RURAL ECONOMY

A Delphi Study of Growth and Yield in Canada's Forests

Project Report 95-03 -- Technical Appendix: Questionnaires and Results by Region

W. Phillips, J. Beck, D. Boulter, D. Booth and K. Clark

PROJECT REPORT

Department of Rural Economy
Faculty of Agriculture, Forestry,
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Edmonton, Canada

A DELPHI STUDY OF GROWTH AND YIELD IN CANADA'S FORESTS

Technical Appendix: Questionnaires and Results by Region

by

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EXECUTIVE SUMMARY

Information on growth and yield of Canada's forests tends to be anecdotal, site specific, difficult to compile, and unsuitable for general aggregation across species and to provincial and ecological region-wide levels. Yet aggregated information on growth and yield is necessary for estimating future timber supplies for large regions in order to plan for the future of both the industry and the other various non-timber forest users. Thus, a study was undertaken using the Delphi technique to summarize the opinions of growth and yield experts and practicing foresters across the country. Survey participants were asked to fill in a series of three sequential and carefully-designed questionnaires. Feedback from each previous questionnaire was used as a basis to refine initial responses and establish a final set of growth and yield estimates for various regions across the country.

The regional breakdown followed a combination of Rowe's forest regions and provincial boundaries: Atlantic-Acadian; Atlantic-Boreal; Quebec-Great Lakes/St. Lawrence; Quebec-Boreal; Ontario-Great Lakes/St. Lawrence; Ontario-Boreal; Prairie/Northwest Territories-Boreal; Interior British Columbia/Yukon-Boreal; Interior British Columbia-Subalpine; Interior British Columbia-Montane; Interior British Columbia-Columbia; Coastal British Columbia-Coast; and Coastal British Columbia-Subalpine. Within each of these 13 regions, responses were broken down further by species groupings: softwood, mixed-wood, and hardwood. Also, the questionnaires were divided into two parts, existing stands and regenerated stands.

Results of the Delphi survey show that existing stands are currently being harvested beyond the age of maximum mean annual increment (MAI) across the country with the exception of the Quebec-Great Lakes/St. Lawrence where harvest is at the age of maximum MAI. Estimated future harvest ages of regenerated stands were at the age of maximum MAI for all regions except the Atlantic-Acadian and Ontario-Great Lakes/St. Lawrence where estimated ages were beyond the age of maximum MAI.

Estimated growth responses connected with unevenaged management, fertilization, cleaning/brushing, juvenile spacing/pre-commercial thinning, and commercial thinning were provided by survey respondents for both existing and regenerated stands. Growth responses from genetic improvement were also provided for regenerated stands. Respondents' estimates of growth from unevenaged management tended to be considerably less than maximum MAI growth rates. Estimates of growth increases as a result of fertilization ranged from 0.1 m^3/ha/year for regenerated stands in the Atlantic-Acadian region to 2.6 m^3/ha/year for both existing and regenerated stands in the Coastal British Columbia-Coast region. Duration of increased growth was generally between 5 and 15 years.

Estimated growth increases from cleaning/brushing varied regionally from a low of 0.3 m^3/ha/year for regenerated stands in Coast British Columbia-Subalpine and Ontario-Boreal regions to a high of 1.8 m^3/ha/year for regenerated stands in the Atlantic-Boreal region. Duration of the increased growth response generally fell within the 7 to 15 year range. The expected growth response from juvenile spacing/pre-commercial thinning varied between -1.0 m^3/ha/year for the Interior British Columbia-Subalpine region and +2.6 m^3/ha/year for the Atlantic-Acadian region. Predicted change in the number of years to reach a rotation based on harvestable tree size was between 0 and -20 years but the effect on rotation age using maximum MAI was generally between -5 and +5 years. Predicted growth increases from commercial thinning varied from a low of -1.8 m^3/ha/year for existing stands in the Coast British Columbia-Coast region to a high of +1.5 m^3/ha/year for regenerated stands in the

Atlantic-Boreal region. Duration of growth changes are expected to be between 8 and 20 years except in the Coastal British Columbia regions where the range is from 27 to 43 years. Predicted shortening of rotation time based on harvestable tree size is from 1 to 10 years while changed rotation age at maximum MAI varied from -2 years to +17 years.

Estimated increases in MAI growth from genetic improvement of regenerated stands varied from 0.3 to 1.2 m^3/ha/year. In general, for most regions, predicted rotations from genetic improvement were shortened by 5 to 10 years.

The results were based on 42 responses over the 13 regions in the third and final round of the survey. Great care should be taken regarding the use of data for the four Interior British Columbia regions due to minimal responses. Otherwise, the data seem to represent the view of experts in the field. Delphi studies such as this one are useful as a first estimate when there is insufficient hard empirical data.

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Questionnaire #1

By Region

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Interior B.C. - Subalpine

NWT and the Prairies - Boreal

Ontario - Boreal

Ontario - Great Lakes/St. Lawrence

Quebec - Boreal

Quebec - Great Lakes/St. Lawrence

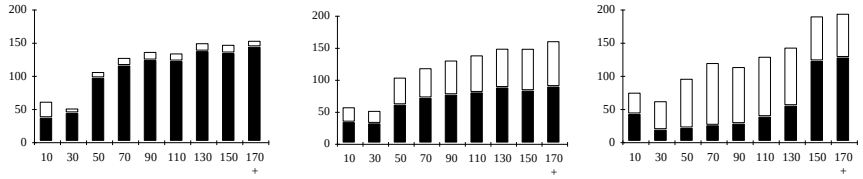
Yukon and Interior B.C. - Boreal

ADMINISTRATIVE / BIOLOGICAL REGION: **Atlantic - Acadian**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	3,330,204	1,949,889	1,959,683
MAI of Mature Stands (m^3/ha/yr)	1.66 (1.48c, 0.18b)*	1.59 (0.93c, 0.67b)*	1.41 (0.34c, 1.07b)*

*c = conifer and b = broadleaf component of MAI

VOLUME / HECTARE
(m^3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.
If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Mixedwoods	Hardwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Mixedwoods	Hardwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

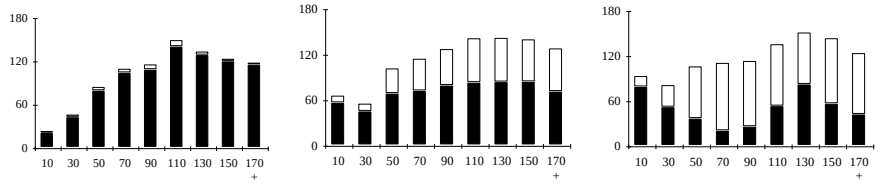
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Atlantic - Boreal**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	1,746,014	235,310	78,010
MAI of Mature Stands (m^3/ha/yr)	1.68 (1.54c,0.14b)*	1.74 (1.34c, 0.40b)*	1.58 (0.52c, 1.06b)*

*c = conifer and b = broadleaf component of MAI

VOLUME / HECTARE
(m^3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.
If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Hardwood	Mixedwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Hardwood	Mixedwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
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	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

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	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till

final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

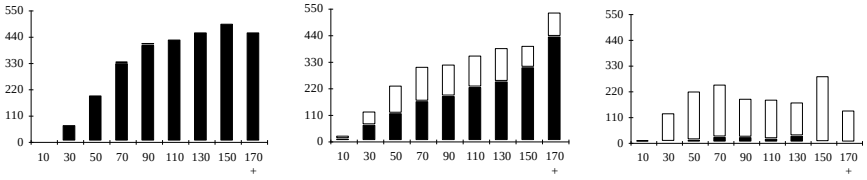
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Coast B.C. - Coast**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	4,528,951	176,499	118,802
MAI of Mature Stands (m^3/ha/yr)	2.43 (2.41c, 0.02b)*	2.35 (1.52c, 0.83b)*	1.87 (0.45c, 1.42b)*

* c = conifer and b = broadleaf component of MAI

VOLUME/HECTARE
(m3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.

If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
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Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Mixedwoods	Hardwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %

Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Mixedwoods	Hardwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

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Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
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8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

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11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

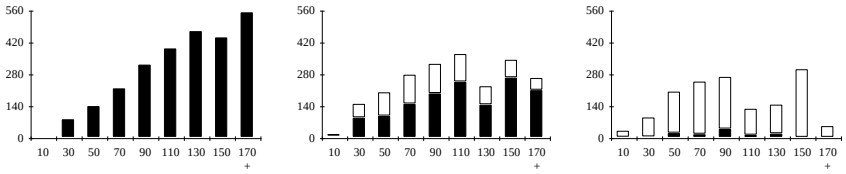
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Coast B.C. - Subalpine**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	923.689	31.488	19.400
MAI of Mature Stands (m^3/ha/yr)	2.41 (2.38c, 0.34b)*	2.53 (1.61c, 0.92b)*	2.56 (0.71c, 1.86b)*

* c = conifer and b = broadleaf component of MAI

VOLUME/HECTARE
(m3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.

If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

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2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Mixedwoods	Hardwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Mixedwoods	Hardwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

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8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

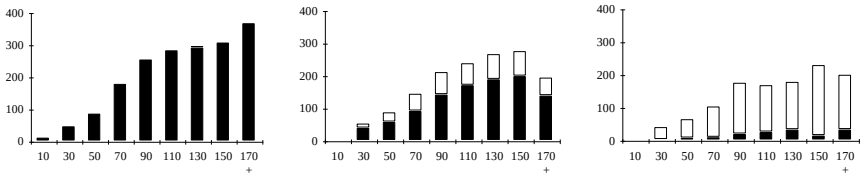
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Interior B.C. - Columbia**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	2,499,423	215,359	51,761
MAI of Mature Stands (m^3/ha/yr)	2.24 (2.2c, 0.04b)*	1.9 (1.51c, 0.39b)*	1.67 (0.43c, 1.23b)*

* c = conifer and b = broadleaf component of MAI

VOLUME/HECTARE
(m3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.
If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Hardwood	Mixedwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Hardwood	Mixedwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change

in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

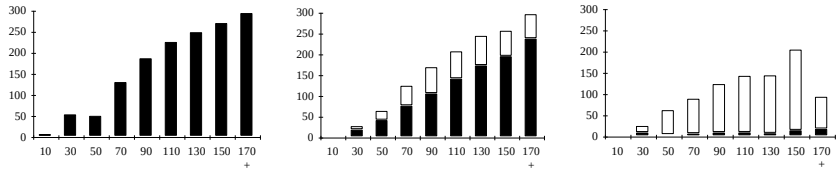
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Interior B.C. - Montane**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	8,066,508	1,071,607	242,480
MAI of Mature Stands (m^3/ha/yr)	1.76 (1.71c, 0.05b)*	1.75 (1.28c, 0.47b)*	1.42 (0.32c, 1.01b)*

* c = conifer and b = broadleaf component of MAI

VOLUME/HECTARE
(m3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.

If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Hardwood	Mixedwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Hardwood	Mixedwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

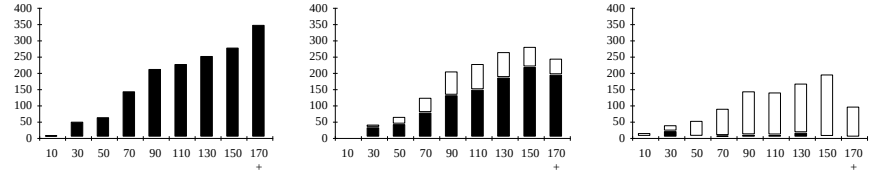
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Interior B.C. - Subalpine**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	6,472,510	572,531	93,190
MAI of Mature Stands (m^3/ha/yr)	2.16 (2.08c, 0.08b)*	1.82 (1.44c, 0.39b)*	1.16 (0.29c, 0.87b)*

* c = conifer and b = broadleaf component of MAI

VOLUME/HECTARE
(m3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.
If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Mixedwoods	Hardwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Mixedwoods	Hardwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

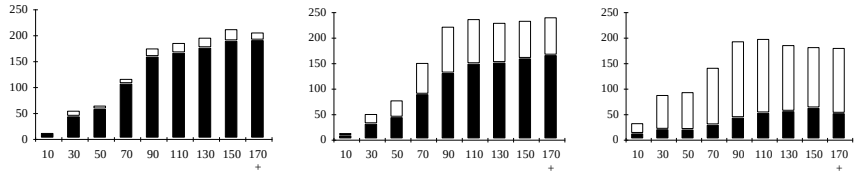
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **NWT and the Prairies - Boreal**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	13.180.496	6.793.902	11.098.169
MAI of Mature Stands (m^3/ha/yr)	1.67 (1.46c, 0.21b)*	1.84 (1.05c, 0.79b)*	2.17 (0.62c, 1.54b)*

* c = conifer amd b = broadleaf component

VOLUME / HECTARE
(m3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.

If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Hardwood	Mixedwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Hardwood	Mixedwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

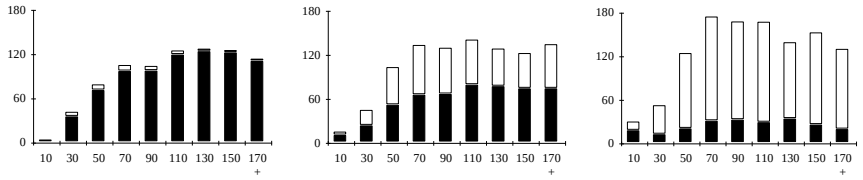
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Ontario - Boreal**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	7,251,261	6,650,682	1,880,704
MAI of Mature Stands (m^3/ha/yr)	1.44 (1.2c, 0.24b)*	2.17 (0.99c, 1.19b)*	2.9 (0.69c, 2.20b)*

* c = conifer and b = broadleaf component of MAI

VOLUME / HECTARE (m^3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.

If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Mixedwoods	Hardwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Mixedwoods	Hardwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

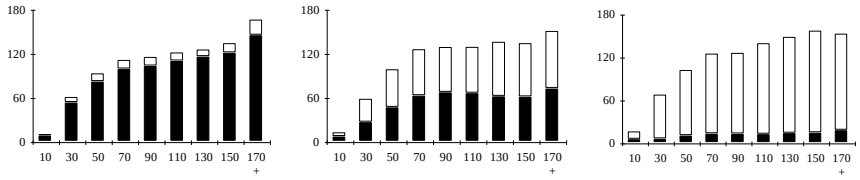
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Ontario - Great Lakes/ St. Lawrence**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	1,947,313	3,271,694	3,606,218
MAI of Mature Stands (m^3/ha/yr)	1.71 (1.13c, 0.58b)*	1.91 (0.80c, 1.11b)*	1.85 (0.29c, 1.57b)*

* c = conifer and b= broadleaf component of MAI

VOLUME / HECTARE
(m^3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.
If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Mixedwoods	Hardwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Mixedwoods	Hardwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

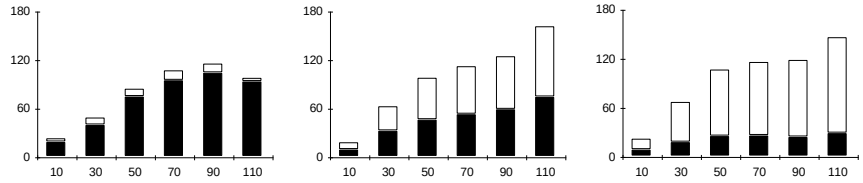
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Quebec - Boreal**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	15,835,682	5,044,631	2,877,991
MAI of Mature Stands (m^3/ha/yr)	1.22 (1.04c, 0.18b)*	1.48 (0.69c, 0.79b)*	1.66 (0.25c, 1.14b)*

* c = conifer and b = broadleaf component of MAI

VOLUME / HECTARE
(m^3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.
If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Hardwood	Mixedwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Hardwood	Mixedwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

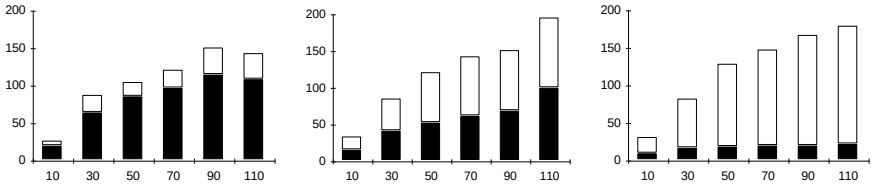
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Quebec - Great Lakes / St. Lawrence**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	1,961,893	3,815,223	3,947,750
MAI of Mature Stands (m^3/ha/yr)	1.56 (0.98c, 0.58b)*	1.77 (0.69c, 1.08b)*	1.78)0.29c, 1.49b)*

* c = conifer and b = broadlead component of MAI

VOLUME / HECTARE
(m^3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.
If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Mixedwoods	Hardwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Mixedwoods	Hardwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Mixedwoods	Hardwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Mixedwoods	Hardwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

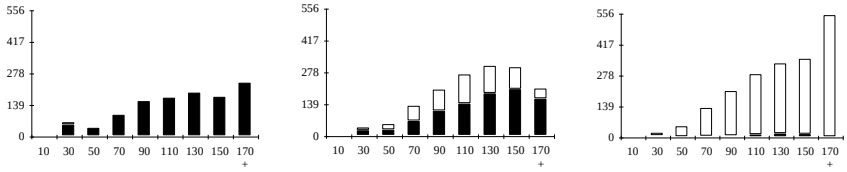
This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

ADMINISTRATIVE / BIOLOGICAL REGION: **Yukon and Interior B.C. - Boreal**

BASELINE ESTIMATES	Softwood	Mixedwood	Hardwood
AREA (ha) Excluding Protected Areas	3.254.920	1.739.720	1.063.521
MAI of Mature Stands (m^3/ha/yr)	1.28 (1.16c, 0.12b)*	1.59 (0.99c, 0.60b)*	1.67 (0.29c, 1.37b)*

* c = conifer and b = broadleaf component of MAI

Volume / hectare
(m3/ha)



■ CONIFER 20 YEAR AGE CLASSES □ BROADLEAF

EXISTING STANDS

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates? YES ____ NO ____

If "**NO**" please go on to the information/question set for the next region - Thank you.

If "**YES**" please proceed in answering the questions below.

2. Please comment on the MAI estimates outlined above in terms of whether they are too high, too low or about right. In the scales below please circle the appropriate **percentage** value indicating your MAI estimates in relation to the baseline estimates.

Circle your estimate of MAI of mature stands compared to baseline estimates.

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 >200

2b. Considering the current age distribution of the species making up each of the three species categories, please indicate your estimates for the area-weighted mean age of mature stands (including over-mature) for each category.

	Softwood	Hardwood	Mixedwood
Mean age	_____ years	_____ years	_____ years

3. Given your revised estimate for the MAI of mature stands made in Question 2(a), how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

4. If existing stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

5a. If existing stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

5b. If yes, what percentage change do you expect? +/- _____ %

5c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

5d. If yes, how many years would the reduction be? _____ years

REGENERATED STANDS

6. With current silviculture practice for this region what would you expect the mean age of regenerated stands at harvest to be?

	Softwood	Hardwood	Mixedwood
Mean Age at Harvest	_____ years	_____ years	_____ years

7. Again, with current silviculture practice for this region, what would you expect the MAI of regenerated stands to be at the ages you listed above compared to the MAI of existing mature stands?

Circle your estimate of MAI for regenerated stands compared to baseline estimates

Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 >250

8. Given your revised estimate for MAI of the area weighted mean age of regenerated stands, how would the MAI change if the area weighted mean age was:

	Softwood	Hardwood	Mixedwood
20 years older	_____ %	_____ %	_____ %
20 years younger	_____ %	_____ %	_____ %
40 years younger	_____ %	_____ %	_____ %

Use (+) or positive percentages for increases in MAI and (-) or negative percentages for decreases in MAI.

9. If regenerated stands were **fertilized** what increase (+) or decrease (-) in yield would you expect and for what period would the change apply?

	Softwood	Hardwood	Mixedwood
% Change	_____ %	_____ %	_____ %
Period of Effect	_____ years	_____ years	_____ years

10a. If regenerated stands were **thinned** would you expect a net change in useable fibre (thinning plus final harvest) from the stands? YES ____ NO ____

10b. If yes, what percentage change do you expect? +/- _____ %

10c. Would **thinning** reduce the rotation age or time till final harvest? YES ____ NO ____

10d. If yes, how many years would the reduction be? _____ years

11a. If regenerated stands were **juvenile spaced** would you expect a net change in useable fibre from the stands? YES ____ NO ____

11b. If yes, what percentage change do you expect? +/- _____ %

11c. Would **juvenile spacing** reduce the rotation age or time till final harvest? YES ____ NO ____

11d. If yes, how many years would the reduction be? _____ years

12a. If regenerated stands were **genetically improved** would you expect a net change in useable fibre from the stands? YES ____ NO ____

12b. If yes, what percentage change do you expect? +/- _____ %

12c. Would **genetic improvement** reduce the rotation age or time till final harvest? YES ____ NO ____

12d. If yes, how many years would the reduction be? _____ years

13a. If regenerated stands were **cleaned/brush controlled** would you expect a net change in useable fibre from the stands? YES ____ NO ____

13b. If yes, what percentage change do you expect? +/- _____ %

13c. Would **cleaning/brush control** reduce the rotation age or time till final harvest? YES ____ NO ____

13d. If yes, how many years would the reduction be? _____ years

This space is provided for any comments regarding any part of this survey. If you have concerns you would like to have examined in future rounds of this project, please note these here as well.

