## **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, And Home Economics University of Alberta 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<sup>3</sup>/ha/year for regenerated stands in the Atlantic-Acadian region to 2.6 m<sup>3</sup>/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<sup>3</sup>/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

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. 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 perce	entages for increases in MAI and	(-) or negative percentages for dec	creases in MAI

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

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

5a. If existing stands were <b>thinned</b> 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. Wou	Id <b>thinning</b> reduce the rotation age or time till final harvest?	YES	_NO

#### **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 estimate
--

2	6	1
Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 1	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 1	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 1	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	% y	ears
10a. If refibre (the	egenerated stands were <b>thinned</b> wo inning plus final harvest) from the s	uld you expect a net change tands?	e in useable	YES	_NO
10b.	If yes, what percentage change do	you expect?		+/	_ %
10c. Wo	uld <b>thinning</b> reduce the rotation ag	e or time till final harvest?		YES	_NO
10d.	If yes, how many years would the	reduction be?			years
11a. If re in useab	egenerated stands were <b>juvenile spa</b> le fibre from the stands?	aced would you expect a ne	t change	YES	_NO
11b.	If yes, what percentage change do	you expect?		+/	_ %
11c. Wo	uld <b>juvenile spacing</b> reduce the rot	ation age or time till final h	arvest?	YES	_NO
11d.	If yes, how many years would the	reduction be?		y	/ears
12a. If rein useab	egenerated stands were <b>genetically</b> le fibre from the stands?	improved would you expec	ct a net change	YES	_NO
12b.	If yes, what percentage change do	you expect?		+/	_ %
12c. Wo harvest?	uld <b>genetic improvement</b> reduce th	ne rotation age or time till fi	inal	YES	_NO
12d.	If yes, how many years would the	reduction be?		. <u></u>	years
13a. If re in useab	egenerated stands were <b>cleaned/bru</b> le fibre from the stands?	<b>ish controlled</b> would you e	xpect a net change	YES	_NO

13b.	If yes, what percentage change do you expect?	+/ %
13c. W final h	Yould <b>cleaning/brush control</b> reduce the rotation age or time till arvest?	YES NO
13d.	If yes, how many years would the reduction be?	years

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



#### **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 percent	ntages for increases in MAI and	(-) or negative percentages for de	creases in MAI.

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

5a. If existing stands were <b>thin</b> fibre (thinning plus final harves	<b>ned</b> would you expect a net change in useable t) from the stands?	YES	NO
5b. If yes, what percentage	change do you expect?	+/	%
5c. Would <b>thinning</b> reduce the	rotation age or time till final harvest?	YES	NO
5d. If yes, how many years	would the reduction be?	y	ears

#### **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	vour estimate	of MAI for	· regenerated	stands	compared	to hase	line estimates
CIICIE	your estimate	UI MAI IUI	icecnerated	stanus	Compared	to base	time estimates

	6	1	
Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 15	) 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 15	) 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 15	0 150 160 170 180 190 200 210 220 230 240 250 >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 fibre (t	regenerated stands were <b>thi</b> hinning plus final harvest) f	<b>nned</b> would you expect a rom the stands?	a net change in useable	YES NO
10b.	If yes, what percentage ch	ange do you expect?		+/ %
10c. W	ould <b>thinning</b> reduce the ro	otation age or time till fin	al harvest?	YES NO
10d.	If yes, how many years w	ould the reduction be?		years
11a. If in usea	regenerated stands were <b>juv</b> ble fibre from the stands?	v <b>enile spaced</b> would you	expect a net change	YES NO
11b.	If yes, what percentage ch	ange do you expect?		+/ %
11c. W	ould <b>juvenile spacing</b> redu	ce the rotation age or tim	e till final harvest?	YES NO
11d.	If yes, how many years w	ould the reduction be?		years
12a. If in usea	regenerated stands were <b>ge</b> ble fibre from the stands?	netically improved woul	ld you expect a net change	YES NO
12b.	If yes, what percentage ch	ange do you expect?		+/ %
12c. W harvest	ould <b>genetic improvement</b> ?	reduce the rotation age of	or time till final	YES NO
12d.	If yes, how many years w	ould the reduction be?		years
13a. If in usea	regenerated stands were <b>cle</b> ble fibre from the stands?	aned/brush controlled	would you expect a net chan	ge YES NO
13b.	If yes, what percentage ch	nange do you expect?		+/ %
13c. W	ould cleaning/brush contr	ol reduce the rotation age	e or time till	

6

final harvest?

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

\_\_\_\_\_years



#### **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.

	1
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.