Questionnaire #2

By Region

Atlantic - Acadian

Atlantic - Boreal

Coast B.C. - Coast

Coast B.C. - Subalpine

Interior B.C. - Columbia

Interior B.C. - Montane

Interior B.C. - Subalpine

Ontario - Boreal

Ontario - Great Lakes/St. Lawrence

NWT and the Prairies - Boreal

Quebec - Boreal

Quebec - Great Lakes/St. Lawrence

Yukon and Interior B.C. - Boreal

ADMINISTRATIVE / BIOLOGICAL REGION **Atlantic - Acadian**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.66	1.85	76.3
Mixedwood	1.59	1.75	77.5
Hardwood	1.41	1.65	83.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
16	NA	_____	18	NA	_____	23	NA	_____
36	2.46	_____	38	2.13	_____	43	1.93	_____
56	2.30	_____	58	2.10	_____	63	2.00	_____
*76	1.85	_____	*78	1.75	_____	*83	1.65	_____
96	1.40	_____	98	1.52	_____	103	1.65	_____
116	NA	_____	118	NA	_____	123	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	4.25%	Mixedwood	4.25%	Hardwood	5.5%
Softwood	5 years	Mixedwood	5 years	Hardwood	5 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 83% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 10.2 % . 33 % of respondents felt the rotation age would be reduced by a mean of 5 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.66	2.83	47.5
Mixedwood	1.59	2.16	55.0
Hardwood	1.41	1.97	57.5

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
0	NA	_____	0	NA	_____	0	NA	_____
08	2.26	_____	15	2.09	_____	18	1.90	_____
28	3.21	_____	35	2.22	_____	38	2.34	_____
*48	2.83	_____	*55	2.16	_____	*58	1.97	_____
68	4.09	_____	75	2.92	_____	78	2.22	_____
88	NA	_____	95	NA	_____	98	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 8 % Mixedwood 8 % Hardwood 8 %
Softwood 5.7 years Mixedwood 5.7 years Hardwood 5.7 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 34.0 %. 100 % of respondents felt the rotation age would be reduced by a mean of 8 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 49.2 % . 100 % of respondents felt the rotation age would be reduced by a mean of 15 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 83% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 12.7 %. 50 % of respondents felt the rotation age would be reduced by a mean of 6.7 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 11.0 % . 100% of respondents felt the rotation age would be reduced by a mean of 5.4 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Atlantic - Boreal**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.68	1.55	91.2
Mixedwood	1.74	1.74	93.8
Hardwood	1.58	1.68	75.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
31	NA	_____	34	NA	_____	15	NA	_____
51	1.94	_____	54	2.26	_____	35	1.90	_____
71	1.81	_____	74	2.09	_____	55	1.90	_____
*91	1.55	_____	*94	1.74	_____	*75	1.68	_____
111	1.14	_____	114	1.33	_____	95	1.46	_____
131	NA	_____	134	NA	_____	115	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	4.2%	Mixedwood	3.3%	Hardwood	5.0%
Softwood	8 years	Mixedwood	3 years	Hardwood	3 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?
Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 60% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 7.5 % . 60 % of respondents felt the rotation age would be reduced by a mean of 15 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
3ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
3ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
3ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
3bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
3bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
3bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
3cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
3cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
3cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.68	2.23	59
Mixedwood	1.74	2.39	57.5
Hardwood	1.58	2.00	51.7

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
0	NA	_____	0	NA	_____	0	NA	_____
19	1.97	_____	18	2.31	_____	12	2.00	_____
39	2.19	_____	38	2.43	_____	32	2.03	_____
*59	2.23	_____	*58	2.39	_____	*52	2.00	_____
79	1.97	_____	78	2.03	_____	72	1.57	_____
99	NA	_____	98	NA	_____	92	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 10 % Mixedwood 6.7 % Hardwood 6.7 %
Softwood 6.7 years Mixedwood 4 years Hardwood 4 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 60% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 3.8 %. 80 % of respondents felt the rotation age would be reduced by a mean of 11 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 80% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 16.2 % . 100 % of respondents felt the rotation age would be reduced by a mean of 17.5 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 13.8 %. 60 % of respondents felt the rotation age would be reduced by a mean of 15 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 60% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 6.2 % . 60% of respondents felt the rotation age would be reduced by a mean of 7.5 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Coast BC - Coast**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.43	3.03	258.5
Mixedwood	2.35	3.45	185.0
Hardwood	1.87	2.90	82.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
198	NA	_____	125	NA	_____	22	NA	_____
218	3.13	_____	145	3.48	_____	42	3.02	_____
238	3.08	_____	165	3.44	_____	62	2.62	_____
*258	3.03	_____	*185	3.45	_____	*82	2.90	_____
278	2.93	_____	205	3.50	_____	102	2.56	_____
298	NA	_____	225	NA	_____	122	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	2.3%	Mixedwood	2.4%	Hardwood	2.0%
Softwood	6.7 years	Mixedwood	10 years	Hardwood	5 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 20% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (-) 2.0 % . 20 % of respondents felt the rotation age would be reduced by a mean of 5 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.43	5.11	86.7
Mixedwood	2.35	4.71	89.0
Hardwood	1.87	3.56	61.0

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
27	NA	_____	29	NA	_____	1	NA	_____
47	4.38	_____	49	3.84	_____	21	2.56	_____
67	4.96	_____	69	4.62	_____	41	3.30	_____
*87	5.11	_____	*89	4.71	_____	*61	3.56	_____
107	4.63	_____	109	4.32	_____	91	3.03	_____
127	NA	_____	129	NA	_____	111	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 8.0 %	Mixedwood 4.2 %	Hardwood 5.0 %
Softwood 12.2 years	Mixedwood 13.3 years	Hardwood 15.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?
Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 60% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 4.2 %. 80 % of respondents felt the rotation age would be reduced by a mean of 4.2 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 40% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 0.0 % . 50 % of respondents felt the rotation age would be reduced by a mean of 6.7 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 50% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 0.0 %. 17 % of respondents felt the rotation age would be reduced by a mean of 10 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 6.3 % . 67% of respondents felt the rotation age would be reduced by a mean of 8.2 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Coast BC - Subalpine**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.41	2.10	269.0
Mixedwood	2.53	2.53	253.3
Hardwood	2.56	3.84	66.7

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
209	NA	_____	193	NA	_____	07	NA	_____
229	2.03	_____	213	2.93	_____	27	6.03	_____
249	2.11	_____	233	2.66	_____	47	4.15	_____
*269	2.10	_____	*253	2.53	_____	*67	3.84	_____
289	2.03	_____	273	2.50	_____	87	3.96	_____
309	NA	_____	293	NA	_____	107	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	5%	Mixedwood	5%	Hardwood	10%
Softwood	10 years	Mixedwood	10 years	Hardwood	10 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 50% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (-) 2.5 % . 0 % of respondents felt the rotation age would be reduced by a mean of NA years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.41	3.68	115.0
Mixedwood	2.53	3.62	96.7
Hardwood	2.56	3.84	65.0

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
55	NA	_____	37	NA	_____	5	NA	_____
75	2.72	_____	57	2.67	_____	25	2.69	_____
95	3.31	_____	77	3.26	_____	45	3.36	_____
*115	3.68	_____	*97	3.62	_____	*65	3.84	_____
135	3.43	_____	117	3.26	_____	85	3.55	_____
155	NA	_____	137	NA	_____	105	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 6% Mixedwood 6% Hardwood 10%
Softwood 8.5 years Mixedwood 8.5 years Hardwood 10 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 67% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 1.3 %. 100 % of respondents felt the rotation age would be reduced by a mean of 3.7 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 0% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 0.0 % . 67 % of respondents felt the rotation age would be reduced by a mean of 7.5 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 50% of respondents felt there would be a net change in yield, and the mean of the change was a (-) 3.0 %. 0 % of respondents felt the rotation age would be reduced by a mean of NA years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 1.0 % . 67% of respondents felt the rotation age would be reduced by a mean of 5.0 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Interior BC - Columbia**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.24	2.78	163.0
Mixedwood	1.90	2.09	143.3
Hardwood	1.67	1.89	106.7

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
103	NA	_____	83	NA	_____	47	NA	_____
123	3.15	_____	103	2.16	_____	67	1.77	_____
143	3.10	_____	123	2.19	_____	87	1.92	_____
*163	2.78	_____	*143	2.09	_____	*107	1.89	_____
183	2.71	_____	163	1.84	_____	127	1.49	_____
203	NA	_____	183	NA	_____	147	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in increases and may have a period of effect as follows:

Softwood	22.6%	Mixedwood	3.3%	Hardwood	3.3%
Softwood	8 years	Mixedwood	10 years	Hardwood	10 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for your concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____years old

2b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?
Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 60% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 6.0 % . 40 % of respondents felt the rotation age would be reduced by a mean of 15 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
3ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
3ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
3ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
3bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
3bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
3bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
3cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
3cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
3cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.24	3.14	94.0
Mixedwood	1.90	2.41	93.3
Hardwood	1.67	2.17	76.6

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
34	NA	_____	33	NA	_____	17	NA	_____
54	3.55	_____	53	2.21	_____	37	1.84	_____
74	3.85	_____	73	2.40	_____	57	2.03	_____
*94	3.14	_____	*93	2.41	_____	*77	2.17	_____
114	3.78	_____	113	2.14	_____	97	1.80	_____
134	NA	_____	133	NA	_____	117	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 28 %	Mixedwood 5 %	Hardwood 5 %
Softwood 10 years	Mixedwood 15 years	Hardwood 15 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?
Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 20% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 4.0%. 80 % of respondents felt the rotation age would be reduced by a mean of 7.5 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 40% of respondents felt there would be a net change in yield, and the mean of the change was a (-) 1.0 % . 80 % of respondents felt the rotation age would be reduced by a mean of 5 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 80% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 7.0 %. 40 % of respondents felt the rotation age would be reduced by a mean of 45 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 6.6 % . 80% of respondents felt the rotation age would be reduced by a mean of 5.8 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Interior BC - Montane**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.76	2.64	160.0
Mixedwood	1.75	2.89	165.0
Hardwood	1.42	2.20	155.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
100	NA	_____	105	NA	_____	95	NA	_____
120	2.86	_____	125	3.25	_____	115	2.20	_____
140	2.90	_____	145	2.96	_____	135	2.36	_____
*160	2.64	_____	*165	2.89	_____	*155	2.20	_____
180	2.64	_____	185	2.74	_____	175	2.04	_____
200	NA	_____	205	NA	_____	195	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	6.0%	Mixedwood	7.5%	Hardwood	10.0%
Softwood	8.0 years	Mixedwood	10.0 years	Hardwood	10.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 33% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 8.3 % . 33 % of respondents felt the rotation age would be reduced by a mean of 15 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.76	2.99	100.0
Mixedwood	1.75	3.41	90.0
Hardwood	1.42	2.63	70.0

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
40	NA	_____	30	NA	_____	10	NA	_____
60	2.54	_____	50	2.81	_____	30	2.10	_____
80	2.99	_____	70	3.24	_____	50	2.50	_____
*100	2.99	_____	*90	3.41	_____	*70	2.63	_____
120	3.09	_____	110	3.07	_____	90	2.30	_____
140	NA	_____	130	NA	_____	110	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 40.0	Mixedwood 7.5 %	Hardwood 10.0 %
Softwood 8.0 years	Mixedwood 10.0 years	Hardwood 10.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 33% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 1.0 %. 100 % of respondents felt the rotation age would be reduced by a mean of 6.7 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 33% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 3.3 % . 100 % of respondents felt the rotation age would be reduced by a mean of 6.7 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 67% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 6.7 %. 67 % of respondents felt the rotation age would be reduced by a mean of 10 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 5.0 % . 100% of respondents felt the rotation age would be reduced by a mean of 5.0 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Interior BC - Subalpine**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.16	2.16	190.0
Mixedwood	1.82	1.82	200.0
Hardwood	1.16	1.16	150.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
130	NA	_____	140	NA	_____	90	NA	_____
150	3.56	_____	160	2.00	_____	110	1.39	_____
170	3.41	_____	180	1.91	_____	130	1.28	_____
*190	2.16	_____	*200	1.82	_____	*150	1.16	_____
210	3.02	_____	220	1.64	_____	170	0.99	_____
230	NA	_____	240	NA	_____	190	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	6.5%	Mixedwood	10.0%	Hardwood	10.0%
Softwood	6.5 years	Mixedwood	10.0 years	Hardwood	10.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 50% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 10.0 % . 50 % of respondents felt the rotation age would be reduced by a mean of 10.0 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	2.16	2.48	120.0
Mixedwood	1.82	2.18	100.0
Hardwood	1.16	1.62	80.0

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
60	NA	_____	40	NA	_____	20	NA	_____
80	1.86	_____	60	1.53	_____	40	1.22	_____
100	2.42	_____	80	2.07	_____	60	1.46	_____
*120	2.48	_____	*100	2.18	_____	*80	1.62	_____
140	2.67	_____	120	2.07	_____	100	1.46	_____
160	NA	_____	140	NA	_____	120	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in increases and may have a period of effect as follows:

Softwood 55.0 % Mixedwood 10.0 % Hardwood 10.0 %
Softwood 7.0 years Mixedwood 10.0 years Hardwood 10.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 0% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 0.0 %. 100 % of respondents felt the rotation age would be reduced by a mean of 5.0 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 0% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 0.0 % . 100 % of respondents felt the rotation age would be reduced by a mean of 5 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 50% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 10.0 %. 50 % of respondents felt the rotation age would be reduced by a mean of 120 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 5.0 % . 100% of respondents felt the rotation age would be reduced by a mean of 5.0 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Ontario - Boreal**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.44	1.67	100.0
Mixedwood	2.17	2.02	93.3
Hardwood	2.90	2.56	82.5

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
40	NA	_____	33	NA	_____	23	NA	_____
60	1.93	_____	53	2.20	_____	43	2.83	_____
80	1.84	_____	73	2.20	_____	63	2.81	_____
*100	1.67	_____	*93	2.02	_____	*83	2.56	_____
120	1.50	_____	113	1.91	_____	103	2.26	_____
140	NA	_____	133	NA	_____	123	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	7.4%	Mixedwood	4.5%	Hardwood	3.5%
Softwood	8.1 years	Mixedwood	5.2 years	Hardwood	5.2 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 100% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 15.0 % . 86 % of respondents felt the rotation age would be reduced by a mean of 13.3 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.44	1.82	78.6
Mixedwood	2.17	2.34	75.0
Hardwood	2.90	2.84	60.8

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
19	NA	_____	15	NA	_____	1	NA	_____
39	1.51	_____	35	1.67	_____	21	2.13	_____
59	1.99	_____	55	2.11	_____	41	2.59	_____
*79	1.82	_____	*75	2.34	_____	*61	2.84	_____
99	1.71	_____	95	2.17	_____	81	2.50	_____
119	NA	_____	115	NA	_____	101	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 8.7 % Mixedwood 6.5 % Hardwood 5.5 %
Softwood 6.8 years Mixedwood 5.2 years Hardwood 5.2 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 86% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 20.8 %. 86 % of respondents felt the rotation age would be reduced by a mean of 16 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 71% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 5.0 % . 71 % of respondents felt the rotation age would be reduced by a mean of 10 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 16.7 %. 100 % of respondents felt the rotation age would be reduced by a mean of 13.3 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 6.8 % . 100% of respondents felt the rotation age would be reduced by a mean of 7.5 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Ontario - Great Lakes / St. Lawrence**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.71	1.71	113.3
Mixedwood	1.91	2.23	102.0
Hardwood	1.85	2.01	110.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
53	NA	_____	42	NA	_____	50	NA	_____
73	1.90	_____	62	2.31	_____	70	2.35	_____
93	1.90	_____	82	2.56	_____	90	2.23	_____
*113	1.71	_____	*102	2.23	_____	*110	2.01	_____
133	1.47	_____	122	1.87	_____	130	1.75	_____
153	NA	_____	142	NA	_____	150	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	4.0%	Mixedwood	4.0%	Hardwood	2.0%
Softwood	6.7 years	Mixedwood	3.3 years	Hardwood	2.5 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 71% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 29.3 % . 57 % of respondents felt the rotation age would be reduced by a mean of 20.0 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.71	2.56	87.1
Mixedwood	1.91	2.48	81.0
Hardwood	1.85	2.68	80.6

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
27	NA	_____	21	NA	_____	21	NA	_____
47	2.79	_____	41	2.78	_____	41	3.06	_____
67	2.82	_____	61	2.91	_____	61	2.92	_____
*87	2.56	_____	*81	2.48	_____	*81	2.68	_____
107	2.31	_____	101	2.13	_____	101	2.46	_____
127	NA	_____	121	NA	_____	121	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 4.0 % Mixedwood 3.7 % Hardwood 3.0 %
Softwood 5.7 years Mixedwood 2.0 years Hardwood 2.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 71% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 18.6 %. 71 % of respondents felt the rotation age would be reduced by a mean of 17 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 43% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 0.83 % . 57 % of respondents felt the rotation age would be reduced by a mean of 15 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 26.4%. 71% of respondents felt the rotation age would be reduced by a mean of 16.0 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 7.3 % . 83% of respondents felt the rotation age would be reduced by a mean of 8.0 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **NWT and the Prairies - Boreal**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.67	1.64	109.2
Mixedwood	1.84	1.90	100.0
Hardwood	2.17	2.17	86.2

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
49	NA	_____	40	NA	_____	26	NA	_____
69	1.73	_____	60	2.06	_____	46	2.40	_____
89	1.69	_____	80	1.93	_____	66	2.52	_____
*109	1.64	_____	*100	1.90	_____	*86	2.17	_____
129	1.50	_____	120	1.79	_____	106	1.89	_____
149	NA	_____	140	NA	_____	126	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	8.4%	Mixedwood	8.4%	Hardwood	7.5%
Softwood	5.7years	Mixedwood	5.7 years	Hardwood	5.4years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 92% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 13.3 % . 75 % of respondents felt the rotation age would be reduced by a mean of 13.2 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.67	2.12	90.0
Mixedwood	1.84	2.25	92.9
Hardwood	2.17	2.64	67.9

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
30	NA	_____	33	NA	_____	8	NA	_____
50	2.24	_____	53	2.39	_____	28	2.67	_____
70	2.27	_____	73	2.47	_____	48	2.77	_____
*90	2.12	_____	*93	2.25	_____	*68	2.64	_____
110	2.17	_____	113	2.39	_____	88	2.60	_____
130	NA	_____	133	NA	_____	108	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?

Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?

Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood 11.3 % Mixedwood 12.5 % Hardwood 12.8 %
Softwood 6.7 years Mixedwood 7.7 years Hardwood 6.6 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.

Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____years old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 67% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 9.6 %. 83 % of respondents felt the rotation age would be reduced by a mean of 11.9 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 83% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 9.8 % . 92 % of respondents felt the rotation age would be reduced by a mean of 8.8 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 92% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 15.4 %. 75 % of respondents felt the rotation age would be reduced by a mean of 17 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 10.7 % . 92% of respondents felt the rotation age would be reduced by a mean of 12.6 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Quebec - Boreal**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.22	0.94	104.0
Mixedwood	1.48	1.41	92.0
Hardwood	1.66	1.74	78.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
44	NA	_____	32	NA	_____	18	NA	_____
64	1.00	_____	52	1.46	_____	38	1.43	_____
84	1.08	_____	72	1.61	_____	58	1.98	_____
*104	0.94	_____	*92	1.41	_____	*78	1.74	_____
124	0.74	_____	112	1.00	_____	98	1.46	_____
144	NA	_____	132	NA	_____	118	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	10.0%	Mixedwood	6.2%	Hardwood	3.8%
Softwood	11.2 years	Mixedwood	10.0 years	Hardwood	8.3 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 80% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 13.0 % . 40 % of respondents felt the rotation age would be reduced by a mean of 15 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.22	1.24	76.0
Mixedwood	1.48	1.75	66.0
Hardwood	1.66	1.99	56.0

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
16	NA	_____	6	NA	_____	0	NA	_____
36	0.86	_____	26	0.94	_____	16	1.09	_____
56	1.15	_____	46	1.58	_____	36	1.71	_____
*76	1.24	_____	*66	1.75	_____	*56	1.99	_____
96	1.04	_____	86	1.49	_____	76	1.71	_____
116	NA	_____	106	NA	_____	96	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:
Softwood 13.8 % Mixedwood 13.8. % Hardwood 11.2 %
Softwood 11.2 years Mixedwood 11.2 years Hardwood 10.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age?
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____years old

5b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?
Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 15.0 %. 80 % of respondents felt the rotation age would be reduced by a mean of 10 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 60% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 8.8 % . 60 % of respondents felt the rotation age would be reduced by a mean of 11.7 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 23.0 %. 40 % of respondents felt the rotation age would be reduced by a mean of 10.0 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 19.0 % . 100% of respondents felt the rotation age would be reduced by a mean of 10.0 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Quebec - Great Lakes / St. Lawrence**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.56	1.52	60.0
Mixedwood	1.77	2.08	70.0
Hardwood	1.78	2.18	85.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
0	NA	_____	10	NA	_____	25	NA	_____
20	1.46	_____	30	1.64	_____	45	1.74	_____
40	1.60	_____	50	2.00	_____	65	2.04	_____
*60	1.52	_____	*70	2.08	_____	*85	2.18	_____
80	1.23	_____	90	3.02	_____	105	2.10	_____
100	NA	_____	110	NA	_____	125	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	5.0%	Mixedwood	8.3%	Hardwood	10.0%
Softwood	8.3 years	Mixedwood	10.0 years	Hardwood	10.0 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____years old

2b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 100% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 16.2% . 50 % of respondents felt the rotation age would be reduced by a mean of 15 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.56	1.64	57.5
Mixedwood	1.77	1.72	70.0
Hardwood	1.78	1.87	110.0

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
0	NA	_____	10	NA	_____	50	NA	_____
18	0.44	_____	30	0.90	_____	70	1.22	_____
38	0.87	_____	50	1.52	_____	90	1.71	_____
*58	1.64	_____	*70	1.72	_____	*110	1.87	_____
78	1.45	_____	90	1.66	_____	130	1.81	_____
98	NA	_____	110	NA	_____	150	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:
Softwood 11.0 % Mixedwood 9.3 % Hardwood 9.3 %
Softwood 11.7 years Mixedwood 11.7 years Hardwood 11.7 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?
Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 11.2 %. 75 % of respondents felt the rotation age would be reduced by a mean of 10 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 50% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 7.5 % . 75 % of respondents felt the rotation age would be reduced by a mean of 10 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 21.2 %. 50 % of respondents felt the rotation age would be reduced by a mean of 10.0 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 16.2 % . 100% of respondents felt the rotation age would be reduced by a mean of 8.8 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Yukon and Interior BC - Boreal**

EXISTING STANDS

1. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of existing stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands.

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.28	1.47	145.0
Mixedwood	1.59	1.83	140.0
Hardwood	1.67	1.92	115.0

Additionally you expressed concern over "uneven age management" and that existing stands may be 2nd, 3rd or 4th generation "regenerated stands". For the survey, the growth and yield data for "existing stands" is meant to apply to stands growing today. "Regenerated stands" are those we create after "today".

1a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr). Note: NA means not available from round one.

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
85	NA	_____	80	NA	_____	55	NA	_____
105	1.65	_____	100	2.06	_____	75	1.87	_____
125	1.62	_____	120	1.92	_____	95	1.92	_____
*145	1.47	_____	*140	1.83	_____	*115	1.92	_____
165	1.36	_____	160	1.60	_____	135	1.68	_____
185	NA	_____	180	NA	_____	155	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

1b. What proportion of the area in thye region is managed by uneven-aged management?
Softwood _____ % Mixedwood _____ % Hardwood _____ %

1c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

1d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

1e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

2. From Questionnaire #1 your collective (mean) responses to **fertilization** of existing stands indicated fertilization would result in yield increases and may have a period of effect as follows:

Softwood	6%	Mixedwood	6%	Hardwood	10%
Softwood	10 years	Mixedwood	10 years	Hardwood	10 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". Please answer the following questions to account for these concerns:

2a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good _____ % Medium _____% Poor _____%

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood _____ Mixedwood _____ Hardwood _____

2e. How long would the increased growth indicated above last (years)?

Softwood _____ Mixedwood _____ Hardwood _____

3. From Questionnaire #1 your collective (mean) responses to thinning of existing stands were as follows: 50% of respondents felt there would be a net change in yield due to thinning, and the mean of the change was a (+) 1.0 % . 50 % of respondents felt the rotation age would be reduced by a mean of 5.0 years.

Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

3a. For existing immature stands what do you expect from **cleaning / brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing / pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood _____ years Mixedwood _____ years Hardwood _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

REGENERATED STANDS

4. From Questionnaire #1, collective (mean) responses from survey participants indicated the following about growth (MAI) of regenerated stands. Included are average estimates of MAI from the baseline we provided in Questionnaire #1 and average estimates of area-weighted mean age of mature stands. "Regenerated stands" are those we create after "today".

	MAI: Provided	MAI: Your Est.	AGE: Your Est.
Softwood	1.28	2.05	115.0
Mixedwood	1.59	2.54	105.0
Hardwood	1.67	2.67	75.0

4a. Please complete the table below with your revised estimates of MAI (Age in years and MAI in m3/ha/yr).

Softwood			**Mixedwood**			**Hardwood**		
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI
55	NA	_____	45	NA	_____	15	NA	_____
75	1.64	_____	65	2.16	_____	35	2.07	_____
95	2.10	_____	85	2.60	_____	55	2.67	_____
*115	2.05	_____	*105	2.54	_____	*75	2.67	_____
135	1.90	_____	125	2.41	_____	95	2.54	_____
155	NA	_____	145	NA	_____	115	NA	_____

* Based on aggregated estimates (rounded) from your estimates reported above.

4b. What proportion of the area in the region is managed by uneven-aged management?
Softwood _____% Mixedwood _____% Hardwood _____%

4c. What growth per ha/year do you expect on areas managed by uneven-aged management?
Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas managed by uneven-aged management?
Softwood _____ m3/ha Mixedwood _____ m3/ha Hardwood _____ m3/ha

4e. What would be the average cutting cycle used on areas managed by uneven-aged management?
Softwood _____ years Mixedwood _____ years Hardwood _____ years

5. From Questionnaire #1 your collective (mean) responses to **fertilization** of regenerated stands indicated fertilization would result in yield increases and may have a period of effect as follows:
Softwood 10 % Mixedwood 10 % Hardwood 10 %
Softwood 10 years Mixedwood 10 years Hardwood 10 years

However your comments indicated concern over fertilizing "all stands', "all sites", "age of stands fertilized" and "amount of fertilizer". To help clarify these concerns please answer the following questions:

5a. At what stand age range would you fertilize? Answer should be range between a low figure and a high figure expressed in years of age.
Softwood ____ & ____ years old Mixedwood ____ & ____ years old Hardwood ____ & ____ years old

5b. At what rate of fertilizer (kg/ha) would you apply?
Softwood _____ kg/ha Mixedwood _____ kg/ha Hardwood _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?
Good _____% Medium _____% Poor _____%

5d. What increase in growth (m3/ha/yr) would you expect?
Softwood _____ Mixedwood _____ Hardwood _____

5e. How long would the increased growth indicated above last (years)?
Softwood _____ Mixedwood _____ Hardwood _____

6. Significant comments were made regarding "what to thin", "would never thin in mature stands", "I assume thinning of immature stands only", and "is rotation set by achieving a certain tree size or maximum mean annual increment". To help clarify **Thinning responses** please answer the following:

6a. From Questionnaire #1 your collective (mean) responses to cleaning/ brush control of regenerated stands were as follows: 0% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 0.0 %. 100 % of respondents felt the rotation age would be reduced by a mean of 12.5 years. For regenerated immature stands what do you expect from **cleaning /brushing** (assume no utilization) regarding:

6aa. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6ab. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6ac. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6ad. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6b. From Questionnaire #1 your collective (mean) responses to juvenile spacing of regenerated stands were as follows: 50% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 1.0 % . 100 % of respondents felt the rotation age would be reduced by a mean of 5 years. For regenerated immature stands what do you expect from **juvenile spacing/ pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6bb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6bc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6bd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

6c. From Questionnaire #1 your collective (mean) responses to thinning of regenerated stands were as follows: 50% of respondents felt there would be a net change in yield, and the mean of the change was a (+) 2.5 %. 50 % of respondents felt the rotation age would be reduced by a mean of 10 years. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?
Softwood +/-_____ m3/ha/yr Mixedwood +/-_____ m3/ha/yr Hardwood +/-_____ m3/ha/yr
6cb. How long would this change in growth last?
Softwood _____ years Mixedwood _____ years Hardwood _____ years
6cc. Change in rotation based on harvestable tree size?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years
6cd. Change in rotation based on maximum MAI?
Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7. From Questionnaire #1 your collective (mean) responses to **genetic improvement** of regenerated stands were as follows: 100% of respondents felt there would be a net change in yield, and the mean of the change was a (+)6.5 % . 100% of respondents felt the rotation age would be reduced by a mean of 7.5 years. Comments indicated uncertainty about unproved **genetic improvement** yields and concerns over rotation being time to certain size tree or Maximum MAI. Please answer the following:

7a. What change in MAI do you expect for genetic improvement?

Softwood _____ m3/ha/yr Mixedwood _____ m3/ha/yr Hardwood _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood +/-_____ years Mixedwood +/-_____ years Hardwood +/-_____ years

Questionnaire #3

By Region

Atlantic - Acadian

Atlantic - Boreal

Coast B.C. - Coast

Coast B.C. - Subalpine

Interior B.C. - Columbia

Interior B.C. - Montane

Interior B.C. - Subalpine

NWT and the Prairies - Boreal

Ontario - Boreal

Ontario - Great Lakes/St. Lawrence

Quebec - Boreal

Quebec - Great Lakes/St. Lawrence

Yukon and Interior B.C. - Boreal

ADMINISTRATIVE / BIOLOGICAL REGION **Atlantic - Acadian**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood				Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI	Age	Que#1 MAI	Que#2 MAI	Final MAI	Age	Que#1 MAI	Que#2 MAI	Final MAI	
16	NA	2.4		18	NA	2.2		23	NA	1.8		
36	2.5	1.8		38	2.1	2.0		43	1.9	2.0		
56	2.3	1.8		58	2.1	1.9		63	2.0	1.9		
76*	1.9	1.8		78*	1.8	1.8		83*	1.7	1.7		
96	1.4	1.3		98	1.5	1.3		103	1.7	1.3		
116	NA	0.1		118	NA	0.9		123	NA	1.0		

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 4 %	Survey result: 14 %	Survey result: 22 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.9 m3/ha/yr	Survey result: 1.8 m3/ha/yr	Survey result: 1.9 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 77 m3/ha	Survey result: 73 m3/ha	Survey result: 73 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 22 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 38 & 50 yrs old	Survey result: 43 & 60 yrs old	Survey result: 43 & 65 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 kg/ha	Survey result: 200 kg/ha	Survey result: 200 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 35%	Survey result: 55 %	Survey result: 10 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.2 m3/ha/yr	Survey result: 0.2 m3/ha/yr	Survey result: 0.2 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 years	Survey result: 5 years	Survey result: 5 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.4 m3/ha/yr	Survey result: 0.4 m3/ha/yr	Survey result: 0.4 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 13 years	Survey result: 13 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -2 years	Survey result: -2 years	Survey result: -2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -3 years	Survey result: -3 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 2.2 m3/ha/yr	Survey result: 2.1 m3/ha/yr	Survey result: 2.1 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 22 years	Survey result: 20 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -13 years	Survey result: -12 years	Survey result: -12 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 3 years	Survey result: 3 years	Survey result: 3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.6 m3/ha/yr	Survey result: 0.6 m3/ha/yr	Survey result: 0.6 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 18 years	Survey result: 18 years	Survey result: 18 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +3 years	Survey result: +3 years	Survey result: +3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
0	NA	1.5			0	NA	1.3			0	NA	1.1	
8	2.3	2.6			15	2.1	2.3			18	1.9	2.3	
28	3.2	3.5			35	2.2	2.5			38	2.3	2.4	
48*	2.8	3.2			55*	2.2	2.5			58*	2.0	2.5	
68	4.1	3.0			75	2.9	2.1			78	2.2	2.2	
88	NA	2.6			95	NA	1.9			98	NA	1.9	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	Survey result: 2 %	**Mixedwood:**	Survey result: 7 %	**Hardwood:**	Survey result 20 %
	Your est. _____ %		Your est. _____ %		Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	Survey result: 1.9 m3/ha/yr	**Mixedwood:**	Survey result: 1.8 m3/ha/yr	**Hardwood:**	Survey result 1.9 m3/ha/yr
	Your est. _____ m3/ha/yr		Your est. _____ m3/ha/yr		Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	Survey result: 77 m3/ha	**Mixedwood:**	Survey result: 73 m3/ha	**Hardwood:**	Survey result 73 m3/ha
	Your est. _____ m3/ha		Your est. _____ m3/ha		Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	Survey result: 20 years	**Mixedwood:**	Survey result: 22 years	**Hardwood:**	Survey result 20 years
	Your est. _____ years		Your est. _____ years		Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 33 & 45 yrs old	Survey result: 38 & 50 yrs old	Survey result: 38 & 55 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 kg/ha	Survey result: 200 kg/ha	Survey result: 200 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 35 %	Survey result: 55 %	Survey result: 10 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.3 m3/ha/yr	Survey result: 0.2 m3/ha/yr	Survey result: 0.2 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 years	Survey result: 5 years	Survey result: 5 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.6 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 13 years	Survey result: 13 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -2 years	Survey result: -2 years	Survey result: -2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +4 years	Survey result: +4 years	Survey result: +4 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 2..2 m3/ha/yr	Survey result: 2.2 m3/ha/yr	Survey result: 2.3 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 20 years	Survey result: 20 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +7 years	Survey result: +7 years	Survey result: +7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +13 years	Survey result: +14 years	Survey result: +15 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 13 years	Survey result: 13 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +3 years	Survey result: +4 years	Survey result: +3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.3 m3/ha/yr	Survey result: 0.3 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -2 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +3 years	Survey result: +5 years	Survey result: +5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Atlantic - Boreal**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
31	NA	1.4			34	NA	1.6			15	NA	1.1	
51	1.9	1.6			54	2.3	2.1			35	1.9	1.8	
71	1.8	1.6			74	2.1	1.8			55	1.9	1.7	
91*	1.6	1.3			94*	1.7	1.4			75*	1.7	1.5	
111	1.1	1.1			114	1.3	1.2			95	1.5	1.3	
131	NA	1.0			134	NA	1.0			115	NA	1.1	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 2 %	Survey result: 3 %	Survey result: 3 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.7 m3/ha/yr	Survey result: 1.8 m3/ha/yr	Survey result: 1.9 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 75 m3/ha	Survey result: 100 m3/ha	Survey result: 125 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 50 & 70 yrs old	Survey result: 45 & 55 yrs old	Survey result: NA & NA yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 kg/ha	Survey result: 150 kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 50 %	Survey result: 30 %	Survey result: 20 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.5 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: NA m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 5 years	Survey result: NA years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.3 m3/ha/yr	Survey result: 1.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result:15 years	Survey result: 5 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -3 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.8 m3/ha/yr	Survey result: 2.3 m3/ha/yr	Survey result: 2.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 25 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -20 years	Survey result: -15 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -10 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.8 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.3 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 20 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: NA years	Survey result: NA years	Survey result: NA years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: NA years	Survey result: NA years	Survey result: NA years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
0	NA	00			0	NA	00			0	NA	NA	
19	2.0	0.5			18	2.3	1.4			12	2.0	1.3	
39	2.2	1.8			38	2.4	2.2			32	2.3	2.3	
59*	2.2	2.4			58*	2.4	2.8			52*	2.0	2.8	
79	2.0	2.1			78	2.0	2.3			72	1.6	2.5	
99	NA	1.7			98	NA	1.7			92	NA	1.8	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood: Survey result: 3 %
Your est. _____ %

Mixedwood: Survey result: 3 %
Your est. _____ %

Hardwood: Survey result 3 %
Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood: Survey result: 1.8 m3/ha/yr
Your est. _____ m3/ha/yr

Mixedwood: Survey result: 1.9 m3/ha/yr
Your est. _____ m3/ha/yr

Hardwood: Survey result 2.0 m3/ha/yr
Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood: Survey result: 85 m3/ha
Your est. _____ m3/ha

Mixedwood: Survey result: 110 m3/ha
Your est. _____ m3/ha

Hardwood: Survey result 135 m3/ha
Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood: Survey result: 20 years
Your est. _____ years

Mixedwood: Survey result: 15 years
Your est. _____ years

Hardwood: Survey result 10 years
Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:
Survey result: 30 & 50 yrs old
Your est. ____ & ____ yrs old

Mixedwood:
Survey result: 35 & 45 yrs old
Your est. ____ & ____ yrs old

Hardwood:
Survey result: NA & NA yrs old
Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:
Survey result: 150 kg/ha
Your est. _____ kg/ha

Mixedwood:
Survey result: 100 kg/ha
Your est. _____ kg/ha

Hardwood:
Survey result: NA kg/ha
Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 60 %	Survey result: 30 %	Survey result: 10 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.8 m3/ha/yr	Survey result: 1.5 m3/ha/yr	Survey result: NA m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 50 years	Survey result: NA years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.3 m3/ha/yr	Survey result: 1.5 m3/ha/yr	Survey result: 1.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -15 years	Survey result: -10 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.5 m3/ha/yr	Survey result: 2..5 m3/ha/yr	Survey result: 2.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 25 years	Survey result: 20 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -18 years	Survey result: -20 years	Survey result: -15 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -10 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.3 m3/ha/yr	Survey result: 1.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA years	Survey result: NA years	Survey result: NA years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA years	Survey result: NA years	Survey result: NA years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.3 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 1.0 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -3 years	Survey result: -3 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Coast B.C. - Coast**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
198	NA	3.2			125	NA	3.5			22	NA	2.0	
218	3.1	3.1			145	3.5	3.5			42	3.0	3.0	
238	3.1	3.1			168	3.4	3.4			62	2.6	3.1	
258*	3.0	3.0			185*	3.5	3.4			82*	2.9	2.9	
278	2.9	2.9			205	3.5	3.3			102	2.6	2.5	
298	NA	2.8			225	NA	3.2			122	NA	2.0	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 %	Survey result: 5 %	Survey result: 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 2.5 m3/ha/yr	Survey result: 2.5 m3/ha/yr	Survey result: 2.5 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 250 m3/ha	Survey result: 200 m3/ha	Survey result: 150 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 20 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0 & 25 yrs old	Survey result: 0 & 25 yrs old	Survey result: 0 & 25 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA kg/ha	Survey result: NA kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 10 %	Survey result: 50 %	Survey result: 10 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.5 m3/ha/yr	Survey result: 1.5 m3/ha/yr	Survey result: 2.0 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +1.0 m3/ha/yr	Survey result: +1.0 m3/ha/yr	Survey result: +0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 20 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -0.2 m3/ha/yr	Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -11 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -0.3 m3/ha/yr	Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 20 years	Survey result: 20 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: +5 years	Survey result: +5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
27	NA	3.0			29	NA	2.6			01	NA	00	
47	4.4	4.4			49	3.8	4.0			21	2.6	2.6	
67	5.0	4.9			68	4.6	4.6			41	3.3	3.3	
87*	5.1	5.1			89*	4.7	4.7			61*	3.5	3.6	
107	4.6	4.9			109	4.3	4.5			81	3.0	3.4	
127	NA	4.6			129	NA	4.0			101	NA	3.0	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood: Survey result: 5 %
Your est. _____ %

Mixedwood: Survey result: 5 %
Your est. _____ %

Hardwood: Survey result 0 %
Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood: Survey result: 2.5 m3/ha/yr
Your est. _____ m3/ha/yr

Mixedwood: Survey result: 2.5 m3/ha/yr
Your est. _____ m3/ha/yr

Hardwood: Survey result 2.5 m3/ha/yr
Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood: Survey result: 200 m3/ha
Your est. _____ m3/ha

Mixedwood: Survey result: 200 m3/ha
Your est. _____ m3/ha

Hardwood: Survey result 150 m3/ha
Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood: Survey result: 20 years
Your est. _____ years

Mixedwood: Survey result: 20 years
Your est. _____ years

Hardwood: Survey result 10 years
Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:
Survey result: 15 & 63 yrs old
Your est. ____ & ____ yrs old

Mixedwood:
Survey result: 0 & 25 yrs old
Your est. ____ & ____ yrs old

Hardwood:
Survey result: 0 & 25 yrs old
Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:
Survey result: 200 kg/ha
Your est. _____ kg/ha

Mixedwood:
Survey result: NA kg/ha
Your est. _____ kg/ha

Hardwood:
Survey result: NA kg/ha
Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	Medium:	Poor:
Survey result: 5 %	Survey result: 50 %	Survey result: 5 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: 1.5 m3/ha/yr	Survey result: 1.5 m3/ha/yr	Survey result: 2.0 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	Mixedwood:	Hardwood:
Survey result: 13 years	Survey result: 15 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.6 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 11 years	Survey result: 30 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -7 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -0.2 m3/ha/yr	Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -11 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -0.3 m3/ha/yr	Survey result: -0.3 m3/ha/yr	Survey result: -0.2 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 20 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -14 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -9 years	Survey result: +5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 1.0 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -9 years	Survey result: -10 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -7 years	Survey result: -5 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Coast B.C. - Subalpine**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood				Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
209	NA	2.7			193	NA	3.0			07	NA	1.0	
229	2.0	2.6			213	2.9	2.8			27	6.0	2.5	
249	2.1	2.5			233	2.7	2.6			47	4.2	3.5	
269*	2.1	2.4			253*	2.5	2.4			67*	3.8	3.8	
289	2.0	2.2			273	2.5	2.2			87	4.0	3.7	
309	NA	2.0			293	NA	2.0			107	NA	3.4	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 %	Survey result: 5 %	Survey result: 00 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 2.0 m3/ha/yr	Survey result: 2.0 m3/ha/yr	Survey result: NA m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 150 m3/ha	Survey result: 150 m3/ha	Survey result: NA m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 30 years	Survey result: 30 years	Survey result: NA years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0 & 25 yrs old	Survey result: 0 & 25 yrs old	Survey result: 0 & 25 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA kg/ha	Survey result: NA kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 10 %	Survey result: 50 %	Survey result: 10 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.5 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -10 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 20 years	Survey result: 20 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
55	NA	2.8			37	NA	2.0			05	NA	1.5	
75	2.7	4.0			57	2.7	2.6			25	2.7	2.5	
95	3.5	4.8			77	3.3	3.2			45	3.4	3.2	
115*	3.7	4.9			97*	3.6	3.6			65*	3.8	3.8	
135	3.4	4.5			117	3.3	3.5			85	3.6	3.6	
155	NA	4.1			137	NA	3.4			105	NA	3.0	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 %	Survey result: 5 %	Survey result 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 2.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result NA m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 150 m3/ha	Survey result: 150 m3/ha	Survey result NA m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 30 years	Survey result: 30 years	Survey result NA years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 & 73 yrs old	Survey result: 0 & 25 yrs old	Survey result: 0 & 25 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 kg/ha	Survey result: NA kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 10 %	Survey result: 35 %	Survey result: 10 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.5 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -0.5 m3/ha/yr	Survey result: -0..5 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -10 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 20 years	Survey result: 20 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +10 years	Survey result: +10 years	Survey result: +10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.4 m3/ha/yr	Survey result: 0.4 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: -10 years	Survey result: -10 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -5 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Interior B.C. - Columbia**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
103	NA	3.3			83	NA	2.2			47	NA	1.5	
123	3.2	3.2			103	2.2	2.5			67	1.8	1.8	
143	3.1	3.1			123	2.2	2.4			87	1.9	2.0	
163*	2.8	2.9			143*	2.1	2.3			107*	1.9	1.8	
183	2.7	2.7			163	1.8	2.0			127	1.5	1.5	
203	NA	2.4			183	NA	1.9			147	NA	1.0	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 30 %	Survey result: 30 %	Survey result: 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 2.0 m3/ha/yr	Survey result: 1.8 m3/ha/yr	Survey result: NA m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 m3/ha	Survey result: 150 m3/ha	Survey result: NA m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 30 years	Survey result: 30 years	Survey result: NA years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0 & 30 yrs old	Survey result: 0 & 30 yrs old	Survey result: 0 & 20 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA kg/ha	Survey result: NA kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 30 %	Survey result: 10 %	Survey result: 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.5m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -0.7 m3/ha/yr	Survey result: -0.7 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 20 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +10 years	Survey result: +10 years	Survey result: +10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
34	NA	1.2			33	NA	1.0			17	NA	1.0	
54	3.6	2.2			53	2.2	1.8			37	1.8	1.6	
74	3.9	2.8			73	2.4	2.3			57	2.0	2.0	

94*	3.1	3.2			93*	2.4	2.6			77*	2.2	2.2	
114	3.8	3.1			113	2.1	2.5			95	1.8	2.1	
134	NA	3.0			133	NA	2.4			117	NA	1.8	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood: Survey result: 30 %
Your est. _____ %

Mixedwood: Survey result: 30 %
Your est. _____ %

Hardwood: Survey result 00 %
Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood: Survey result: 2.0 m3/ha/yr
Your est. _____ m3/ha/yr

Mixedwood: Survey result: 1.8 m3/ha/yr
Your est. _____ m3/ha/yr

Hardwood: Survey result NA m3/ha/yr
Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood: Survey result: 200 m3/ha
Your est. _____ m3/ha

Mixedwood: Survey result: 150 m3/ha
Your est. _____ m3/ha

Hardwood: Survey result NA m3/ha
Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood: Survey result: 30 years
Your est. _____ years