	Softwood	Mixedwoods	Hardwood
% Change	%	%	%

	Period of Effect	years	years		years
5a. If ex fibre (th	xisting stands were <b>thinne</b> ninning plus final harvest)	<b>d</b> would you expect a n from the stands?	et change in useable	YES	NO
5b.	If yes, what percentage c	hange do you expect?		+/	%
5c. Wo	uld <b>thinning</b> reduce the ro	tation age or time till fi	nal harvest?	YES	NO
5d.	If yes, how many years w	vould 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 y	our estimate	of MAI fo	r recenerated	stands comp	ared to	haseline	ectimatec
CITCLE	your estimate	UI MAI IU	n iegenerateu	stanus compa		Dasenne	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.

		Softwood	Mixedwoods	Hardwood	
	% Change	%	%	%	
	Period of Effect	years	years	ye	ars
10a. If fibre (th	regenerated stands were <b>th</b> hinning plus final harvest)	<b>inned</b> would you expect a from the stands?	a net change in useable	YES	NO
10b.	If yes, what percentage c	hange do you expect?		+/	%
10c. W	ould <b>thinning</b> reduce the r	otation age or time till fin	al harvest?	YES	NO
10d.	If yes, how many years w	vould the reduction be?		у	vears
11a. If in usea	regenerated stands were <b>ju</b> ble fibre from the stands?	wenile spaced would you	expect a net change	YES	NO
11b.	If yes, what percentage c	hange do you expect?		+/	%
11c. W	ould <b>juvenile spacing</b> red	uce the rotation age or tim	e till final harvest?	YES	NO
11d.	If yes, how many years w	vould the reduction be?		ye	ears
12a. If in usea	regenerated stands were <b>ge</b> ble fibre from the stands?	enetically improved woul	d you expect a net change	YES	NO
12b.	If yes, what percentage c	hange do you expect?		+/	%

12c. Would <b>genetic improvement</b> reduce the rotation age or time till final harvest?			_NO
12d.	If yes, how many years would the reduction be?		years
13a. If regenerated stands were <b>cleaned/brush controlled</b> would you expect a net change in useable fibre from the stands?			_NO
13b.	If yes, what percentage change do you expect?	+/	_ %
13c. Wo final har	uld <b>cleaning/brush control</b> reduce the rotation age or time till vest?	YES	_NO
13d.	If yes, how many years would the reduction be?		years

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



#### **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.

	1
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.

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

5a. If existing stands were <b>thinned</b> would you expect a net change in useable fibre (thinning plus final harvest) from the stands?			_NO
5b.	If yes, what percentage change do you expect?	+/	%
5c. Wou	ld <b>thinning</b> 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 pra	ctice for this region what	at would you expect the mea	an age of regenerated stands a	t 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?

YES \_\_\_\_ NO \_\_\_\_

	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?

10b.	If yes, what percentage change do you expect?	+/	%
10c. Wo	ould <b>thinning</b> reduce the rotation age or time till final harvest?	YES	NO
10d.	If yes, how many years would the reduction be?		_years
11a. If r in useat	egenerated stands were <b>juvenile spaced</b> would you expect a net change ole fibre from the stands?	YES	NO
11b.	If yes, what percentage change do you expect?	+/	%
11c. Wo	ould <b>juvenile spacing</b> reduce the rotation age or time till final harvest?	YES	NO
11d.	If yes, how many years would the reduction be?		years
12a. If r in useat	egenerated stands were <b>genetically improved</b> would you expect a net change ble fibre from the stands?	YES	NO

12b.	If yes, what percentage change do you expect?	+/	_ %
12c. Wo harvest?	uld <b>genetic improvement</b> reduce the rotation age or time till final	YES	_NO
12d.	If yes, how many years would the reduction be?		years
13a. If ro in useab	egenerated stands were <b>cleaned/brush controlled</b> would you expect a net change le fibre from the stands?	YES	_NO
13b.	If yes, what percentage change do you expect?	+/	_ %
13c. Wo final har	uld <b>cleaning/brush control</b> reduce the rotation age or time till vest?	YES	_NO
13d.	If yes, how many years would the reduction be?	y	/ears

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



#### **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 es
--

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 ex	isting stands were <b>thinned</b> would you expect a net change in useable		
fibre (th	inning plus final harvest) from the stands?	YES	NO
5b.	If yes, what percentage change do you expect?	+/-	%

14

 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?