Mixedwood: Survey result: 30 years
Your est. _____ years

Hardwood: Survey result NA years
Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0 & 20 yrs old	Survey result: 0 & 20 yrs old	Survey result: 0 & 15 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA kg/ha	Survey result: NA kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 30 %	Survey result: 10 %	Survey result: 00 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -0.7 m3/ha/yr	Survey result: -0.7 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr	Survey result: -1.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 20 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Interior B.C. - Montane**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
100	NA	NA			105	NA	NA			95	NA	NA	
120	2.9	NA			125	3.3	NA			115	2.2	NA	
140	2.9	NA			145	3.0	NA			135	2.4	NA	
160*	2.6	NA			165*	2.9	NA			155*	2.2	NA	
180	2.6	NA			185	2.7	NA			175	2.0	NA	
200	NA	NA			205	NA	NA			195	NA	NA	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: %	Survey result: %	Survey result: %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha	Survey result: m3/ha	Survey result: m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: & yrs old	Survey result: & yrs old	Survey result: & yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: kg/ha	Survey result: kg/ha	Survey result: kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: %	Survey result: %	Survey result: %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
40	NA	NA			30	NA	NA			10	NA	NA	
60	2.5	NA			50	2.8	NA			30	2.1	NA	
80	3.0	NA			70	3.2	NA			50	2.5	NA	
100*	3.0	NA			90*	3.4	NA			70*	2.6	NA	
120	3.1	NA			110	3.1	NA			90	2.3	NA	
140	NA	NA			130	NA	NA			110	NA	NA	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: %	Survey result: %	Survey result %
Your est. _____ %	Your est. _____ %	Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: xx m3/ha/yr	Survey result: xx m3/ha/yr	Survey result xx m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha	Survey result: m3/ha	Survey result m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: & yrs old	Survey result: & yrs old	Survey result: & yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: kg/ha	Survey result: kg/ha	Survey result: kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: %	Survey result: %	Survey result: %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	Mixedwood:	Hardwood:
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Interior B.C. - Subalpine**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
130	NA	NA			140	NA	NA			90	NA	NA	
150	3.6	NA			160	2.0	NA			110	1.4	NA	
170	3.4	NA			180	1.9	NA			130	1.3	NA	
190*	2.2	NA			200*	1.8	NA			150*	1.2	NA	
210	3.0	NA			220	1.6	NA			170	1.0	NA	
230	NA	NA			240	NA	NA			190	NA	NA	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: %	Survey result: %	Survey result: %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha	Survey result: m3/ha	Survey result: m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: & yrs old	Survey result: & yrs old	Survey result: & yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: kg/ha	Survey result: kg/ha	Survey result: kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: %	Survey result: %	Survey result: %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
60	NA	NA			40	NA	NA			20	NA	NA	
80	1.9	NA			60	1.5	NA			40	1.2	NA	
100	2.4	NA			80	2.1	NA			60	1.5	NA	
120*	2.5	NA			100*	2.2	NA			80*	1.6	NA	
140	2.7	NA			120	2.1	NA			100	1.5	NA	
160	NA	NA			140	NA	NA			120	NA	NA	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: %	Survey result: %	Survey result %
Your est. _____ %	Your est. _____ %	Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: xx m3/ha/yr	Survey result: xx m3/ha/yr	Survey result xx m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha	Survey result: m3/ha	Survey result m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: & yrs old	Survey result: & yrs old	Survey result: & yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: kg/ha	Survey result: kg/ha	Survey result: kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: %	Survey result: %	Survey result: %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: years	Survey result: years	Survey result: years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey result: m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **NWT and Prairies - Boreal**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
49	NA	1.5			40	NA	1.8			26	NA	2.2	
69	1.7	1.8			60	2.1	2.0			46	2.4	2.4	
89	1.7	1.8			80	1.9	2.0			66	2.5	2.4	
109*	1.6	1.7			100*	1.9	1.9			86*	2.1	2.2	
129	1.5	1.7			120	1.8	1.8			106	1.9	2.0	
149	NA	1.5			140	NA	1.6			126	NA	1.5	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.0 %	Survey result: 1.0 %	Survey result: 0.0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.7 m3/ha/yr	Survey result: 1.9 m3/ha/yr	Survey result: 2.2 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 90 m3/ha	Survey result: 102 m3/ha	Survey result: 00 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 35 years	Survey result: 31 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 25 & 76 yrs old	Survey result: 35 & 78 yrs old	Survey result: 17 & 51 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 65 kg/ha	Survey result: 50 kg/ha	Survey result: 20 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 10 %	Survey result: 3 %	Survey result: 8 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.8 m3/ha/yr	Survey result: 3.0 m3/ha/yr	Survey result: 3.2 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 9 years	Survey result: 8 years	Survey result: 12 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +0.5 m3/ha/yr	Survey result: +0.6 m3/ha/yr	Survey result: +0.6 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 7 years	Survey result: 7 years	Survey result: 8 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -8 years	Survey result: -8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -6 years	Survey result: -6 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +0.1 m3/ha/yr	Survey result: +0.2 m3/ha/yr	Survey result: +0.2 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 8 years	Survey result: 8 years	Survey result: 9 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -8 years	Survey result: -6 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 00 years	Survey result: +2 years	Survey result: +2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +1.0 m3/ha/yr	Survey result: +1.1 m3/ha/yr	Survey result: +1.1 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 12 years	Survey result: 11 years	Survey result: 11 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -7 years	Survey result: -5 years	Survey result: -2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +2 years	Survey result: +2 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
30	NA	1.5			33	NA	1.9			8	NA	2.2	
50	2.2	2.0			53	2.4	2.3			28	2.7	2.6	
70	2.3	2.1			73	2.5	2.4			48	2.8	2.6	
90*	2.1	2.1			93*	2.3	2.3			68*	2.6	2.5	
110	2.2	1.9			113	2.4	2.3			88	2.6	2.1	
130	NA	1.8			133	NA	2.0			108	NA	2.3	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	Survey result: 2 %	**Mixedwood:**	Survey result: 6 %	**Hardwood:**	Survey result: 13 %
	Your est. _____ %		Your est. _____ %		Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	Survey result: 1.9 m3/ha/yr	**Mixedwood:**	Survey result: 2.0 m3/ha/yr	**Hardwood :**	Survey result 2.0 m3/ha/yr
	Your est. _____ m3/ha/yr		Your est. _____ m3/ha/yr		Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 12 m3/ha	Survey result: 103 m3/ha	Survey result NA m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 32 years	Survey result: 29 years	Survey result 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 40 & 88 yrs old	Survey result: 43 & 97 yrs old	Survey result: 20 & 63 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 65 kg/ha	Survey result: 100 kg/ha	Survey result: 25 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 20 %	Survey result: 5 %	Survey result: 13 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.8 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 0.9 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 12 years	Survey result: 15 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: +0.6 m3/ha/yr	Survey result: +0.6 m3/ha/yr	Survey result: +0.7 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 8 years	Survey result: 8 years	Survey result: 9 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -7 years	Survey result: -7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -7 years	Survey result: -7 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: +0.3 m3/ha/yr	Survey result: +0.4 m3/ha/yr	Survey result: +0.4 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 9 years	Survey result: 9 years	Survey result: 11 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -7 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 2 years	Survey result: 2 years	Survey result: 2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: +1.1 m3/ha/yr	Survey result: +1.1 m3/ha/yr	Survey result: +1.1 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 12 years	Survey result: 11 years	Survey result: 12 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -7 years	Survey result: -4 years	Survey result: -2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +2 years	Survey result: +2 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.9 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -12 years	Survey result: -12 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -2 years	Survey result: -1 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Ontario - Boreal**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
40	NA	1.6			33	NA	1.9			23	NA	1.8	
60	1.9	1.9			53	2.2	2.5			43	2.8	2.7	
80	1.8	2.0			73	2.2	2.5			63	2.8	2.9	
100*	1.7	1.8			93*	2.0	2.2			83*	2.6	2.4	
120	1.5	1.6			113	1.9	1.8			103	2.3	2.0	
140	NA	1.3			133	NA	1.5			123	NA	1.6	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 6 %	Survey result: 13 %	Survey result: 19 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.8 m3/ha/yr	Survey result: 2.2 m3/ha/yr	Survey result: 2.3 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 54 m3/ha	Survey result: 50 m3/ha	Survey result: 57 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 24 years	Survey result: 24 years	Survey result: 21 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 13 & 41 yrs old	Survey result: 14 & 41 yrs old	Survey result: 12 & 36 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 175 kg/ha	Survey result: 175 kg/ha	Survey result: 175 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 31 %	Survey result: 25 %	Survey result: 11 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.9 m3/ha/yr	Survey result: 0.6 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 10 years	Survey result: 11 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.7 m3/ha/yr	Survey result: 0.4 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 11 years	Survey result: 6 years	Survey result: 9 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -3 years	Survey result: +2 years	Survey result: +8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 00 years	Survey result: +3 years	Survey result: +10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.9 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.1 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 11 years	Survey result: 11 years	Survey result: 14 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -3 years	Survey result: +1 years	Survey result: +1 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -1 years	Survey result: +1 years	Survey result: +1 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.8 m3/ha/yr	Survey result: 1.2 m3/ha/yr	Survey result: 1.2 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 11 years	Survey result: 13 years	Survey result: 12 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +2 years	Survey result: +3 years	Survey result: +3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +3 years	Survey result: +2 years	Survey result: +2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Miedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
19	NA	1.2			15	NA	1.2			1	NA	1.1	
39	1.5	1.7			35	1.7	2.1			21	2.1	2.2	
59	2.0	1.9			55	2.1	2.4			41	2.6	2.5	
79*	1.8	2.0			75*	2.3	2.5			61*	2.8	2.7	
99	1.7	1.8			95	2.1	2.1			81	2.5	2.3	
119	NA	1.6			115	NA	1.7			101	NA	1.6	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 9 %	Survey result: 18 %	Survey result 21 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.9 m3/ha/yr	Survey result: 2.1 m3/ha/yr	Survey result 2.2 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 47 m3/ha	Survey result: 47 m3/ha	Survey result 46 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 24 years	Survey result: 21 years	Survey result 21 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 13 & 44 yrs old	Survey result: 14 & 45 yrs old	Survey result: 12 & 38 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 150 kg/ha	Survey result: 150 kg/ha	Survey result: 150 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 28 %	Survey result: 24 %	Survey result: 16 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.6 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 10 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.6 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 10 years	Survey result: 7 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: +1 years	Survey result: +2 years	Survey result: +8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +1 years	Survey result: +2 years	Survey result: +8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 14 years	Survey result: 13 years	Survey result: 14 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -2 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: +1 years	Survey result: +1 years	Survey result: +1 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 13 years	Survey result: 14 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: +1 years	Survey result: +3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +1 years	Survey result: -1 years	Survey result: +1 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +6 years	Survey result: +5 years	Survey result: +4 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +5 years	Survey result: +4 years	Survey result: +3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Ontario - Great Lakes / St. Lawrence**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
53	NA	2.5			42	NA	2.0			50	NA	1.9	
73	1.9	2.3			62	2.3	2.3			70	2.4	2.2	
93	1.9	2.2			82	2.6	2.5			90	2.2	2.3	
113*	1.7	2.1			102*	2.2	2.3			110*	2.0	2.0	
133	1.5	1.9			122	1.9	2.1			130	1.8	1.8	
153	NA	1.7			142	NA	2.0			150	NA	1.7	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 %	Survey result: 32 %	Survey result: 47 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 2.4 m3/ha/yr	Survey result: 2.7 m3/ha/yr	Survey result: 2.1 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 58 m3/ha	Survey result: 62 m3/ha	Survey result: 65 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 22 years	Survey result: 22 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 13 & 38 yrs old	Survey result: 13 & 39 yrs old	Survey result: 13 & 39 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 kg/ha	Survey result: 200 kg/ha	Survey result: 225 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 25 %	Survey result: 18 %	Survey result: 8 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.9 m3/ha/yr	Survey result: 1.2 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 6 years	Survey result: 6 years	Survey result: 5 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +0.9 m3/ha/yr	Survey result: +0.7 m3/ha/yr	Survey result: +0.6 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 12 years	Survey result: 7 years	Survey result: 7 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -1 years	Survey result: +7 years	Survey result: +7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +6 years	Survey result: +7 years	Survey result: +7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.1 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.1 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 13 years	Survey result: 8 years	Survey result: 8 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 5 years	Survey result: 5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 4 years	Survey result: 6 years	Survey result: 6 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 1.0 m3/ha/yr	Survey result: 0.9 m3/ha/yr	Survey result: 1.0 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 9 years	Survey result: 8 years	Survey result: 8 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: 5 years	Survey result: 5 years	Survey result: 5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 5 years	Survey result: 5 years	Survey result: 5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
27	NA	2.8			21	NA	1.5			21	NA	1.5	
47	2.8	3.2			41	2.8	2.8			41	3.1	2.7	
67	2.8	2.9			61	2.9	3.0			61	2.9	2.7	
87*	2.6	2.6			81*	2.5	2.8			81*	2.7	2.6	
107	2.3	2.3			101	2.1	2.5			101	2.5	2.3	
127	NA	1.9			121	NA	2.2			121	NA	1.9	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	Survey result: 25 %	**Mixedwood:**	Survey result: 43 %	**Hardwood:**	Survey result 45 %
	Your est. _____ %		Your est. _____ %		Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	Survey result: 2.1 m3/ha/yr	**Mixedwood:**	Survey result: 2.5 m3/ha/yr	**Hardwood:**	Survey result 2.2 m3/ha/yr
	Your est. _____ m3/ha/yr		Your est. _____ m3/ha/yr		Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 93 m3/ha	Survey result: 93 m3/ha	Survey result 110 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 23 years	Survey result: 22 years	Survey result 22 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 11 & 35 yrs old	Survey result: 11 & 36 yrs old	Survey result: 11 & 36 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 kg/ha	Survey result: 200 kg/ha	Survey result: 225 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 52 %	Survey result: 33 %	Survey result: 5 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.7 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.4 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 6 years	Survey result: 7 years	Survey result: 7 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 9 years	Survey result: 8 years	Survey result: 9 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: 9 years	Survey result: 7 years	Survey result: 7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 9 years	Survey result: 7 years	Survey result: 7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 13 years	Survey result: 11 years	Survey result: 11 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: 7 years	Survey result: 7 years	Survey result: 5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 7 years	Survey result: 7 years	Survey result: 6 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.6 m3/ha/yr	Survey result: 0.6 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 11 years	Survey result: 9 years	Survey result: 9 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: 7 years	Survey result: 6 years	Survey result: 6 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 8 years	Survey result: 7 years	Survey result: 7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.9 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.1 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 6 years	Survey result: 6 years	Survey result: 7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 6 years	Survey result: 6 years	Survey result: 8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Quebec - Boreal**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
44	NA	0.8			32	NA	1.2			18	NA	1.5	
64	1.0	1.2			52	1.5	1.6			38	1.4	1.7	
84	1.1	1.1			72	1.6	1.7			58	2.0	2.1	
104*	0.9	1.0			92*	1.4	1.5			78*	1.7	1.8	
124	0.7	0.8			112	1.0	1.0			98	1.5	1.5	
144	NA	0.6			132	NA	0.8			118	NA	1.0	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 6 %	Survey result: 10 %	Survey result: 5 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.3 m3/ha/yr	Survey result: 1.7 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 40 m3/ha	Survey result: 85 m3/ha	Survey result: 113 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 30 years	Survey result: 25 years	Survey result: 22 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	Mixedwood:	Hardwood:
Survey result: 51 & 62 yrs old	Survey result: 44 &56 yrs old	Survey result: 38 & 49 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	Mixedwood:	Hardwood:
Survey result: 283 kg/ha	Survey result: 300 kg/ha	Survey result: 275 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	Medium:	Poor:
Survey result: 38 %	Survey result: 26 %	Survey result: 00 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.9 m3/ha/yr	Survey result: 0.9 m3/ha/yr	Survey result: 1.2 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	Mixedwood:	Hardwood:
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 1.0 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.1 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 26 years	Survey result: 27 years	Survey result: 16 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 000- years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 29 years	Survey result: 28 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -8 years	Survey result: -8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -4 years	Survey result: -4 years	Survey result: -4 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 1.3 m3/ha/yr	Survey result: 1.3 m3/ha/yr	Survey result: 1.3 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 14 years	Survey result: 14 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
16	NA	0.9			6	NA	0.6			0	NA	0.9	
36	0.9	0.9			26	0.9	1.1			16	1.1	1.3	
56	1.2	1.2			46	1.6	1.8			36	1.7	2.0	
76*	1.2	1.4			66*	1.8	1.7			56*	2.0	2.1	
96	1.0	1.1			86	1.5	1.4			76	1.7	1.9	
116	NA	0.8			106	NA	0.5			96	NA	1.7	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	Survey result: 8 %	**Mixedwood:**	Survey result: 12 %	**Hardwood:**	Survey result 5 %
	Your est. _____ %		Your est. _____ %		Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	Survey result: 1.1 m3/ha/yr	**Mixedwood:**	Survey result: 1.4 m3/ha/yr	**Hardwood:**	Survey result 1.7 m3/ha/yr
	Your est. _____ m3/ha/yr		Your est. _____ m3/ha/yr		Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 40 m3/ha	Survey result: 60 m3/ha	Survey result 65 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 13 years	Survey result 18 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 42 & 55 yrs old	Survey result: 36 & 50 yrs old	Survey result: 35 & 46 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 283 kg/ha	Survey result: 300 kg/ha	Survey result: 275 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 29 %	Survey result: 29 %	Survey result: 00 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.9 m3/ha/yr	Survey result: 0.9 m3/ha/yr	Survey result: 1.2 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 1.1 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.2 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 26 years	Survey result: 23 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -3 years	Survey result: -3 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: +1 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.7 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 29 years	Survey result: 25 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -2 years	Survey result: -2 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 1.3 m3/ha/yr	Survey result: 1.3 m3/ha/yr	Survey result: 1.4 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 14 years	Survey result: 14 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.6 m3/ha/yr	Survey result: 0.7 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -8 years	Survey result: -8 years	Survey result: -8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -6 years	Survey result: -6 years	Survey result: -6 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Quebec - Great Lakes / St. Lawrence**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
0	NA	0.9			10	NA	1.1			25	NA	1.4	
20	1.5	1.4			30	1.6	1.6			42	1.7	1.7	
40	1.6	1.6			50	2.0	2.0			65	2.0	2.1	
60*	1.5	1.7			70*	2.1	2.1			85*	2.2	2.1	
80	1.2	1.4			90	2.0	2.2			105	2.1	2.0	
100	NA	1.0			110	NA	1.8			125	NA	1.8	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 12 %	Survey result: 31 %	Survey result: 50 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.6 m3/ha/yr	Survey result: 2.1 m3/ha/yr	Survey result: 2.1 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 105 m3/ha	Survey result: 105 m3/ha	Survey result: 109 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 21 years	Survey result: 19 years	Survey result: 19 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 43 & 56 yrs old	Survey result: 39 & 56 yrs old	Survey result: 53 & 66 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 238 kg/ha	Survey result: 263 kg/ha	Survey result: 333 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 35 %	Survey result: 26 %	Survey result: 6 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.8 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.9 m3/ha/yr	Survey result: 0.7 m3/ha/yr	Survey result: 0.6 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 18 years	Survey result: 21 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -6 years	Survey result: -6 years	Survey result: -7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -2 years	Survey result: -2 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.8 m3/ha/yr	Survey result: 0.8 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 17 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -8 years	Survey result: -7 years	Survey result: -7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -3 years	Survey result: -3 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 13 years	Survey result: 13 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -8 years	Survey result: -7 years	Survey result: -7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +4 years	Survey result: +2 years	Survey result: +2 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
0	NA	1.3			10	NA	1.3			50	NA	1.6	
18	0.4	1.1			30	0.9	1.4			70	1.2	1.8	
38	0.9	1.7			50	1.5	2.0			90	1.7	2.1	
58*	1.7	1.9			70*	1.7	2.0			110*	1.9	2.1	
78	1.5	1.7			90	1.7	1.9			130	1.8	2.0	
98	NA	1.5			110	NA	1.8			150	NA	0.8	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	Survey result: 15 %	**Mixedwood:**	Survey result: 34%	**Hardwood:**	Survey result 57 %
	Your est. _____ %		Your est. _____ %		Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	Survey result: 1.7 m3/ha/yr	**Mixedwood:**	Survey result: 2.1 m3/ha/yr	**Hardwood:**	Survey result 2.0 m3/ha/yr
	Your est. _____ m3/ha/yr		Your est. _____ m3/ha/yr		Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 103 m3/ha	Survey result: 103 m3/ha	Survey result 107 m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 18 years	Survey result 18 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 32 & 48 yrs old	Survey result: 37 & 53 yrs old	Survey result: 44 & 59 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 238 kg/ha	Survey result: 263 kg/ha	Survey result: 288 kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 33 %	Survey result: 27 %	Survey result: 6 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.1 m3/ha/yr	Survey result: 0.7 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 12 years	Survey result: 11 years	Survey result: 11 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.1 m3/ha/yr	Survey result: 0.8 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 18 years	Survey result: 21 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -8 years	Survey result: -7 years	Survey result: -8 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -2 years	Survey result: -2 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.6 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 17 years	Survey result: 20 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -8 years	Survey result: -9 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -3 years	Survey result: -3 years	Survey result: -3 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 13 years	Survey result: 12 years	Survey result: 11 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -7 years	Survey result: -7 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.6 m3/ha/yr	Survey result: 0.4 m3/ha/yr	Survey result: 0.4 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -6 years	Survey result: -6 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	Mixedwood:	Hardwood:
Survey result: -8 years	Survey result: -6 years	Survey result: -6 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

ADMINISTRATIVE / BIOLOGICAL REGION **Yukon and Interior B.C. - Boreal**

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
85	NA	1.9			80	NA	2.2			55	NA	1.9	
105	1.7	1.9			100	2.1	2.2			75	1.9	2.0	
125	1.6	1.6			120	1.9	1.9			95	1.9	1.9	
145*	1.5	1.5			140*	1.8	1.8			115*	1.9	1.8	
165	1.4	1.5			160	1.6	1.7			135	1.7	1.5	
185	NA	1.4			180	NA	1.5			155	NA	1.2	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

1b. What proportion of the area is managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 %	Survey result: 0 %	Survey result: 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

1c. What is the growth per ha/year on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA m3/ha/yr	Survey result: NA m3/ha/yr	Survey result: NA m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

1d. What after-cut growing stock level is left on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA m3/ha	Survey result: NA m3/ha	Survey result: NA m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

1e. What is the average cutting cycle used on areas managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 30 years	Survey result: NA years	Survey result: NA years
Your est. _____ years	Your est. _____ years	Your est. _____ years

2. From Questionnaire #2 the results regarding **fertilization** of existing stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

2a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 & 30 yrs old	Survey result: 0 & 30 yrs old	Survey result: 0 & 30 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

2b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result:200 kg/ha	Survey result: NA kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

2c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 55 %	Survey result: 0 %	Survey result: 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

2d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.7 m3/ha/yr	Survey result: 0.3 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

2e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 13 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

3a. For existing immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

3aa. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3ab. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3ac. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3ad. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3b. For existing immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

3ba. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3bb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3bc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -10 years	Survey result: -10 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3bd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3c. For existing immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

3ca. Change in growth?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -1.0 m3/ha/yr	Survey result: -1.0 m3/ha/yr	Survey result: -1.0 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

3cb. How long would this change in growth last?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 20 years	Survey result: 20 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

3cc. Change in rotation based on harvestable tree size?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

3cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1 and #2, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 results led to a mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. Please examine each case below and provide final revised estimates of MAI for each species/age class. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. Remember, the MAI should be maximum at the 20 year age class where you expect maximum biological growth for pulpwood utilization for the region.

	Softwood					Mixedwood					Hardwood		
Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI		Age	Que#1 MAI	Que#2 MAI	Final MAI
55	NA	1.8			45	NA	2.0			15	NA	1.9	
75	1.6	1.9			65	2.2	2.1			35	2.1	2.2	
95	2.1	2.0			85	2.6	2.2			55	2.7	2.3	
115*	2.1	2.0			105*	2.5	2.2			75*	2.7	2.3	
135	1.9	1.9			125	2.4	2.1			95	2.5	2.2	
155	NA	1.8			145	NA	1.9			115	NA	1.9	

The aggregated results below are taken from round 2 survey results. Please review the figures and provide any revised figures that you deem more representative of the region. If your revised figure agrees with the survey figure, please enter your estimate even if it is the same as the survey one.

4b. What proportion of the area will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 %	Survey result: 0 %	Survey result 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

4c. What growth per ha/year do you expect on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA m3/ha/yr	Survey result: NA m3/ha/yr	Survey result NA m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. ____ m3/ha/yr

4d. What after-cut growing stock level do you expect to be left on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: NA m3/ha	Survey result: NA m3/ha	Survey result NA m3/ha
Your est. _____ m3/ha	Your est. _____ m3/ha	Your est. _____ m3/ha

4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 30 years	Survey result: NA years	Survey result NA years
Your est. _____ years	Your est. _____ years	Your est. _____ years

5. From Questionnaire #2 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Base your figures on one-time application (comments from the previous round suggested that number of applications be clarified). Please enter your estimates even if in one or more cases they are identical to those of the survey results.

5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 5 & 30 yrs old	Survey result: 0 & 30 yrs old	Survey result: 0 & 30 yrs old
Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old	Your est. ____ & ____ yrs old

5b. At what rate of fertilizer (kg/ha) would you apply?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 200 kg/ha	Survey result: NA kg/ha	Survey result: NA kg/ha
Your est. _____ kg/ha	Your est. _____ kg/ha	Your est. _____ kg/ha

5c. If sites are distinguished as Good, Medium and Poor what proportion of sites would you fertilize?

Good:	**Medium:**	**Poor:**
Survey result: 55 %	Survey result: 0 %	Survey result: 0 %
Your est. _____ %	Your est. _____ %	Your est. _____ %

5d. What increase in growth (m3/ha/yr) would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.7 m3/ha/yr	Survey result: 0.3 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

5e. How long would the increased growth indicated above last (years)?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 13 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. Each question below applies only to immature stands. The mean of your responses to round 2 are given below. Please review these results and provide revised estimates. If your estimate agrees with the mean figure from round 2, please enter this as your estimate.

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

6aa. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6ab. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6ac. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6ad. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr	Survey result: -0.5 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6bb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6bc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -10 years	Survey result: -10 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6bd. Change in rotation based on maximum MAI?

Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6c. For regenerated immature stands what do you expect from **commercial thinning** (include thinning plus final harvest) regarding:

6ca. Change in growth?

Softwood:	Mixedwood:	Hardwood:
Survey result: -1.0 m3/ha/yr	Survey result: -1.0 m3/ha/yr	Survey result: -1.0 m3/ha/yr
Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr	Your est. +/-_____ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:	Hardwood:
Survey result: 20 years	Survey result: 20 years	Survey result: 15 years
Your est. _____ years	Your est. _____ years	Your est. _____ years

6cc. Change in rotation based on harvestable tree size?

Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: +-5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

6cd. Change in rotation based on maximum MAI?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: +10 years	Survey result: +10 years	Survey result: +10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7. From Questionnaire #2, the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below. Please review these figures and provide any revised figures that you deem more representative of the region. Please enter your estimates even if, in one or more cases, they are identical to those of the survey results.

7a. What change in MAI do you expect from greater improvement?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: 0.3 m3/ha/yr	Survey result: 0.3 m3/ha/yr	Survey result: 0.5 m3/ha/yr
Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr	Your est. _____ m3/ha/yr

7b. What change in rotation based on harvestable tree size would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

7c. What change in rotation based on Maximum MAI would you expect?

Softwood:	**Mixedwood:**	**Hardwood:**
Survey result: -5 years	Survey result: -5 years	Survey result: -10 years
Your est. +/-_____ years	Your est. +/-_____ years	Your est. +/-_____ years

Questionnaire #1, #2 and #3 Results

By Region

Atlantic - Acadian

Atlantic - Boreal

Coast B.C. - Coast

Coast B.C. - Subalpine

Interior B.C. - Columbia

Interior B.C. - Montane

Interior B.C. - Subalpine

NWT and the Prairies - Boreal

Ontario - Boreal

Ontario - Great Lakes/St. Lawrence

Quebec - Boreal

Quebec - Great Lakes/St. Lawrence

Yukon and Interior B.C. - Boreal

ADMINISTRATIVE / BIOLOGICAL REGION

Atlantic - Acadian

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
16	NA	2.4	2.0		18	NA	2.2	2.2		23	NA	1.8	2.3
36	2.5	1.8	2.2		38	2.1	2.0	2.3		43	1.9	2.0	2.4
56	2.3	1.8	2.2		58	2.1	1.9	2.3		63	2.0	1.9	2.3
76*	1.9	1.8	1.7		78*	1.8	1.8	1.8		83*	1.7	1.7	1.9
96	1.4	1.3	1.1		98	1.5	1.3	1.4		103	1.7	1.3	1.5
116	NA	0.1	0.3		118	NA	0.9	1.0		123	NA	1.0	1.2

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 4% Ques #3 result: 4%
Mixedwood: Ques #2 result: 14% Ques #3 result: 9%
Hardwood: Ques #2 result: 22% Ques #3 result: 23%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Mixedwood: Ques #2 result: 1.8 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Hardwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 77 m^3/ha Ques #3 result: 79 m^3/ha
Mixedwood: Ques #2 result: 73 m^3/ha Ques #3 result: 77 m^3/ha
Hardwood: Ques #2 result: 73 m^3/ha Ques #3 result: 77 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 20 years Ques #3 result: 18 years
Mixedwood: Ques #2 result: 22 years Ques #3 result: 18 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 18 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 38 & 50 yrs old Ques #3 result: 32 & 45 yrs old
Mixedwood: Ques #2 result: 43 & 60 yrs old Ques #3 result: 34 & 50 yrs old
Hardwood: Ques #2 result: 43 & 65 yrs old Ques #3 result: 34 & 53 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha
Mixedwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha
Hardwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 35% Ques #3 result: 28%
Medium: Ques #2 result: 55% Ques #3 result: 60%
Poor: Ques #2 result: 10% Ques #3 result: 13%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.2 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr
Mixedwood: Ques #2 result: 0.2 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr
Hardwood: Ques #2 result: 0.2 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 5 years Ques #3 result: 5 years
Mixedwood: Ques #2 result: 5 years Ques #3 result: 5years
Hardwood: Ques #2 result: 5 years Ques #3 result: 5 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Mixedwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Hardwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 13 years Ques #3 result: 13 years
Mixedwood: Ques #2 result: 13 years Ques #3 result: 13 years
Hardwood: Ques #2 result: 13 years Ques #3 result: 13 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -2 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -2 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -2 years Ques #3 result: -5 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -3 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: -3 years Ques #3 result: -2 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -2 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: 2.2 m^3/ha/yr Ques #3 result: 2.6 m^3/ha/yr
Mixedwood: Ques #2 result: 2.1 m^3/ha/yr Ques #3 result: 2.6 m^3/ha/yr
Hardwood: Ques #2 result: 2.1 m^3/ha/yr Ques #3 result: 2.6 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 22 years Ques #3 result: 23 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 23 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 23 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -13 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: -12 years Ques #3 result: 2 years
Hardwood: Ques #2 result: -12 years Ques #3 result: 2 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 3 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 3 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 3 years Ques #3 result: 10 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Mixedwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 18 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 18 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 18 years Ques #3 result: 20 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 3 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 3 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 3 years Ques #3 result: 10 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
0	NA	1.5	1.0		0	NA	1.3	1		0	NA	1.1	1
8	2.3	2.6	2.3		15	2.1	2.3	2.8		18	1.9	2.3	2.8
28	3.2	3.5	3.7		35	2.2	2.5	2.8		38	2.3	2.4	2.8
48*	2.8	3.2	3.0		55*	2.2	2.5	2.2		58*	2.0	2.5	2.3
68	4.1	3.0	2.9		75	2.9	2.1	2.0		78	2.2	2.2	2.0
88	NA	2.6	2.3		95	NA	1.9	1.8		98	NA	1.9	1.9

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 2% Ques #3 result: 4%
Mixedwood: Ques #2 result: 7% Ques #3 result: 6%
Hardwood: Ques #2 result: 20% Ques #3 result: 20%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.9 m^3/ha/yr
Mixedwood: Ques #2 result: 1.8 m^3/ha/yr Ques #3 result: 1.9 m^3/ha/yr
Hardwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.9 m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 77 m^3/ha Ques #3 result: 78 m^3/ha
Mixedwood: Ques #2 result: 73 m^3/ha Ques #3 result: 78 m^3/ha
Hardwood: Ques #2 result: 73 m^3/ha Ques #3 result: 78 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 20 years Ques #3 result: 18 years
Mixedwood: Ques #2 result: 22 years Ques #3 result: 18 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 18 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 33 & 45 yrs old Ques #3 result: 25 & 40 yrs old
Mixedwood: Ques #2 result: 38 & 50 yrs old Ques #3 result: 25 & 40 yrs old
Hardwood: Ques #2 result: 38 & 55 yrs old Ques #3 result: 25 & 50 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha
Mixedwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha
Hardwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 35% Ques #3 result: 30%
Medium: Ques #2 result: 55% Ques #3 result: 70%
Poor: Ques #2 result: 10% Ques #3 result: 0%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.3 m^3/ha/yr Ques #3 result: 0.1 m^3/ha/yr
Mixedwood: Ques #2 result: 0.2 m^3/ha/yr Ques #3 result: 0.1 m^3/ha/yr
Hardwood: Ques #2 result: 0.2 m^3/ha/yr Ques #3 result: 0.1m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 5 years Ques #3 result: 5 years
Mixedwood: Ques #2 result: 5 years Ques #3 result: 5 years
Hardwood: Ques #2 result: 5 years Ques #3 result: 5 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 13 years Ques #3 result: 13 years
Mixedwood: Ques #2 result: 13 years Ques #3 result: 13 years
Hardwood: Ques #2 result: 13 years Ques #3 result: 13 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -2 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: -2 years Ques #3 result: 0 years
Hardwood: Ques #2 result: -2 years Ques #3 result: 0 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 4 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 4 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 4 years Ques #3 result: 0 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: 2.2 m^3/ha/yr Ques #3 result: 2.1 m^3/ha/yr
Mixedwood: Ques #2 result: 2.2 m^3/ha/yr Ques #3 result: 2.4 m^3/ha/yr
Hardwood: Ques #2 result: 2.3 m^3/ha/yr Ques #3 result: 2.6 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 20 years Ques #3 result: 23 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 23 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 23 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 7 years Ques #3 result: -13 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: -13 years
Hardwood: Ques #2 result: 7 years Ques #3 result: -11 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 13 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 14 years Ques #3 result: 12 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 15 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0 m^3/ha/yr
Mixedwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0 m^3/ha/yr
Hardwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 13 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 13 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 13 years Ques #3 result: 10 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 3 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 4 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 3 years Ques #3 result: 10 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Mixedwood: Ques #2 result: 0.3 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Hardwood: Ques #2 result: 0.3 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -2 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: -2 years
Hardwood: Ques #2 result: 0 years Ques #3 result: -2 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: 3 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 5 years Ques #3 result: NA years
Hardwood: Ques #2 result: 5 years Ques #3 result: NA years

ADMINISTRATIVE / BIOLOGICAL REGION

Atlantic - Boreal

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
31	NA	1.4	1.1		34	NA	1.6	1.8		15	NA	1.1	1.3
51	1.9	1.6	2.0		54	2.3	2.1	2.3		35	1.9	1.8	1.9
71	1.8	1.6	1.9		74	2.1	1.8	2.0		55	1.9	1.7	1.8
91*	1.6	1.3	1.6		94*	1.7	1.4	1.7		75*	1.7	1.5	1.6
111	1.1	1.1	1.1		114	1.3	1.2	1.1		95	1.5	1.3	1.3
131	NA	1.0	1.0		134	NA	1.0	0.6		115	NA	1.1	1.0

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 2.0% Ques #3 result: 2.0%
Mixedwood: Ques #2 result: 3.0% Ques #3 result: 2.5%
Hardwood: Ques #2 result: 3.0% Ques #3 result: 2.5%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 1.7 m^3/ha/yr Ques #3 result: 1.7 m^3/ha/yr
Mixedwood: Ques #2 result: 1.8 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Hardwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.9 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 75 m^3/ha Ques #3 result: 75 m^3/ha
Mixedwood: Ques #2 result: 100 m^3/ha Ques #3 result: 100 m^3/ha
Hardwood: Ques #2 result: 125 m^3/ha Ques #3 result: 125 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 15years Ques #3 result: 15 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 50 & 70 yrs old Ques #3 result: 50 & 70 yrs old
Mixedwood: Ques #2 result: 45 & 55 yrs old Ques #3 result: 45 & 55 yrs old
Hardwood: Ques #2 result: NA & NA yrs old Ques #3 result: NA & NA yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha
Mixedwood: Ques #2 result: 150 kg/ha Ques #3 result: 150 kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 50%
Ques #3 result: 50%

Medium: Ques #2 result: 30%
Ques #3 result: 30%

Poor: Ques #2 result: 20%
Ques #3 result: 20%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.5m^3/ha/yr
Ques #3 result: 1.5 m^3/ha/yr

Mixedwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: NA m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 10 years
Ques #3 result: 10 years

Mixedwood: Ques #2 result: 5 years
Ques #3 result: 5 years

Hardwood: Ques #2 result: NA years
Ques #3 result: NA years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr

Mixedwood: Ques #2 result: 1.3 m^3/ha/yr
Ques #3 result: 1.3 m^3/ha/yr

Hardwood: Ques #2 result: 1.5 m^3/ha/yr
Ques #3 result: 1.5 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 15 years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: 15 years
Ques #3 result: 15 years

Hardwood: Ques #2 result: 5 years
Ques #3 result: 5 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Hardwood: Ques #2 result: -5 years
Ques #3 result: -5 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: -3 years
Ques #3 result: -3 years

Hardwood: Ques #2 result: -3 years
Ques #3 result: -5 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: 1.8 m^3/ha/yr
Ques #3 result: 1.8 m^3/ha/yr

Mixedwood: Ques #2 result: 2.3 m^3/ha/yr
Ques #3 result: 2.3 m^3/ha/yr

Hardwood: Ques #2 result: 2.5 m^3/ha/yr
Ques #3 result: 2.5 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 25 years
Ques #3 result: 23 years

Mixedwood: Ques #2 result: 15 years
Ques #3 result: 15 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 10 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -20 years
Ques #3 result: -18 years

Mixedwood: Ques #2 result: -15 years
Ques #3 result: -15 years

Hardwood: Ques #2 result: -10 years
Ques #3 result: -10 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -10 years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Hardwood: Ques #2 result: -5 years
Ques #3 result: -5 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Hardwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -3 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -2 years
Hardwood: Ques #2 result: NA years Ques #3 result: NA years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 3 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 2 years
Hardwood: Ques #2 result: NA years Ques #3 result: NA years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
0	NA	0.8	0.0		0	NA	0.0	0.0		0	NA	NA	NA
19	2.0	0.5	0.3		18	2.3	1.4	1.0		12	2.0	1.3	1.3
39	2.2	1.8	1.9		38	2.4	2.2	2.0		32	2.3	2.3	2.3
59*	2.2	2.4	2.3		58*	2.4	2.8	2.5		52*	2.0	2.8	2.8
79	2.0	2.1	2.0		78	2.0	2.3	2.3		72	1.6	2.5	2.5
99	NA	1.7	1.7		98	NA	1.7	1.5		92	NA	1.8	1.8

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 3.0% Ques #3 result: 3.0%
Mixedwood: Ques #2 result: 3.0% Ques #3 result: 5.0%
Hardwood: Ques #2 result: 3.0% Ques #3 result: 5.0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 1.8 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Mixedwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: NA m^3/ha/yr
Hardwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: NA m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 85 m^3/ha **Mixedwood:** Ques #2 result: 110 m^3/ha **Hardwood:** Ques #2 result: 135 m^3/ha
Ques #3 result: 85 m^3/ha Ques #3 result: 110 m^3/ha Ques #3 result: 135 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 20 years **Mixedwood:** Ques #2 result: 15 years **Hardwood:** Ques #2 result: 10 years
Ques #3 result: 20 years Ques #3 result: 15 years Ques #3 result: 10 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 30 & 50 yrs old **Mixedwood:** Ques #2 result: 35 & 45 yrs old **Hardwood:** Ques #2 result: NA & NA yrs old
Ques #3 result: 30 & 50 yrs old Ques #3 result: 35 & 45 yrs old Ques #3 result: NA & NA yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 150 kg/ha **Mixedwood:** Ques #2 result: 100 kg/ha **Hardwood:** Ques #2 result: NA kg/ha
Ques #3 result: 150 kg/ha Ques #3 result: 100 kg/ha Ques #3 result: NA kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 60% **Medium:** Ques #2 result: 30% **Poor:** Ques #2 result: 10%
Ques #3 result: 60% Ques #3 result: 30% Ques #3 result: 10%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.8 m^3/ha/yr **Mixedwood:** Ques #2 result: 1.5 m^3/ha/yr **Hardwood:** Ques #2 result: NA m^3/ha/yr
Ques #3 result: 1.8 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr Ques #3 result: NA m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 10 years **Mixedwood:** Ques #2 result: 50 years **Hardwood:** Ques #2 result: NA years
Ques #3 result: 10 years Ques #3 result: 5 years Ques #3 result: NA years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 1.3 m^3/ha/yr **Mixedwood:** Ques #2 result: 1.5 m^3/ha/yr **Hardwood:** Ques #2 result: 1.8 m^3/ha/yr
Ques #3 result: 1.3 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 20 years **Mixedwood:** Ques #2 result: 10 years **Hardwood:** Ques #2 result: 10 years
Ques #3 result: 20 years Ques #3 result: 10 years Ques #3 result: 10 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -15 years **Mixedwood:** Ques #2 result: -10 years **Hardwood:** Ques #2 result: -10 years
Ques #3 result: -15 years Ques #3 result: -10 years Ques #3 result: -10 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -10 years **Mixedwood:** Ques #2 result: -5 years **Hardwood:** Ques #2 result: -5 years
Ques #3 result: -10 years Ques #3 result: -5 years Ques #3 result: -5 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 1.4 m^3/ha/yr
Mixedwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr
Hardwood: Ques #2 result: 2.8 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 25 years Ques #3 result: 30 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 15 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -18 years Ques #3 result: -20 years
Mixedwood: Ques #2 result: -20 years Ques #3 result: -20 years
Hardwood: Ques #2 result: -15 years Ques #3 result: -15 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -10 years Ques #3 result: -13 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -10 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -10 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Mixedwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr
Hardwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -3 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -2 years
Hardwood: Ques #2 result: NA years Ques #3 result: NA years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 3 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 2 years
Hardwood: Ques #2 result: NA years Ques #3 result: NA years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.3 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Mixedwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -10 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -3 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -3 years Ques #3 result: -3 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -3 years

ADMINISTRATIVE / BIOLOGICAL REGION

Coastal B.C. - Coast

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
198	NA	3.2	3.3		125	NA	3.5	4.7		22	NA	2.0	4.0
218	3.1	3.1	2.9		145	3.5	3.5	4.3		42	3.0	3.0	5.7
238	3.1	3.1	2.8		168	3.4	3.4	3.9		62	2.6	3.1	5.2
258*	3.0	3.0	2.7		185*	3.5	3.4	3.6		82*	2.9	2.9	4.7
278	2.9	2.9	2.5		205	3.5	3.3	3.2		102	2.6	2.5	3.4
298	NA	2.8	2.0		225	NA	3.2	2.9		122	NA	2.0	2.0

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 5% Ques #3 result: 4%
Mixedwood: Ques #2 result: 5% Ques #3 result: 2%
Hardwood: Ques #2 result: 0% Ques #3 result: 0%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 4.6 m^3/ha/yr
Mixedwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 3.8 m^3/ha/yr
Hardwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 250 m^3/ha Ques #3 result: 338 m^3/ha
Mixedwood: Ques #2 result: 200 m^3/ha Ques #3 result: 267 m^3/ha
Hardwood: Ques #2 result: 150 m^3/ha Ques #3 result: 175 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 18 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 28 & 45 yrs old
Mixedwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 33 & 52 yrs old
Hardwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 0 & 12 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: NA kg/ha Ques #3 result: 233 kg/ha
Mixedwood: Ques #2 result: NA kg/ha Ques #3 result: 225 kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: 75 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 10% Ques #3 result: 12%
Medium: Ques #2 result: 50% Ques #3 result: 22%
Poor: Ques #2 result: 10% Ques #3 result: 11%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 2.6 m^3/ha/yr
Mixedwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Hardwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 1 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 15 years Ques #3 result: 29 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 7 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 20 years Ques #3 result: 40 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 40 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 22 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -12 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -13 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -3 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 4 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: -0.2 m^3/ha/yr Ques #3 result: -0.2 m^3/ha/yr
Mixedwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr
Hardwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 10 years Ques #3 result: 30 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 6 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -11 years Ques #3 result: -12 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -13 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 9 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: -0.3 m^3/ha/yr Ques #3 result: -1.1 m^3/ha/yr
Mixedwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.3 m^3/ha/yr
Hardwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.8 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 20 years Ques #3 result: 40 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 37 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 35 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -2.0 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -2.0 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -2.0 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 11 years
Mixedwood: Ques #2 result: 5 years Ques #3 result: 13 years
Hardwood: Ques #2 result: 5 years Ques #3 result: 2 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
27	NA	3.0	4.7		29	NA	2.6	3.6		1	NA	0	0
47	4.4	4.4	6.2		49	3.8	4.0	4.8		21	2.6	2.6	5.2
67	5.0	4.9	7.5		68	4.6	4.6	5.5		41	3.3	3.3	7.1
87*	5.1	5.1	7.5		89*	4.7	4.7	5.8		61*	3.5	3.6	6.7
107	4.6	4.9	7.0		109	4.3	4.5	5.7		81	3.0	34	5.6
127	na	4.6	6.4		129	na	4.0	5.2		101	na	3.0	4.3

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 5% Ques #3 result: 5%
Mixedwood: Ques #2 result: 5% Ques #3 result: 5%
Hardwood: Ques #2 result: 0% Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 5.4 m^3/ha/yr
Mixedwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 4.3 m^3/ha/yr
Hardwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 200 m^3/ha Ques #3 result: 300 m^3/ha
Mixedwood: Ques #2 result: 200 m^3/ha Ques #3 result: 267 m^3/ha
Hardwood: Ques #2 result: 150 m^3/ha Ques #3 result: 175 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 15 & 63 yrs old Ques #3 result: 24 & 45 yrs old
Mixedwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 28 & 48 yrs old
Hardwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 0 & 16 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 200 kg/ha Ques #3 result: 233 kg/ha
Mixedwood: Ques #2 result: NA kg/ha Ques #3 result: 125 kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: 75 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 5% Ques #3 result: 6%
Medium: Ques #2 result: 50% Ques #3 result: 17%
Poor: Ques #2 result: 5% Ques #3 result: 10%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 2.6 m^3/ha/yr
Mixedwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr
Hardwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 13 years Ques #3 result: 28 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 12 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 7 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 1.4 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 11 years Ques #3 result: 39 years
Mixedwood: Ques #2 result: 30 years Ques #3 result: 39 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 23 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -7 years Ques #3 result: -12 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -13 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -3 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 4 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 0 years Ques #3 result: -2 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: -0.2 m^3/ha/yr Ques #3 result: -0.4 m^3/ha/yr
Mixedwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr
Hardwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 10 years Ques #3 result: 30 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 6 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -11 years Ques #3 result: -13 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -13 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 9 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 1 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: -0.3 m^3/ha/yr Ques #3 result: -1.1 m^3/ha/yr
Mixedwood: Ques #2 result: -0.3 m^3/ha/yr Ques #3 result: -1.3 m^3/ha/yr
Hardwood: Ques #2 result: -0.2 m^3/ha/yr Ques #3 result: -1.3 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 20 years Ques #3 result: 43 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 38 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 35 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: -14 years Ques #3 result: -4 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -3 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: -9 years Ques #3 result: 11 years
Hardwood: Ques #2 result: 5 years Ques #3 result: 0 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 1.1 m^3/ha/yr
Hardwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.2 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -9 years Ques #3 result: -6 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -7 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -7 years Ques #3 result: -4 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -4 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -7 years

ADMINISTRATIVE / BIOLOGICAL REGION

Coastal B.C. - Subalpine

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
209	NA	2.7	2.8		193	NA	3.0	2.7		07	NA	1.0	0.4
229	2.0	2.6	2.7		213	2.9	2.8	2.6		27	6.0	2.5	0.6
249	2.1	2.5	2.6		233	2.7	2.6	2.4		47	4.2	3.5	0.9
269*	2.1	2.4	2.5		253*	2.5	2.4	2.3		67*	3.8	3.8	1.1
289	2.0	2.2	2.4		273	2.5	2.2	2.1		87	4.0	3.7	1.2
309	NA	2.0	2.0		293	NA	2.0	1.9		107	NA	3.4	1.2

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 5% Ques #3 result: 3%
Mixedwood: Ques #2 result: 5% Ques #3 result: 3%
Hardwood: Ques #2 result: 0% Ques #3 result: 0%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr
Mixedwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 2.8 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 0 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 150 m^3/ha Ques #3 result: 118 m^3/ha
Mixedwood: Ques #2 result: 150 m^3/ha Ques #3 result: 107 m^3/ha
Hardwood: Ques #2 result: NA m^3/ha Ques #3 result: 0 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 30 years Ques #3 result: 26 years
Mixedwood: Ques #2 result: 30 years Ques #3 result: 27 years
Hardwood: Ques #2 result: NA years Ques #3 result: 0 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 25 & 40 yrs old
Mixedwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 35 & 53 yrs old
Hardwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 0 & 25 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: NA kg/ha Ques #3 result: 135 kg/ha
Mixedwood: Ques #2 result: NA kg/ha Ques #3 result: 250 kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: 0 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 10% Ques #3 result: 3%
Medium: Ques #2 result: 50% Ques #3 result: 14%
Poor: Ques #2 result: 10% Ques #3 result: 9%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.7 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Hardwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 15 years Ques #3 result: 35 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 13 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 13 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 15 years Ques #3 result: 35 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 48 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 30 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -10 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -12 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 7 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: 12 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -3 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr
Mixedwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr
Hardwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 32 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 7 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -12 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -15 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -7 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 5 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 3 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr
Mixedwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.3 m^3/ha/yr
Hardwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.3 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 20 years Ques #3 result: 33 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 40 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 27 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -4 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -3 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -3 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 10 years Ques #3 result: 15 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 17 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 7 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
55	NA	2.8	3.1		37	NA	2.0	2.4		5	NA	1.5	0.8
75	2.7	4.0	4.0		57	2.7	2.6	3.0		25	2.7	2.5	2.0
95	3.5	4.8	5.0		77	3.3	3.2	3.6		45	3.4	3.2	2.9
115*	3.7	4.9	4.8		97*	3.6	3.6	3.8		65*	3.8	3.8	3.6
135	3.4	4.5	4.4		117	3.3	3.5	3.7		85	3.6	3.6	3.3
155	NA	4.1	4.0		137	NA	3.4	3.5		105	NA	3.0	2.7

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 5% Ques #3 result: 6%
Mixedwood: Ques #2 result: 5% Ques #3 result: 7%
Hardwood: Ques #2 result: 0% Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 0 m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 150 m^3/ha Ques #3 result: 163 m^3/ha
Mixedwood: Ques #2 result: 150 m^3/ha Ques #3 result: 167 m^3/ha
Hardwood: Ques #2 result: NA m^3/ha Ques #3 result: 0 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 30 years Ques #3 result: 24 years
Mixedwood: Ques #2 result: 30 years Ques #3 result: 23 years
Hardwood: Ques #2 result: NA years Ques #3 result: 0 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 15 & 73 yrs old Ques #3 result: 25 & 40 yrs old
Mixedwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 35 & 53 yrs old
Hardwood: Ques #2 result: 0 & 25 yrs old Ques #3 result: 0 & 25 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 200 kg/ha Ques #3 result: 135 kg/ha
Mixedwood: Ques #2 result: NA kg/ha Ques #3 result: 250 kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: 0 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 10% Ques #3 result: 4%
Medium: Ques #2 result: 35% Ques #3 result: 15%
Poor: Ques #2 result: 10% Ques #3 result: 12%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.7 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Hardwood: Ques #2 result: 1.5 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 15 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 13 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 13 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 30 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 37 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 23 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -9 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -10 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -2 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: 5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: 7 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -2 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr
Mixedwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr
Hardwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.3 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 31 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 7 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -9 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -13 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 5 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.4 m^3/ha/yr
Mixedwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.2 m^3/ha/yr
Hardwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.2 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 20 years Ques #3 result: 33 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 38 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 27 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -4 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -3 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -3 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 10 years Ques #3 result: 16 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 17 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 7 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Mixedwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Hardwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -7 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -6 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -6 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -8 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -6 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -6 years

ADMINISTRATIVE / BIOLOGICAL REGION

Interior B.C. - Columbia

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
103	NA	3.3	3.0		83	NA	2.2	2.3		47	NA	1.5	1.5
123	3.2	3.2	2.9		103	2.2	2.5	2.5		67	1.8	1.8	1.8
143	3.1	3.1	2.8		123	2.2	2.4	2.4		87	1.9	2.0	2.0
163*	2.8	2.9	2.6		143*	2.1	2.3	2.3		107*	1.9	1.8	1.8
183	2.7	2.7	2.4		163	1.8	2.0	2.1		127	1.5	1.5	1.5
203	NA	2.4	2.2		183	NA	1.9	1.9		147	NA	1.0	1.0

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 30% Ques #3 result: 20%
Mixedwood: Ques #2 result: 30% Ques #3 result: 20%
Hardwood: Ques #2 result: 0% Ques #3 result: NA%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 2.0 m^3/ha/yr
Mixedwood: Ques #2 result: 1.8 m^3/ha/yr Ques #3 result: 2.0 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 200 m^3/ha Ques #3 result: 150 m^3/ha
Mixedwood: Ques #2 result: 150 m^3/ha Ques #3 result: 150 m^3/ha
Hardwood: Ques #2 result: NA m^3/ha Ques #3 result: NA m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 30 years Ques #3 result: 30 years
Mixedwood: Ques #2 result: 30 years Ques #3 result: 30 years
Hardwood: Ques #2 result: NA years Ques #3 result: NA years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 0 & 30 yrs old Ques #3 result: 0 & 30 yrs old
Mixedwood: Ques #2 result: 0 & 30 yrs old Ques #3 result: 0 & 30 yrs old
Hardwood: Ques #2 result: 0 & 20 yrs old Ques #3 result: 0 & 20 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha
Mixedwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 30% Ques #3 result: 30%
Medium: Ques #2 result: 10% Ques #3 result: 20%
Poor: Ques #2 result: 0% Ques #3 result: NA%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 15 years Ques #3 result: 15 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 15 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Mixedwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Hardwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 15 years Ques #3 result: 15 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 15 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: -0.7 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: -0.7 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 15 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 15 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -10 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -10 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr
Mixedwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr
Hardwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 15 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -3 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 10 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
34	NA	1.2	1.2		33	NA	1.0	1.0		17	NA	1.0	1.0
54	3.6	2.2	2.2		53	2.2	1.8	1.8		37	1.8	1.6	1.6
74	3.9	2.8	2.8		73	2.4	2.3	2.3		57	2.0	2.0	2.0
94*	3.1	3.2	3.2		93*	2.4	2.6	2.6		77*	2.2	2.2	2.3
114	3.8	3.1	3.1		113	2.1	2.5	2.5		95	1.8	2.1	2.2
134	NA	3.0	3.0		133	NA	2.4	2.4		117	NA	1.8	2.0

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 30% Ques #3 result: 30%
Mixedwood: Ques #2 result: 30% Ques #3 result: 30%
Hardwood: Ques #2 result: 0% Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 2.0 m^3/ha/yr
Mixedwood: Ques #2 result: 1.8 m^3/ha/yr Ques #3 result: 2.0 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 200 m^3/ha **Mixedwood:** Ques #2 result: 150 m^3/ha **Hardwood:** Ques #2 result: NA m^3/ha
Ques #3 result: 150 m^3/ha Ques #3 result: 150 m^3/ha Ques #3 result: NA m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 30 years **Mixedwood:** Ques #2 result: 30 years **Hardwood:** Ques #2 result: NA years
Ques #3 result: 30 years Ques #3 result: 30 years Ques #3 result: NA years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 0 & 20 yrs old **Mixedwood:** Ques #2 result: 0 & 20 yrs old **Hardwood:** Ques #2 result: 0 & 15 yrs old
Ques #3 result: 0 & 20 yrs old Ques #3 result: 0 & 20 yrs old Ques #3 result: 0 & 15 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: NA kg/ha **Mixedwood:** Ques #2 result: NA kg/ha **Hardwood:** Ques #2 result: NA kg/ha
Ques #3 result: NA kg/ha Ques #3 result: NA kg/ha Ques #3 result: NA kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 30% **Medium:** Ques #2 result: 10% **Poor:** Ques #2 result: 0%
Ques #3 result: 30% Ques #3 result: 10% Ques #3 result: 0%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.5 m^3/ha/yr **Mixedwood:** Ques #2 result: 0.5 m^3/ha/yr **Hardwood:** Ques #2 result: 0.8 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr Ques #3 result: 1 m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 15 years **Mixedwood:** Ques #2 result: 15 years **Hardwood:** Ques #2 result: 10 years
Ques #3 result: 15 years Ques #3 result: 15 years Ques #3 result: 10 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr **Mixedwood:** Ques #2 result: 0.7 m^3/ha/yr **Hardwood:** Ques #2 result: 0.7 m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years **Mixedwood:** Ques #2 result: 15 years **Hardwood:** Ques #2 result: 10 years
Ques #3 result: 15 years Ques #3 result: 15 years Ques #3 result: 10 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years **Mixedwood:** Ques #2 result: -5 years **Hardwood:** Ques #2 result: -5 years
Ques #3 result: -5 years Ques #3 result: -5 years Ques #3 result: -5 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years **Mixedwood:** Ques #2 result: -5 years **Hardwood:** Ques #2 result: -5 years
Ques #3 result: -5 years Ques #3 result: -5 years Ques #3 result: -5 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: -0.7 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Mixedwood: Ques #2 result: -0.7 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Hardwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.5 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 15 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 15 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -10 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -10 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr
Mixedwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr
Hardwood: Ques #2 result: -1.5 m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 15 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 10 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -10 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -10 years

ADMINISTRATIVE / BIOLOGICAL REGION

Interior B.C. - Montane

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
100	NA	NA	2.0		105	NA	NA	2.0		95	NA	NA	2.0
120	2.9	NA	2.3		125	3.3	NA	2.3		115	2.2	NA	2.2
140	2.9	NA	2.2		145	3.0	NA	2.2		135	2.4	NA	2.1
160*	2.6	NA	2.1		165 *	2.9	NA	2.1		155*	2.2	NA	1.9
180	2.6	NA	2.0		185	2.7	NA	2.0		175	2.0	NA	1.7
200	NA	NA	1.8		205	NA	NA	1.8		195	NA	NA	1.4

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: NA% Ques #3 result: 10%
Mixedwood: Ques #2 result: NA% Ques #3 result: 0%
Hardwood: Ques #2 result: NA% Ques #3 result: 0%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha Ques #3 result: 150 m^3/ha
Mixedwood: Ques #2 result: NA m^3/ha Ques #3 result: NA m^3/ha
Hardwood: Ques #2 result: NA m^3/ha Ques #3 result: NA m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: NA years Ques #3 result: 30 years
Mixedwood: Ques #2 result: NA years Ques #3 result: NA years
Hardwood: Ques #2 result: NA years Ques #3 result: NA years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old
Mixedwood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old
Hardwood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 20 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha
Mixedwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: NA%
Ques #3 result: 10%

Medium: Ques #2 result: NA%
Ques #3 result: 10%

Poor: Ques #2 result: NA%
Ques #3 result: 0%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: NA m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: NA years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 15 years

Hardwood: Ques #2 result: NA years
Ques #3 result: NA years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: NA years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 15 years

Hardwood: Ques #2 result: NA years
Ques #3 result: 10 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -5 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -5 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -10 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -10 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years
Ques #3 result: 20 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 20 years

Hardwood: Ques #2 result: NA years
Ques #3 result: 10 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -10 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -5 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years
Ques #3 result: 0 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 0 years

Hardwood: Ques #2 result: NA years
Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years Ques #3 result: 20 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 20 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 20 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -5 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -5 years
Hardwood: Ques #2 result: NA years Ques #3 result: -5 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 10 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 10 years
Hardwood: Ques #2 result: NA years Ques #3 result: 5 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
40	NA	NA	2.0		30	NA	NA	1.5		10	NA	NA	0.8
60	2.5	NA	2.5		50	2.8	NA	2.4		30	2.1	NA	2.0
80	3.0	NA	2.8		70	3.2	NA	2.9		50	2.5	NA	2.5
100*	3.0	NA	3.0		90*	3.4	NA	3.2		70*	2.6	NA	2.8
120	3.1	NA	2.9		110	3.1	NA	3.1		90	2.3	NA	2.6
140	NA	NA	2.8		130	NA	NA	3.0		110	NA	NA	2.4

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA% Ques #3 result: 20%
Mixedwood: Ques #2 result: NA% Ques #3 result: 20%
Hardwood: Ques #2 result: NA% Ques #3 result: NA%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 2.3 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 2.3 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha
Ques #3 result: 150 m^3/ha

Mixedwood: Ques #2 result: NA m^3/ha
Ques #3 result: 150 m^3/ha

Hardwood: Ques #2 result: NA m^3/ha
Ques #3 result: NA m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA years
Ques #3 result: 25 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 25 years

Hardwood: Ques #2 result: NA years
Ques #3 result: NA years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: NA & NA yrs old
Ques #3 result: 0 & 30 yrs old

Mixedwood: Ques #2 result: NA & NA yrs old
Ques #3 result: 0 & 30 yrs old

Hardwood: Ques #2 result: NA & NA yrs old
Ques #3 result: 0 & 20 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: NA kg/ha
Ques #3 result: NA kg/ha

Mixedwood: Ques #2 result: NA kg/ha
Ques #3 result: NA kg/ha

Hardwood: Ques #2 result: NA kg/ha
Ques #3 result: NA kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: NA%
Ques #3 result: 10%

Medium: Ques #2 result: NA%
Ques #3 result: 10%

Poor: Ques #2 result: NA%
Ques #3 result: NA%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: NA m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: NA years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 15 years

Hardwood: Ques #2 result: NA years
Ques #3 result: NA years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 15 years

Hardwood: Ques #2 result: NA years
Ques #3 result: 10 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -5 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -5 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -10 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -10 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -0.5 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -0.5 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -0.5 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years Ques #3 result: 20 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 20 years
Hardwood: Ques #2 result: NA years Ques #3 result: 10 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -10 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -10 years
Hardwood: Ques #2 result: NA years Ques #3 result: -5 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 0 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 0 years
Hardwood: Ques #2 result: NA years Ques #3 result: 0 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: NA years Ques #3 result: 20 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 20 years
Hardwood: Ques #2 result: NA years Ques #3 result: 20 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -5 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -5 years
Hardwood: Ques #2 result: NA years Ques #3 result: -5 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 10 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 10 years
Hardwood: Ques #2 result: NA years Ques #3 result: 5 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -10 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -10 years
Hardwood: Ques #2 result: NA years Ques #3 result: -15 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: -10 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -10 years
Hardwood: Ques #2 result: NA years Ques #3 result: -20 years

ADMINISTRATIVE / BIOLOGICAL REGION

Interior B.C. - Subalpine

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
130	NA	NA	3.0		140	NA	NA	2.5		90	NA	NA	2.0
150	3.6	NA	2.9		160	2.0	NA	2.4		110	1.4	NA	1.9
170	3.4	NA	2.8		180	1.9	NA	2.2		130	1.3	NA	1.7
190*	2.2	NA	2.6		200 *	1.8	NA	2.0		150*	1.2	NA	1.5
210	3.0	NA	2.4		220	1.6	NA	1.8		170	1.0	NA	1.3
230	NA	NA	2.0		240	NA	NA	1.6		190	NA	NA	1.0

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: NA% Ques #3 result: 10%
Mixedwood: Ques #2 result: NA% Ques #3 result: 10%
Hardwood: Ques #2 result: NA% Ques #3 result: 0%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 2.2 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha Ques #3 result: 150 m^3/ha
Mixedwood: Ques #2 result: NA m^3/ha Ques #3 result: 150 m^3/ha
Hardwood: Ques #2 result: NA m^3/ha Ques #3 result: NA m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: NA years Ques #3 result: 30 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 30 years
Hardwood: Ques #2 result: NA years Ques #3 result: NA years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old
Mixedwood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old
Hardwood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 29 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha
Mixedwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha
Hardwood: Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: NA%
Ques #3 result: 10%

Medium: Ques #2 result: NA%
Ques #3 result: 10%

Poor: Ques #2 result: NA%
Ques #3 result: 0%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.8 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: NA m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: NA years
Ques #3 result: 10 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 10 years

Hardwood: Ques #2 result: NA years
Ques #3 result: NA years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: NA years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 15 years

Hardwood: Ques #2 result: NA years
Ques #3 result: 10 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -10 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -5 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -10 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -5 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -1.0 m^3/ha/yr

Mixedwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -1.0 m^3/ha/yr

Hardwood: Ques #2 result: NA m^3/ha/yr
Ques #3 result: -0.8 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 15 years

Hardwood: Ques #2 result: NA years
Ques #3 result: 10 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: -10 years

Hardwood: Ques #2 result: NA years
Ques #3 result: -10 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years
Ques #3 result: 0 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: 0 years

Hardwood: Ques #2 result: NA years
Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr **Mixedwood:** Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr **Hardwood:** Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years Ques #3 result: 15 years **Mixedwood:** Ques #2 result: NA years Ques #3 result: 15 years **Hardwood:** Ques #2 result: 15 years Ques #3 result: 10 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -5 years **Mixedwood:** Ques #2 result: NA years Ques #3 result: -5 years **Hardwood:** Ques #2 result: NA years Ques #3 result: -5 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 10 years **Mixedwood:** Ques #2 result: NA years Ques #3 result: 10 years **Hardwood:** Ques #2 result: NA years Ques #3 result: 5 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
60	NA	NA	2.5		40	NA	NA	1.8		20	NA	NA	1.0
0	1.9	NA	2.9		60	1.5	NA	2.4		40	1.2	NA	1.8
100	2.4	NA	3.1		80	2.1	NA	2.8		60	1.5	NA	2.2
120*	2.5	NA	3.0		100*	2.2	NA	3.0		80*	1.6	NA	2.5
140	2.7	NA	2.9		120	2.1	NA	2.9		100	1.5	NA	2.3
160	NA	NA	2.7		140	NA	NA	2.7		120	NA	NA	2.0

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA% Ques #3 result: 20% **Mixedwood:** Ques #2 result: NA% Ques #3 result: 10% **Hardwood:** Ques #2 result: NA% Ques #3 result: NA%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr **Mixedwood:** Ques #2 result: NA m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr **Hardwood:** Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha **Mixedwood:** Ques #2 result: NA m^3/ha **Hardwood:** Ques #2 result: NA m^3/ha
Ques #3 result: 150 m^3/ha Ques #3 result: 150 m^3/ha Ques #3 result: NA m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA years **Mixedwood:** Ques #2 result: NA years **Hardwood:** Ques #2 result: NA years
Ques #3 result: 30 years Ques #3 result: 30 years Ques #3 result: NA years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: NA & NA yrs old **Mixedwood:** Ques #2 result: NA & NA yrs old **Hardwood:** Ques #2 result: NA & NA yrs old
Ques #3 result: 0 & 30 yrs old Ques #3 result: 0 & 30 yrs old Ques #3 result: 0 & 10 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: NA kg/ha **Mixedwood:** Ques #2 result: NA kg/ha **Hardwood:** Ques #2 result: NA kg/ha
Ques #3 result: NA kg/ha Ques #3 result: NA kg/ha Ques #3 result: NA kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: NA% **Medium:** Ques #2 result: NA% **Poor:** Ques #2 result: NA%
Ques #3 result: 20% Ques #3 result: 10% Ques #3 result: NA%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: NA m^3/ha/yr **Mixedwood:** Ques #2 result: NA m^3/ha/yr **Hardwood:** Ques #2 result: NA m^3/ha/yr
Ques #3 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr Ques #3 result: NA m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: NA years **Mixedwood:** Ques #2 result: NA years **Hardwood:** Ques #2 result: NA years
Ques #3 result: 15 years Ques #3 result: 15 years Ques #3 result: NA years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr **Mixedwood:** Ques #2 result: NA m^3/ha/yr **Hardwood:** Ques #2 result: NA m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years **Mixedwood:** Ques #2 result: NA years **Hardwood:** Ques #2 result: NA years
Ques #3 result: 15 years Ques #3 result: 15 years Ques #3 result: 10 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years **Mixedwood:** Ques #2 result: NA years **Hardwood:** Ques #2 result: NA years
Ques #3 result: -10 years Ques #3 result: -10 years Ques #3 result: -5 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years **Mixedwood:** Ques #2 result: NA years **Hardwood:** Ques #2 result: NA years
Ques #3 result: -10 years Ques #3 result: -10 years Ques #3 result: -5 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -0.8 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: NA years Ques #3 result: 15 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 15 years
Hardwood: Ques #2 result: NA years Ques #3 result: 10 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -10 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -10 years
Hardwood: Ques #2 result: NA years Ques #3 result: -10 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 0 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 0 years
Hardwood: Ques #2 result: NA years Ques #3 result: 0 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.5 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: NA years Ques #3 result: 15 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 15 years
Hardwood: Ques #2 result: NA years Ques #3 result: 10 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -5 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -5 years
Hardwood: Ques #2 result: NA years Ques #3 result: -5 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: 10 years
Mixedwood: Ques #2 result: NA years Ques #3 result: 10 years
Hardwood: Ques #2 result: NA years Ques #3 result: 5 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: NA years Ques #3 result: -5 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -5 years
Hardwood: Ques #2 result: NA years Ques #3 result: -5 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: NA years Ques #3 result: -5 years
Mixedwood: Ques #2 result: NA years Ques #3 result: -5 years
Hardwood: Ques #2 result: NA years Ques #3 result: -10 years

ADMINISTRATIVE / BIOLOGICAL REGION

NWT and Prairies - Boreal

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
49	NA	1.5	1.4		40	NA	1.8	1.7		26	NA	2.2	1.9
69	1.7	1.8	1.6		60	2.1	2.0	1.9		46	2.4	2.4	2.3
89	1.7	1.8	1.7		80	1.9	2.0	1.9		66	2.5	2.4	2.4
109*	1.6	1.7	1.6		100 *	1.9	1.9	1.9		86*	2.1	2.2	2.3
129	1.5	1.7	1.4		120	1.8	1.8	1.7		106	1.9	2.0	2.1
149	NA	1.5	1.3		140	NA	1.6	1.5		126	NA	1.5	1.6

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 0% Ques #3 result: 1%
Mixedwood: Ques #2 result: 1% Ques #3 result: 4%
Hardwood: Ques #2 result: 0% Ques #3 result: 0%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 1.7 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr
Mixedwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.7 m^3/ha/yr
Hardwood: Ques #2 result: 2.2 m^3/ha/yr Ques #3 result: 1.7 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 90 m^3/ha Ques #3 result: 68 m^3/ha
Mixedwood: Ques #2 result: 102 m^3/ha Ques #3 result: 90 m^3/ha
Hardwood: Ques #2 result: NA m^3/ha Ques #3 result: 27 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 35 years Ques #3 result: 35 years
Mixedwood: Ques #2 result: 31 years Ques #3 result: 43 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 17 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 25 & 76 yrs old Ques #3 result: 37 & 72 yrs old
Mixedwood: Ques #2 result: 35 & 78 yrs old Ques #3 result: 41 & 75 yrs old
Hardwood: Ques #2 result: 17 & 51 yrs old Ques #3 result: 25 & 57 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 65 kg/ha Ques #3 result: 74 kg/ha
Mixedwood: Ques #2 result: 50 kg/ha Ques #3 result: 56 kg/ha
Hardwood: Ques #2 result: 20 kg/ha Ques #3 result: 36 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 10% Ques #3 result: 9%
Medium: Ques #2 result: 3% Ques #3 result: 6%
Poor: Ques #2 result: 8% Ques #3 result: 8%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.8 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr
Mixedwood: Ques #2 result: 3.0 m^3/ha/yr Ques #3 result: 1.9 m^3/ha/yr
Hardwood: Ques #2 result: 3.2 m^3/ha/yr Ques #3 result: 2.0 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 9 years Ques #3 result: 8 years
Mixedwood: Ques #2 result: 8 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 12 years Ques #3 result: 8 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Mixedwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Hardwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 7 years Ques #3 result: 9 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: 9 years
Hardwood: Ques #2 result: 8 years Ques #3 result: 8 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -9 years
Mixedwood: Ques #2 result: -8 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -8 years Ques #3 result: -8 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -6 years Ques #3 result: -6 years
Mixedwood: Ques #2 result: -6 years Ques #3 result: -3 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -3 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: 0.1 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr
Mixedwood: Ques #2 result: 0.2 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr
Hardwood: Ques #2 result: 0.2 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 8 years Ques #3 result: 9 years
Mixedwood: Ques #2 result: 8 years Ques #3 result: 9 years
Hardwood: Ques #2 result: 9 years Ques #3 result: 8 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -8 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -6 years Ques #3 result: -4 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: -1 years
Mixedwood: Ques #2 result: 2 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 2 years Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Mixedwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Hardwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 12 years Ques #3 result: 12 years
Mixedwood: Ques #2 result: 11 years Ques #3 result: 11 years
Hardwood: Ques #2 result: 11 years Ques #3 result: 10 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -7 years Ques #3 result: -10 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -2 years Ques #3 result: -5 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 2 years Ques #3 result: 1 years
Mixedwood: Ques #2 result: 2 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 0 years Ques #3 result: -1 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
30	NA	1.5	1.3		33	NA	1.9	1.7		8	NA	2.2	1.8
50	2.2	2.0	1.7		53	2.4	2.3	2.0		28	2.7	2.6	2.2
70	2.3	2.1	1.9		73	2.5	2.4	2.8		48	2.8	2.6	2.4
90*	2.1	2.1	1.8		93*	2.3	2.3	2.7		68*	2.6	2.5	2.4
110	2.2	1.9	1.7		113	2.4	2.3	2.6		88	2.6	2.1	2.2
130	NA	1.8	1.5		133	NA	2.0	1.8		108	NA	2.3	2.0

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 2% Ques #3 result: 2%
Mixedwood: Ques #2 result: 6% Ques #3 result: 12%
Hardwood: Ques #2 result: 13% Ques #3 result: 2%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.6 m^3/ha/yr
Mixedwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Hardwood: Ques #2 result: 2.0 m^3/ha/yr Ques #3 result: 1.7 m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 12 m^3/ha Ques #3 result: 40 m^3/ha
Mixedwood: Ques #2 result: 103 m^3/ha Ques #3 result: 86 m^3/ha
Hardwood: Ques #2 result: NA m^3/ha Ques #3 result: 36 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 32 years Ques #3 result: 34 years
Mixedwood: Ques #2 result: 29 years Ques #3 result: 29 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 20 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 40 & 88 yrs old Ques #3 result: 41 & 76 yrs old
Mixedwood: Ques #2 result: 43 & 97 yrs old Ques #3 result: 42 & 78 yrs old
Hardwood: Ques #2 result: 20 & 63 yrs old Ques #3 result: 28 & 59 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 65 kg/ha Ques #3 result: 74 kg/ha
Mixedwood: Ques #2 result: 100 kg/ha Ques #3 result: 81 kg/ha
Hardwood: Ques #2 result: 25 kg/ha Ques #3 result: 36 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 20% Ques #3 result: 11%
Medium: Ques #2 result: 5% Ques #3 result: 5%
Poor: Ques #2 result: 13% Ques #3 result: 9%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.2 m^3/ha/yr
Hardwood: Ques #2 result: 0.9 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 12 years Ques #3 result: 9 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 8 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Mixedwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 8 years Ques #3 result: 8 years
Mixedwood: Ques #2 result: 8 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 9 years Ques #3 result: 7 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -7 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -7 years Ques #3 result: -6 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -7 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: 0.3 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr
Mixedwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Hardwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 9 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 9 years Ques #3 result: 9 years
Hardwood: Ques #2 result: 11 years Ques #3 result: 8 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -7 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 2 years Ques #3 result: -1 years
Mixedwood: Ques #2 result: 2 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 2 years Ques #3 result: -1 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Mixedwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Hardwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 12 years Ques #3 result: 12 years
Mixedwood: Ques #2 result: 11 years Ques #3 result: 11 years
Hardwood: Ques #2 result: 12 years Ques #3 result: 11 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -7 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -4 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -2 years Ques #3 result: -5 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 2 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 2 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 0 years Ques #3 result: -1 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.9 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.9 m^3/ha/yr
Hardwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 1.2 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -12 years Ques #3 result: -11 years
Mixedwood: Ques #2 result: -12 years Ques #3 result: -11 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -13 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -2 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: -1 years Ques #3 result: -2 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -3 years

ADMINISTRATIVE / BIOLOGICAL REGION

Ontario - Boreal

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
40	NA	1.6	1.7		33	NA	1.9	2.0		23	NA	1.8	2.1
60	1.9	1.9	2.0		53	2.2	2.5	2.3		43	2.8	2.7	2.8
80	1.8	2.0	2.1		73	2.2	2.5	2.4		63	2.8	2.9	2.8
100*	1.7	1.8	2.0		93*	2.0	2.2	2.1		83*	2.6	2.4	2.5
120	1.5	1.6	1.7		113	1.9	1.8	1.8		103	2.3	2.0	2.0
140	NA	1.3	1.4		133	NA	1.5	1.5		123	NA	1.6	1.6

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 6%; Ques #3 result: NA%
Mixedwood: Ques #2 result: 13%; Ques #3 result: 9%
Hardwood: Ques #2 result: 19%; Ques #3 result: 10%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 1.8 m^3/ha/yr; Ques #3 result: 1.6 m^3/ha/yr
Mixedwood: Ques #2 result: 2.2 m^3/ha/yr; Ques #3 result: 2.0 m^3/ha/yr
Hardwood: Ques #2 result: 2.3 m^3/ha/yr; Ques #3 result: 2.4 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 54 m^3/ha; Ques #3 result: 43 m^3/ha
Mixedwood: Ques #2 result: 50 m^3/ha; Ques #3 result: 52 m^3/ha
Hardwood: Ques #2 result: 57 m^3/ha; Ques #3 result: 57 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 24 years; Ques #3 result: 32 years
Mixedwood: Ques #2 result: 24 years; Ques #3 result: 29 years
Hardwood: Ques #2 result: 21 years; Ques #3 result: 22 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 13 & 41 yrs old; Ques #3 result: 14 & 35 yrs old
Mixedwood: Ques #2 result: 14 & 41 yrs old; Ques #3 result: 8 & 33 yrs old
Hardwood: Ques #2 result: 12 & 36 yrs old; Ques #3 result: 7 & 30 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 175 kg/ha; Ques #3 result: 183 kg/ha
Mixedwood: Ques #2 result: 175 kg/ha; Ques #3 result: 175 kg/ha
Hardwood: Ques #2 result: 175 kg/ha; Ques #3 result: 175 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 31%
Ques #3 result: 14%

Medium: Ques #2 result: 25%
Ques #3 result: 20%

Poor: Ques #2 result: 11%
Ques #3 result: 6%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.9 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

Mixedwood: Ques #2 result: 0.6 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Hardwood: Ques #2 result: 0.8 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 10 years
Ques #3 result: 9 years

Mixedwood: Ques #2 result: 10 years
Ques #3 result: 9 years

Hardwood: Ques #2 result: 11 years
Ques #3 result: 8 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

Mixedwood: Ques #2 result: 0.4 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Hardwood: Ques #2 result: 0.8 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 11 years
Ques #3 result: 11 years

Mixedwood: Ques #2 result: 6 years
Ques #3 result: 6 years

Hardwood: Ques #2 result: 9 years
Ques #3 result: 7 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -3 years
Ques #3 result: -2 years

Mixedwood: Ques #2 result: 2 years
Ques #3 result: 1 years

Hardwood: Ques #2 result: 8 years
Ques #3 result: 1 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years
Ques #3 result: -1 years

Mixedwood: Ques #2 result: 3 years
Ques #3 result: -2 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 2 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: 0.9 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

Mixedwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

Hardwood: Ques #2 result: 1.1 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 11 years
Ques #3 result: 12 years

Mixedwood: Ques #2 result: 11 years
Ques #3 result: 9 years

Hardwood: Ques #2 result: 14 years
Ques #3 result: 12 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -3 years
Ques #3 result: -7 years

Mixedwood: Ques #2 result: 1 years
Ques #3 result: -1 years

Hardwood: Ques #2 result: 1 years
Ques #3 result: -1 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -1 years
Ques #3 result: -2 years

Mixedwood: Ques #2 result: 1 years
Ques #3 result: -3 years

Hardwood: Ques #2 result: 1 years
Ques #3 result: -3 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Mixedwood: Ques #2 result: 1.2 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Hardwood: Ques #2 result: 1.2 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 11 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 13 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 12 years Ques #3 result: 9 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 2 years Ques #3 result: -1 years
Mixedwood: Ques #2 result: 3 years Ques #3 result: -3 years
Hardwood: Ques #2 result: 3 years Ques #3 result: -3 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 3 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: 2 years Ques #3 result: -2 years
Hardwood: Ques #2 result: 2 years Ques #3 result: -2 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
19	NA	1.2	1.1		15	NA	1.2	1.0		1	NA	1.1	0.6
39	1.5	1.7	1.7		35	1.7	2.1	1.8		21	2.1	2.2	2.0
59	2.0	1.9	2.0		55	2.1	2.4	2.4		41	2.6	2.5	2.5
79*	1.8	2.0	2.1		75*	2.3	2.5	2.5		61*	2.8	2.7	2.9
99	1.7	1.8	1.8		95	2.1	2.1	2.1		81	2.5	2.3	2.6
119	NA	1.6	1.6		115	NA	1.7	1.7		101	NA	1.6	2.1

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 9% Ques #3 result: 5%
Mixedwood: Ques #2 result: 18% Ques #3 result: 9%
Hardwood: Ques #2 result: 21% Ques #3 result: 10%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 1.9 m^3/ha/yr Ques #3 result: 1.8 m^3/ha/yr
Mixedwood: Ques #2 result: 2.1 m^3/ha/yr Ques #3 result: 2.3 m^3/ha/yr
Hardwood: Ques #2 result: 2.2 m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 47 m^3/ha Ques #3 result: 55 m^3/ha
Mixedwood: Ques #2 result: 47 m^3/ha Ques #3 result: 55 m^3/ha
Hardwood: Ques #2 result: 46 m^3/ha Ques #3 result: 55 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 24 years Ques #3 result: 22 years
Mixedwood: Ques #2 result: 21 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 21 years Ques #3 result: 20 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 13 & 44 yrs old Ques #3 result: 5 & 30 yrs old
Mixedwood: Ques #2 result: 14 & 45 yrs old Ques #3 result: 8 & 30 yrs old
Hardwood: Ques #2 result: 12 & 38 yrs old Ques #3 result: 5 & 30 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 150 kg/ha Ques #3 result: 200 kg/ha
Mixedwood: Ques #2 result: 150 kg/ha Ques #3 result: 150 kg/ha
Hardwood: Ques #2 result: 150 kg/ha Ques #3 result: 150 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 28% Ques #3 result: 13%
Medium: Ques #2 result: 24% Ques #3 result: 20%
Poor: Ques #2 result: 16% Ques #3 result: 0%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 10 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 13 years Ques #3 result: 15 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 10 years Ques #3 result: 8 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 1 years Ques #3 result: -4 years
Mixedwood: Ques #2 result: 2 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 8 years Ques #3 result: -4 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 1 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: 2 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 8 years Ques #3 result: -4 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr
Mixedwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.2 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 14 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 13 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 14 years Ques #3 result: 9 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -2 years Ques #3 result: -4 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: -2 years
Hardwood: Ques #2 result: 0 years Ques #3 result: -3 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 1 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: 1 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 1 years Ques #3 result: -3 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Mixedwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: NA m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 13 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 14 years Ques #3 result: 11 years
Hardwood: Ques #2 result: 13 years Ques #3 result: 11 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 0 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: 1 years Ques #3 result: -2 years
Hardwood: Ques #2 result: 3 years Ques #3 result: -2 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 1 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: -1 years Ques #3 result: -2 years
Hardwood: Ques #2 result: 1 years Ques #3 result: -2 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Mixedwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: 6 years Ques #3 result: 1 years
Mixedwood: Ques #2 result: 5 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 4 years Ques #3 result: -1 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: 5 years Ques #3 result: 1 years
Mixedwood: Ques #2 result: 4 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 3 years Ques #3 result: -1 years

ADMINISTRATIVE / BIOLOGICAL REGION

Ontario - Great Lakes/St. Lawrence

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
53	NA	2.5	2.1		42	NA	2.0	2.1		50	NA	1.9	2.0
73	1.9	2.3	2.3		62	2.3	2.3	2.4		70	2.4	2.2	2.3
93	1.9	2.2	2.3		82	2.6	2.5	2.5		90	2.2	2.3	2.3
113*	1.7	2.1	2.2		102 *	2.2	2.3	2.1		110*	2.0	2.0	2.0
133	1.5	1.9	1.9		122	1.9	2.1	2.0		130	1.8	1.8	1.8
153	NA	1.7	1.6		142	NA	2.0	1.7		150	NA	1.7	1.6

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 15% Ques #3 result: 15%
Mixedwood: Ques #2 result: 32% Ques #3 result: 25%
Hardwood: Ques #2 result: 47% Ques #3 result: 50%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 2.4 m^3/ha/yr Ques #3 result: 2.0 m^3/ha/yr
Mixedwood: Ques #2 result: 2.7 m^3/ha/yr Ques #3 result: 2.2 m^3/ha/yr
Hardwood: Ques #2 result: 2.1 m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 58 m^3/ha Ques #3 result: 50 m^3/ha
Mixedwood: Ques #2 result: 62 m^3/ha Ques #3 result: 50 m^3/ha
Hardwood: Ques #2 result: 65 m^3/ha Ques #3 result: 63 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 20 years Ques #3 result: 17 years
Mixedwood: Ques #2 result: 22 years Ques #3 result: 19 years
Hardwood: Ques #2 result: 22 years Ques #3 result: 22 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 13 & 38 yrs old Ques #3 result: 11 & 33 yrs old
Mixedwood: Ques #2 result: 13 & 39 yrs old Ques #3 result: 11 & 31 yrs old
Hardwood: Ques #2 result: 13 & 39 yrs old Ques #3 result: 6 & 33 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha
Mixedwood: Ques #2 result: 200 kg/ha Ques #3 result: 208 kg/ha
Hardwood: Ques #2 result: 225 kg/ha Ques #3 result: 235 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 25%
Ques #3 result: 17%

Medium: Ques #2 result: 18%
Ques #3 result: 9%

Poor: Ques #2 result: 8%
Ques #3 result: 8%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.9 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

Mixedwood: Ques #2 result: 1.2 m^3/ha/yr
Ques #3 result: 0.9 m^3/ha/yr

Hardwood: Ques #2 result: 0.7 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 6 years
Ques #3 result: 5 years

Mixedwood: Ques #2 result: 6 years
Ques #3 result: 5 years

Hardwood: Ques #2 result: 5 years
Ques #3 result: 5 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 0.9 m^3/ha/yr
Ques #3 result: 0.8 m^3/ha/yr

Mixedwood: Ques #2 result: 0.7 m^3/ha/yr
Ques #3 result: 0.8 m^3/ha/yr

Hardwood: Ques #2 result: 0.6 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 12 years
Ques #3 result: 11 years

Mixedwood: Ques #2 result: 7 years
Ques #3 result: 6 years

Hardwood: Ques #2 result: 7 years
Ques #3 result: 5 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -1 years
Ques #3 result: -3 years

Mixedwood: Ques #2 result: 7 years
Ques #3 result: -1 years

Hardwood: Ques #2 result: 7 years
Ques #3 result: -1 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 6 years
Ques #3 result: -1 years

Mixedwood: Ques #2 result: 7 years
Ques #3 result: 0 years

Hardwood: Ques #2 result: 7 years
Ques #3 result: 0 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: 1.1 m^3/ha/yr
Ques #3 result: 0.9 m^3/ha/yr

Mixedwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 0.9 m^3/ha/yr

Hardwood: Ques #2 result: 1.1 m^3/ha/yr
Ques #3 result: 0.9 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 13 years
Ques #3 result: 10 years

Mixedwood: Ques #2 result: 8 years
Ques #3 result: 8 years

Hardwood: Ques #2 result: 8 years
Ques #3 result: 7 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 0 years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: 5 years
Ques #3 result: -4 years

Hardwood: Ques #2 result: 5 years
Ques #3 result: -4 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 4 years
Ques #3 result: 0 years

Mixedwood: Ques #2 result: 6 years
Ques #3 result: -1 years

Hardwood: Ques #2 result: 6 years
Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Mixedwood: Ques #2 result: 0.9 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 9 years Ques #3 result: 9 years
Mixedwood: Ques #2 result: 8 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 8 years Ques #3 result: 11 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 5 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: 5 years Ques #3 result: -2 years
Hardwood: Ques #2 result: 5 years Ques #3 result: -3 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 5 years Ques #3 result: 1 years
Mixedwood: Ques #2 result: 5 years Ques #3 result: 1 years
Hardwood: Ques #2 result: 5 years Ques #3 result: 1 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
27	NA	2.8	2.7		21	NA	1.5	2.2		21	NA	1.5	1.9
47	2.8	3.2	3.1		41	2.8	2.8	2.7		41	3.1	2.7	2.4
67	2.8	2.9	2.9		61	2.9	3.0	2.9		61	2.9	2.7	2.8
87*	2.6	2.6	2.8		81*	2.5	2.8	2.8		81*	2.7	2.6	2.8
107	2.3	2.3	2.3		101	2.1	2.5	2.5		101	2.5	2.3	2.2
127	NA	1.9	1.9		121	NA	2.2	2.2		121	NA	1.9	1.9

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 25% Ques #3 result: 23%
Mixedwood: Ques #2 result: 43% Ques #3 result: 33%
Hardwood: Ques #2 result: 45% Ques #3 result: 51%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 2.1 m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr
Mixedwood: Ques #2 result: 2.5 m^3/ha/yr Ques #3 result: 2.6 m^3/ha/yr
Hardwood: Ques #2 result: 2.2 m^3/ha/yr Ques #3 result: 2.5 m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 93 m^3/ha Ques #3 result: 66 m^3/ha
Mixedwood: Ques #2 result: 93 m^3/ha Ques #3 result: 84 m^3/ha
Hardwood: Ques #2 result: 110 m^3/ha Ques #3 result: 82 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 23 years Ques #3 result: 22 years
Mixedwood: Ques #2 result: 22 years Ques #3 result: 22 years
Hardwood: Ques #2 result: 22 years Ques #3 result: 19 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 11 & 35 yrs old Ques #3 result: 15 & 24 yrs old
Mixedwood: Ques #2 result: 11 & 36 yrs old Ques #3 result: 15 & 24 yrs old
Hardwood: Ques #2 result: 11 & 36 yrs old Ques #3 result: 15 & 32 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 200 kg/ha Ques #3 result: 200 kg/ha
Mixedwood: Ques #2 result: 200 kg/ha Ques #3 result: 239 kg/ha
Hardwood: Ques #2 result: 225 kg/ha Ques #3 result: 175 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 52% Ques #3 result: 19%
Medium: Ques #2 result: 33% Ques #3 result: 21%
Poor: Ques #2 result: 5% Ques #3 result: 12%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.7 m^3/ha/yr Ques #3 result: 0.9 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Hardwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 1.4 m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 6 years Ques #3 result: 6 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 7 years Ques #3 result: 6 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Mixedwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 9 years Ques #3 result: 8 years
Mixedwood: Ques #2 result: 8 years Ques #3 result: 7 years
Hardwood: Ques #2 result: 9 years Ques #3 result: 8 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 9 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: -2 years
Hardwood: Ques #2 result: 7 years Ques #3 result: -3 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 9 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 7 years Ques #3 result: -2 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 13 years Ques #3 result: 12 years
Mixedwood: Ques #2 result: 11 years Ques #3 result: 9 years
Hardwood: Ques #2 result: 11 years Ques #3 result: 10 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 7 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: -3 years
Hardwood: Ques #2 result: 5 years Ques #3 result: -3 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 7 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: 1 years
Hardwood: Ques #2 result: 6 years Ques #3 result: 0 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Mixedwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr
Hardwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 11 years Ques #3 result: 9 years
Mixedwood: Ques #2 result: 9 years Ques #3 result: 8 years
Hardwood: Ques #2 result: 9 years Ques #3 result: 8 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: 7 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: 6 years Ques #3 result: -1 years
Hardwood: Ques #2 result: 6 years Ques #3 result: -2 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 8 years Ques #3 result: 1 years
Mixedwood: Ques #2 result: 7 years Ques #3 result: 1 years
Hardwood: Ques #2 result: 7 years Ques #3 result: 1 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.9 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Hardwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: 6 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: 6 years Ques #3 result: -3 years
Hardwood: Ques #2 result: 7 years Ques #3 result: -3 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: 6 years Ques #3 result: -3 years
Mixedwood: Ques #2 result: 6 years Ques #3 result: -3 years
Hardwood: Ques #2 result: 8 years Ques #3 result: -3 years

ADMINISTRATIVE / BIOLOGICAL REGION

Quebec - Boreal

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
44	NA	0.8	0.7		32	NA	1.2	0.9		18	NA	1.5	0.9
64	1.0	1.2	1.2		52	1.5	1.6	1.5		38	1.4	1.7	1.6
84	1.1	1.1	1.2		72	1.6	1.7	1.6		58	2.0	2.1	2.0
104*	0.9	1.0	1.0		92*	1.4	1.5	1.4		78*	1.7	18	1.8
124	0.7	0.8	0.7		112	1.0	1.0	1.0		98	1.5	1.5	1.5
144	NA	0.6	0.5		132	NA	0.8	0.6		118	NA	1.0	0.9

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 6% Ques #3 result: 5%
Mixedwood: Ques #2 result: 10% Ques #3 result: 7%
Hardwood: Ques #2 result: 5% Ques #3 result: 0%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 1.0 m^3/ha/yr
Mixedwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 1.3 m^3/ha/yr
Hardwood: Ques #2 result: 1.7 m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 40 m^3/ha Ques #3 result: 40 m^3/ha
Mixedwood: Ques #2 result: 85 m^3/ha Ques #3 result: 95 m^3/ha
Hardwood: Ques #2 result: 113 m^3/ha Ques #3 result: 120 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 30 years Ques #3 result: 30 years
Mixedwood: Ques #2 result: 25 years Ques #3 result: 28 years
Hardwood: Ques #2 result: 22 years Ques #3 result: 30 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 51 & 62 yrs old Ques #3 result: 58 & 70 yrs old
Mixedwood: Ques #2 result: 44 & 56 yrs old Ques #3 result: 50 & 63 yrs old
Hardwood: Ques #2 result: 38 & 49 yrs old Ques #3 result: 38 & 52 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 283 kg/ha Ques #3 result: 254 kg/ha
Mixedwood: Ques #2 result: 300 kg/ha Ques #3 result: 177 kg/ha
Hardwood: Ques #2 result: 275 kg/ha Ques #3 result: 25 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 38%
Ques #3 result: 42%

Medium: Ques #2 result: 26%
Ques #3 result: 25%

Poor: Ques #2 result: 0%
Ques #3 result: 0%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.9 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Mixedwood: Ques #2 result: 0.9 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

Hardwood: Ques #2 result: 1.2 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 10 years
Ques #3 result: 10 years

Mixedwood: Ques #2 result: 10 years
Ques #3 result: 10 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 10 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Mixedwood: Ques #2 result: 0.8 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

Hardwood: Ques #2 result: 0.1 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 26 years
Ques #3 result: 18 years

Mixedwood: Ques #2 result: 27 years
Ques #3 result: 18 years

Hardwood: Ques #2 result: 16 years
Ques #3 result: 14 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years
Ques #3 result: -8 years

Mixedwood: Ques #2 result: -5 years
Ques #3 result: -8 years

Hardwood: Ques #2 result: -2 years
Ques #3 result: -7 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years
Ques #3 result: 0 years

Mixedwood: Ques #2 result: 0 years
Ques #3 result: 0 years

Hardwood: Ques #2 result: 0 years
Ques #3 result: 0 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: 0.7 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Mixedwood: Ques #2 result: 0.8 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

Hardwood: Ques #2 result: 0.8 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 29 years
Ques #3 result: 23 years

Mixedwood: Ques #2 result: 28 years
Ques #3 result: 23 years

Hardwood: Ques #2 result: 20 years
Ques #3 result: 18 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: -8 years
Ques #3 result: -10 years

Hardwood: Ques #2 result: -8 years
Ques #3 result: -8 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -4 years
Ques #3 result: -3 years

Mixedwood: Ques #2 result: -4 years
Ques #3 result: -3 years

Hardwood: Ques #2 result: -4 years
Ques #3 result: -3 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Mixedwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 14 years Ques #3 result: 14 years
Mixedwood: Ques #2 result: 14 years Ques #3 result: 13 years
Hardwood: Ques #2 result: 13 years Ques #3 result: 13 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -7 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -6 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 2 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 2 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 2 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
16	NA	0.9	0.4		6	NA	0.6	0.3		NA	NA	0.9	0.5
36	0.9	0.9	0.9		26	0.9	1.1	1.0		16	1.1	1.3	1.0
56	1.2	1.2	1.3		46	1.6	1.8	1.8		36	1.7	2.0	1.9
76*	1.2	1.4	1.4		66*	1.8	1.7	1.8		56*	2.	2.1	2.1
96	1.0	1.1	1.1		86	1.5	1.4	1.4		76	1.7	1.9	1.9
116	NA	0.8	0.9		106	NA	0.5	0.7		96	NA	1.7	1.7

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 8% Ques #3 result: 10%
Mixedwood: Ques #2 result: 12% Ques #3 result: 17%
Hardwood: Ques #2 result: 5% Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 1.1 m^3/ha/yr
Mixedwood: Ques #2 result: 1.4 m^3/ha/yr Ques #3 result: 1.4 m^3/ha/yr
Hardwood: Ques #2 result: 1.7 m^3/ha/yr Ques #3 result: NA m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 40 m^3/ha **Mixedwood:** Ques #2 result: 60 m^3/ha **Hardwood:** Ques #2 result: 65 m^3/ha
Ques #3 result: 40 m^3/ha Ques #3 result: 60 m^3/ha Ques #3 result: NA m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 15 years **Mixedwood:** Ques #2 result: 13 years **Hardwood:** Ques #2 result: 18 years
Ques #3 result: 15 years Ques #3 result: 10 years Ques #3 result: NA years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 42 & 55 yrs old **Mixedwood:** Ques #2 result: 36 & 50 yrs old **Hardwood:** Ques #2 result: 35 & 46 yrs old
Ques #3 result: 50 & 62 yrs old Ques #3 result: 40 & 52 yrs old Ques #3 result: 35 & 47 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 283 kg/ha **Mixedwood:** Ques #2 result: 300 kg/ha **Hardwood:** Ques #2 result: 275 kg/ha
Ques #3 result: 254 kg/ha Ques #3 result: 267 kg/ha Ques #3 result: 242 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 29% **Medium:** Ques #2 result: 29% **Poor:** Ques #2 result: 0%
Ques #3 result: 42% Ques #3 result: 25% Ques #3 result: 0%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.9 m^3/ha/yr **Mixedwood:** Ques #2 result: 0.9 m^3/ha/yr **Hardwood:** Ques #2 result: 1.2 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr Ques #3 result: 0.4 m^3/ha/yr Ques #3 result: 0.7m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 10 years **Mixedwood:** Ques #2 result: 10 years **Hardwood:** Ques #2 result: 10 years
Ques #3 result: 10 years Ques #3 result: 10 years Ques #3 result: 10 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 1.1 m^3/ha/yr **Mixedwood:** Ques #2 result: 0.8 m^3/ha/yr **Hardwood:** Ques #2 result: 0.2 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 26 years **Mixedwood:** Ques #2 result: 23 years **Hardwood:** Ques #2 result: 13 years
Ques #3 result: 18 years Ques #3 result: 18 years Ques #3 result: 14 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -3 years **Mixedwood:** Ques #2 result: -3 years **Hardwood:** Ques #2 result: 0 years
Ques #3 result: -6 years Ques #3 result: -6 years Ques #3 result: -4 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years **Mixedwood:** Ques #2 result: 0 years **Hardwood:** Ques #2 result: 1 years
Ques #3 result: 0 years Ques #3 result: 0 years Ques #3 result: 0 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.5 m^3/ha/yr
Mixedwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 29 years Ques #3 result: 23 years
Mixedwood: Ques #2 result: 25 years Ques #3 result: 22 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 18 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -2 years Ques #3 result: -9 years
Mixedwood: Ques #2 result: -2 years Ques #3 result: -9 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -8 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Mixedwood: Ques #2 result: 1.3 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 1.4 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 14 years Ques #3 result: 16 years
Mixedwood: Ques #2 result: 14 years Ques #3 result: 15 years
Hardwood: Ques #2 result: 13 years Ques #3 result: 14 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -7 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -6 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 2 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 2 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 2 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Mixedwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -8 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -8 years Ques #3 result: -8 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -6 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -6 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -6 years Ques #3 result: -8 years

ADMINISTRATIVE / BIOLOGICAL REGION

Quebec - Great Lakes/St. Lawrence

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
0	NA	2.4	0		10	NA	1.5	0.6		25	NA	1.6	1.2
20	1.5	1.7	1.3		30	1.6	1.8	1.5		42	1.4	1.9	1.7
40	1.6	1.8	1.5		50	2.0	2.2	1.9		65	1.7	2.1	2.0
60*	1.5	1.8	1.6		70*	2.1	2.2	2.0		85*	2.2	2.1	2.2
80	1.2	1.6	1.4		90	2.0	2.2	1.9		105	2.1	2.0	2.0
100	NA	1.4	1.0		110	NA	1.8	1.7		125	NA	1.8	1.9

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 11% Ques #3 result: 17%
Mixedwood: Ques #2 result: 28% Ques #3 result: 48%
Hardwood: Ques #2 result: 44% Ques #3 result: 60%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: 1.6 m^3/ha/yr Ques #3 result: 1.6 m^3/ha/yr
Mixedwood: Ques #2 result: 2.1 m^3/ha/yr Ques #3 result: 2.0 m^3/ha/yr
Hardwood: Ques #2 result: 2.1 m^3/ha/yr Ques #3 result: 2.1 m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: 105 m^3/ha Ques #3 result: 88 m^3/ha
Mixedwood: Ques #2 result: 105 m^3/ha Ques #3 result: 98 m^3/ha
Hardwood: Ques #2 result: 109 m^3/ha Ques #3 result: 105 m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 21 years Ques #3 result: 23 years
Mixedwood: Ques #2 result: 19 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 19 years Ques #3 result: 20 years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 37 & 49 yrs old Ques #3 result: 43 & 55 yrs old
Mixedwood: Ques #2 result: 33 & 50 yrs old Ques #3 result: 40 & 53 yrs old
Hardwood: Ques #2 result: 45 & 58 yrs old Ques #3 result: 50 & 67 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 238 kg/ha Ques #3 result: 229 kg/ha
Mixedwood: Ques #2 result: 263 kg/ha Ques #3 result: 254 kg/ha
Hardwood: Ques #2 result: 333 kg/ha Ques #3 result: 294 kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 35% Ques #3 result: 38%
Medium: Ques #2 result: 25% Ques #3 result: 25%
Poor: Ques #2 result: 6% Ques #3 result: 3%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 9 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 9 years Ques #3 result: 10years
Hardwood: Ques #2 result: 9 years Ques #3 result: 10 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Mixedwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 16 years Ques #3 result: 13 years
Mixedwood: Ques #2 result: 18 years Ques #3 result: 14 years
Hardwood: Ques #2 result: 21 years Ques #3 result: 13 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -7 years
Mixedwood: Ques #2 result: -6 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -7 years Ques #3 result: -7 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -1 years Ques #3 result: -1 years
Mixedwood: Ques #2 result: -2 years Ques #3 result: -1 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -1 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: 0.9 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Mixedwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 16 years Ques #3 result: 13 years
Mixedwood: Ques #2 result: 17 years Ques #3 result: 15 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 15 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -9 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -7 years Ques #3 result: -7 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -3 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: -3 years Ques #3 result: -2 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -2 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 0.8 m^3/ha/yr

Mixedwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 0.8 m^3/ha/yr

Hardwood: Ques #2 result: 1.0 m^3/ha/yr
Ques #3 result: 0.8 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: 13 years
Ques #3 result: 14 years

Hardwood: Ques #2 result: 13 years
Ques #3 result: 14 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years
Ques #3 result: -6 years

Mixedwood: Ques #2 result: -7 years
Ques #3 result: -6 years

Hardwood: Ques #2 result: -7 years
Ques #3 result: -5 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 4 years
Ques #3 result: 3 years

Mixedwood: Ques #2 result: 2 years
Ques #3 result: 2 years

Hardwood: Ques #2 result: 2 years
Ques #3 result: 2 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
NA	NA	2.7	0.7		10	NA	1.3	0.7		50	NA	1.6	1.6
18	0.4	1.9	0.7		30	0.9	1.7	1.4		70	1.2	2.0	1.9
38	0.9	2.0	1.5		50	1.5	2.3	1.9		90	1.7	2.2	2.0
58*	1.7	2.1	1.8		70*	1.7	2.3	2.0		110*	1.9	2.1	2.1
78	1.5	1.8	1.7		90	1.7	2.1	1.8		130	1.8	2.0	1.9
98	NA	1.7	1.3		110	NA	2.0	1.6		150	NA	1.8	0.9

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 12%
Ques #3 result: 17%

Mixedwood: Ques #2 result: 32%
Ques #3 result: 45%

Hardwood: Ques #2 result: 57%
Ques #3 result: 57%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 1.7 m^3/ha/yr
Ques #3 result: 1.1 m^3/ha/yr

Mixedwood: Ques #2 result: 2.1 m^3/ha/yr
Ques #3 result: 2.0 m^3/ha/yr

Hardwood: Ques #2 result: 2.2 m^3/ha/yr
Ques #3 result: 1.2 m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 103 m^3/ha Ques #3 result: 88 m^3/ha
Mixedwood: Ques #2 result: 103 m^3/ha Ques #3 result: 98 m^3/ha
Hardwood: Ques #2 result: 107 m^3/ha Ques #3 result: 105 m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 20 years Ques #3 result: 23 years
Mixedwood: Ques #2 result: 18 years Ques #3 result: 20 years
Hardwood: Ques #2 result: 18 years Ques #3 result: 20 years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 27 & 42 yrs old Ques #3 result: 37 & 48 yrs old
Mixedwood: Ques #2 result: 31 & 47 yrs old Ques #3 result: 42 & 53 yrs old
Hardwood: Ques #2 result: 36 & 52 yrs old Ques #3 result: 58 & 65 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 238 kg/ha Ques #3 result: 229 kg/ha
Mixedwood: Ques #2 result: 263 kg/ha Ques #3 result: 254 kg/ha
Hardwood: Ques #2 result: 288 kg/ha Ques #3 result: 279 kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 33% Ques #3 result: 38%
Medium: Ques #2 result: 27% Ques #3 result: 25%
Poor: Ques #2 result: 6% Ques #3 result: 3%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Mixedwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 0.7 m^3/ha/yr Ques #3 result: 0.6m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 11 years Ques #3 result: 10 years
Mixedwood: Ques #2 result: 11 years Ques #3 result: 10 years
Hardwood: Ques #2 result: 11 years Ques #3 result: 10 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.6 m^3/ha/yr
Mixedwood: Ques #2 result: 1.1 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 13 years
Mixedwood: Ques #2 result: 18 years Ques #3 result: 14 years
Hardwood: Ques #2 result: 21 years Ques #3 result: 13 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -7 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -8 years Ques #3 result: -7 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -2 years Ques #3 result: -1 years
Mixedwood: Ques #2 result: -2 years Ques #3 result: -1 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -1 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Mixedwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 13 years
Mixedwood: Ques #2 result: 17 years Ques #3 result: 15 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 15 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -8 years Ques #3 result: -7 years
Hardwood: Ques #2 result: -9 years Ques #3 result: -7 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -3 years Ques #3 result: -2 years
Mixedwood: Ques #2 result: -3 years Ques #3 result: -2 years
Hardwood: Ques #2 result: -3 years Ques #3 result: -2 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Mixedwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Hardwood: Ques #2 result: 1.0 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 13 years Ques #3 result: 15 years
Mixedwood: Ques #2 result: 12 years Ques #3 result: 14 years
Hardwood: Ques #2 result: 11 years Ques #3 result: 14 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -7 years Ques #3 result: -7 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 2 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 2 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 2 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.8 m^3/ha/yr Ques #3 result: 0.8 m^3/ha/yr
Mixedwood: Ques #2 result: 0.6 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr
Hardwood: Ques #2 result: 0.4 m^3/ha/yr Ques #3 result: 0.7 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -8 years Ques #3 result: -8 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -6 years Ques #3 result: -8 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -8 years Ques #3 result: -9 years
Mixedwood: Ques #2 result: -7 years Ques #3 result: -8 years
Hardwood: Ques #2 result: -6 years Ques #3 result: -8 years

ADMINISTRATIVE / BIOLOGICAL REGION

Yukon and Interior B.C. - Boreal

EXISTING STANDS

1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.

1a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are provided below. In most cases, Questionnaire #2 and #3 results led to mean MAI maximization which was inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
85	NA	1.9	1.9		80	NA	2.2	2.2		55	NA	1.9	1.9
105	1.7	1.9	2.0		100	2.1	2.2	2.3		75	1.9	2.0	2.0
125	1.6	1.6	1.9		120	1.9	1.9	2.1		95	1.9	1.9	1.9
145*	1.5	1.5	1.8		140	1.8	1.8	2.0		115*	1.9	1.8	1.8
165	1.4	1.5	1.7		160	1.6	1.7	1.9		135	1.7	1.5	1.6
185	NA	1.4	1.6		180	NA	1.5	1.8		155	NA	1.2	1.2

The aggregated results below are from rounds 2 and 3 survey results.

1b. What proportion of the area is managed by uneven-aged management.

Softwood: Ques #2 result: 5%; Ques #3 result: 5%
Mixedwood: Ques #2 result: 0%; Ques #3 result: NA%
Hardwood: Ques #2 result: 0%; Ques #3 result: NA%

1c. Growth per ha/year on areas managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha/yr; Ques #3 result: 1.5 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr; Ques #3 result: NA m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr; Ques #3 result: NA m^3/ha/yr

1d. After-cut growing stock level left on areas managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha; Ques #3 result: 100 m^3/ha
Mixedwood: Ques #2 result: NA m^3/ha; Ques #3 result: NA m^3/ha
Hardwood: Ques #2 result: NA m^3/ha; Ques #3 result: NA m^3/ha

1e. Average cutting cycle used on areas managed by uneven-aged management?

Softwood: Ques #2 result: 30 years; Ques #3 result: 30 years
Mixedwood: Ques #2 result: NA years; Ques #3 result: NA years
Hardwood: Ques #2 result: NA years; Ques #3 result: NA years

2. From Questionnaires #2 and #3 the results regarding **fertilization** of existing stands have been aggregated and are given below. Figures are based on one-time applications

2a. Stand age range when fertilization could take place.

Softwood: Ques #2 result: 5 & 30 yrs old; Ques #3 result: 5 & 30 yrs old
Mixedwood: Ques #2 result: 0 & 30 yrs old; Ques #3 result: 0 & 30 yrs old
Hardwood: Ques #2 result: 0 & 30 yrs old; Ques #3 result: 0 & 30 yrs old

2b. Rate of fertilizer (kg/ha) application.

Softwood: Ques #2 result: 200 kg/ha; Ques #3 result: NA kg/ha
Mixedwood: Ques #2 result: NA kg/ha; Ques #3 result: NA kg/ha
Hardwood: Ques #2 result: NA kg/ha; Ques #3 result: NA kg/ha

2c. For sites distinguished as Good, Medium and Poor, the proportion of sites that would be fertilized.

Good: Ques #2 result: 55%
Ques #3 result: 25%

Medium: Ques #2 result: 0%
Ques #3 result: 0%

Poor: Ques #2 result: 0%
Ques #3 result: 0%

2d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.7 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

Mixedwood: Ques #2 result: 0.3 m^3/ha/yr
Ques #3 result: 0.3 m^3/ha/yr

Hardwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

2e. Length of time the increased growth would last (years).

Softwood: Ques #2 result: 13 years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: 15 years
Ques #3 result: 13 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 10 years

3. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

3a. For existing immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

3aa. Change in growth.

Softwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Mixedwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Hardwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

3ab. Length of time this change in growth would last.

Softwood: Ques #2 result: 15 years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: 15 years
Ques #3 result: 13 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 10 years

3ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Hardwood: Ques #2 result: -5 years
Ques #3 result: -5 years

3ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Hardwood: Ques #2 result: -5 years
Ques #3 result: -5 years

3b. For existing immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

3ba. Change in growth.

Softwood: Ques #2 result: -0.5 m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

Mixedwood: Ques #2 result: -0.5 m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

Hardwood: Ques #2 result: -0.5 m^3/ha/yr
Ques #3 result: -0.5 m^3/ha/yr

3bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: 15 years
Ques #3 result: 13 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 10 years

3bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years
Ques #3 result: -10 years

Mixedwood: Ques #2 result: -10 years
Ques #3 result: -10 years

Hardwood: Ques #2 result: -10 years
Ques #3 result: -10 years

3bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years
Ques #3 result: 0 years

Mixedwood: Ques #2 result: 0 years
Ques #3 result: 0 years

Hardwood: Ques #2 result: 0 years
Ques #3 result: 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth.

Softwood: Ques #2 result: -1.0 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Mixedwood: Ques #2 result: -1.0 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Hardwood: Ques #2 result: -1.0 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr

3cb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 17 years
Hardwood: Ques #2 result: 15 years Ques #3 result: 15 years

3cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

3cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 10 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 0 years

REGENERATED STANDS

4. Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood.

4a. From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated stands are provided below. In most cases, Questionnaire #2 and #3 results led to a mean MAI maximizations which were inconsistent with Questionnaire #1 age estimate of maximum MAI. The age classes were set in 20 year increments from Questionnaire #1 results that gave estimates of the ages of maximum MAI's which are denoted by an asterisk. The MAI should estimates are maximum at the 20 year age class where maximum biological growth is expected for pulpwood utilization for the region.

Softwood					Mixedwood					Hardwood			
Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI		Age	Que#1 MAI	Que#2 MAI	Que#3 MAI
55	NA	1.8	1.8		45	NA	2.0	2.0		15	NA	1.9	1.9
75	1.6	1.9	1.9		65	2.2	2.1	2.1		35	2.1	2.2	2.2
95	2.1	2.0	2.0		85	2.6	2.2	2.2		55	2.7	2.3	2.3
115*	2.1	2.0	2.0		105*	2.5	2.2	2.2		75*	2.7	2.3	2.4
135	1.9	1.9	1.9		125	2.4	2.1	2.1		95	2.5	2.2	2.3
155	NA	1.8	1.8		145	NA	1.9	1.9		115	NA	1.9	2.1

The aggregated results below are taken from rounds 2 and 3 survey results.

4b. Proportion of the area that will be managed by uneven-aged management.

Softwood: Ques #2 result: 5% Ques #3 result: 5%
Mixedwood: Ques #2 result: 0% Ques #3 result: 0%
Hardwood: Ques #2 result: 0% Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: 1.5 m^3/ha/yr
Mixedwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr
Hardwood: Ques #2 result: NA m^3/ha/yr Ques #3 result: NA m^3/ha/yr

4d. After-cut growing stock level expected to be left on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: NA m^3/ha
Ques #3 result: 150 m^3/ha

Mixedwood: Ques #2 result: NA m^3/ha
Ques #3 result: NA m^3/ha

Hardwood: Ques #2 result: NA m^3/ha
Ques #3 result: NA m^3/ha

4e. Average cutting cycle used on areas that will be managed by uneven-aged management.

Softwood: Ques #2 result: 30 years
Ques #3 result: 30 years

Mixedwood: Ques #2 result: NA years
Ques #3 result: NA years

Hardwood: Ques #2 result: NA years
Ques #3 result: NA years

5. From Questionnaires #2 and #3 the results regarding **fertilization** of regenerated stands have been aggregated and are given below. Figures are based on one-time applications.

5a. Stand age range when fertilization would take place.

Softwood: Ques #2 result: 5 & 30 yrs old
Ques #3 result: 5 & 30 yrs old

Mixedwood: Ques #2 result: 0 & 30 yrs old
Ques #3 result: 0 & 30 yrs old

Hardwood: Ques #2 result: 0 & 30 yrs old
Ques #3 result: 0 & 30 yrs old

5b. Rate of fertilizer (kg/ha).

Softwood: Ques #2 result: 200 kg/ha
Ques #3 result: NA kg/ha

Mixedwood: Ques #2 result: NA kg/ha
Ques #3 result: NA kg/ha

Hardwood: Ques #2 result: NA kg/ha
Ques #3 result: NA kg/ha

5c. For sites distinguished as Good, Medium and Poor, that proportion of sites that would be fertilized.

Good: Ques #2 result: 55%
Ques #3 result: 30%

Medium: Ques #2 result: 0%
Ques #3 result: 0%

Poor: Ques #2 result: 0%
Ques #3 result: 0%

5d. Expected increase in growth (m3/ha/yr).

Softwood: Ques #2 result: 0.7 m^3/ha/yr
Ques #3 result: 0.7 m^3/ha/yr

Mixedwood: Ques #2 result: 0.3 m^3/ha/yr
Ques #3 result: 0.6 m^3/ha/yr

Hardwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

5e. Length of time the increased growth indicated above last (years).

Softwood: Ques #2 result: 13 years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: 15 years
Ques #3 result: 13 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 10 years

6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning would occur only on immature stands. Several comments on round 2 again emphasize immature stands only. The results below apply only to immature stands. The mean of responses to round 2 and 3 are given below.

6a. For regenerated immature stands, expectations from **cleaning/brushing** (assuming no utilization) regarding the following are:

6aa. Change in growth.

Softwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Mixedwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

Hardwood: Ques #2 result: 0.5 m^3/ha/yr
Ques #3 result: 0.5 m^3/ha/yr

6ab. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years
Ques #3 result: 15 years

Mixedwood: Ques #2 result: 15 years
Ques #3 result: 13 years

Hardwood: Ques #2 result: 10 years
Ques #3 result: 10 years

6ac. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Hardwood: Ques #2 result: -5 years
Ques #3 result: -5 years

6ad. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Mixedwood: Ques #2 result: -5 years
Ques #3 result: -5 years

Hardwood: Ques #2 result: -5 years
Ques #3 result: -5 years

6b. For regenerated immature stands expectations from **juvenile spacing/pre-commercial thinning** (assuming no utilization) regarding the following are:

6ba. Change in growth?

Softwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.5 m^3/ha/yr
Mixedwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.5 m^3/ha/yr
Hardwood: Ques #2 result: -0.5 m^3/ha/yr Ques #3 result: -0.5 m^3/ha/yr

6bb. Length of time this change in growth lasted.

Softwood: Ques #2 result: 15 years Ques #3 result: 15 years
Mixedwood: Ques #2 result: 15 years Ques #3 result: 13 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 10 years

6bc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -10 years Ques #3 result: -10 years
Mixedwood: Ques #2 result: -10 years Ques #3 result: -10 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -10 years

6bd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 0 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 0 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 0 years Ques #3 result: 0 years

6c. For regenerated immature stands, expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

6ca. Change in growth.

Softwood: Ques #2 result: -1.0 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Mixedwood: Ques #2 result: -1.0 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr
Hardwood: Ques #2 result: -1.0 m^3/ha/yr Ques #3 result: -1.0 m^3/ha/yr

6cb. Length of time this change in growth last.

Softwood: Ques #2 result: 20 years Ques #3 result: 20 years
Mixedwood: Ques #2 result: 20 years Ques #3 result: 17 years
Hardwood: Ques #2 result: 20 years Ques #3 result: 15 years

6cc. Change in rotation based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

6cd. Change in rotation based on maximum MAI.

Softwood: Ques #2 result: 10 years Ques #3 result: 0 years
Mixedwood: Ques #2 result: 10 years Ques #3 result: 0 years
Hardwood: Ques #2 result: 10 years Ques #3 result: 0 years

7. From Questionnaires #2, and #3 the results regarding **genetic improvement** of regenerated stands have been aggregated and are given below.

7a. Change in MAI expected from greater improvement.

Softwood: Ques #2 result: 0.3 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Mixedwood: Ques #2 result: 0.3 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr
Hardwood: Ques #2 result: 0.5 m^3/ha/yr Ques #3 result: 0.3 m^3/ha/yr

7b. Change in rotation expected based on harvestable tree size.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -5 years Ques #3 result: -5 years

7c. Change in rotation expected based on Maximum MAI.

Softwood: Ques #2 result: -5 years Ques #3 result: -5 years
Mixedwood: Ques #2 result: -5 years Ques #3 result: -5 years
Hardwood: Ques #2 result: -10 years Ques #3 result: -10 years