U	% Change Period of Effect	Softwood % years	Hardwood % years	Mixedwood % years
10a. If r fibre (th	egenerated stands were <b>th</b> i inning plus final harvest) f	inned would you expect a from the stands?	net change in useable	YES NO
10b.	If yes, what percentage cl	nange do you expect?		+/%
10c. Wo	ould <b>thinning</b> reduce the re	otation age or time till fina	al harvest?	YES NO
10d.	If yes, how many years w	ould the reduction be?		years
11a. If r in useab	egenerated stands were <b>ju</b> le fibre from the stands?	venile spaced would you	expect a net change	YES NO
11b.	If yes, what percentage cl	nange do you expect?		+/ %
11c. Wo	ould <b>juvenile spacing</b> redu	ce the rotation age or time	e till final harvest?	YES NO
11d.	If yes, how many years w	ould the reduction be?		years
12a. If r in useab	egenerated stands were <b>ge</b> le fibre from the stands?	netically improved would	d you expect a net change	YES NO
12b.	If yes, what percentage cl	nange do you expect?		+/%
12c. Wo harvest?	ould genetic improvement	reduce the rotation age o	r time till final	YES NO
12d.	If yes, how many years w	ould the reduction be?		years

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

in useab	le fibre from the stands?	YES	_NO
13b.	If yes, what percentage change do you expect?	+/	%
13c. Wo final har	ould <b>cleaning/brush control</b> reduce the rotation age or time till rvest?	YES	_NO
13d.	If yes, how many years would the reduction be?	y	/ears

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



#### **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		

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

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

5a. If existing stands were <b>thinned</b> would you expect a net change in useable fibre (thinning plus final harvest) from the stands?			NO
5b.	If yes, what percentage change do you expect?	+/	%
5c. Wot	ald <b>thinning</b> reduce the rotation age or time till final harvest?	YES	NO
5d.	If yes, how many years would the reduction be?	3	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
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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 y	our estimate	of MAI fo	or regenerated	stands compared	l to ba	seline 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.

	% Change	Softwood	Hardwood	Mixedwoo	d Y
	% Change Period of Effect	% years	% years		% years
10a. If 1 fibre (th	regenerated stands were <b>th</b> i inning plus final harvest) f	<b>nned</b> would you expect a r rom the stands?	net change in useable	YES	NO
10b.	If yes, what percentage cl	nange do you expect?		+/	_ %
10c. Wo	ould <b>thinning</b> reduce the re	otation age or time till final	harvest?	YES	_NO
10d.	If yes, how many years would the reduction be? years				years
11a. If 1 in useat	regenerated stands were <b>ju</b> ble fibre from the stands?	venile spaced would you ex	xpect a net change	YES	NO
11b.	If yes, what percentage cl	nange do you expect?		+/	_ %
11c. Wo	ould <b>juvenile spacing</b> redu	ce the rotation age or time	till final harvest?	YES	_NO
11d.	If yes, how many years w	ould the reduction be?			years
12a. If r in useat	12a. If regenerated stands were <b>genetically improved</b> would you expect a net change in useable fibre from the stands? YES NO				

12b.	If yes, what percentage change do you expect?	+/	%
12c. Wo harvest?	uld <b>genetic improvement</b> reduce the rotation age or time till final	YES	_NO
12d.	If yes, how many years would the reduction be?		years
13a. If re in useabl	egenerated stands were <b>cleaned/brush controlled</b> would you expect a net change le 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?       YESNO			_NO
13d.	If yes, how many years would the reduction be?	у	ears

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



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.

2	L
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.

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

5a. If existing stands were thinned would you expect a net change in useablefibre (thinning plus final harvest) from the stands?YES			_NO
5b.	If yes, what percentage change do you expect?	+/	%
5c. Woul	ld <b>thinning</b> 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 pract	ice for this region w	what would you expect the mean	age of regenerated stands a	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

	0	1
Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 15	50 160 170 180 190 200 210 220 230 240 250 >250
Mixedwoods MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 15	50 160 170 180 190 200 210 220 230 240 250 >250
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140 15	50 160 170 180 190 200 210 220 230 240 250 >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?

YES \_\_\_\_\_ NO \_\_\_\_\_

	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?

10b.	If yes, what percentage change do you expect?	+/ %	
10c. W	ould <b>thinning</b> reduce the rotation age or time till final harvest?	YES NO	
10d.	If yes, how many years would the reduction be?	years	
11a. If a in useat	regenerated stands were <b>juvenile spaced</b> would you expect a net change ble fibre from the stands?	YES NO	
11b.	If yes, what percentage change do you expect?	+/ %	
11c. W	ould <b>juvenile spacing</b> reduce the rotation age or time till final harvest?	YES NO	
11d.	If yes, how many years would the reduction be?	years	
12a. If 1 in useat	regenerated stands were <b>genetically improved</b> would you expect a net change ble fibre from the stands?	YES NO	
12b.	If yes, what percentage change do you expect?	+/ %	

12c. Would <b>genetic improvement</b> reduce the rotation age or time till final harvest?		YES	NO
12d. If yes, how many ye	ears would the reduction be?		years
13a. If regenerated stands we in useable fibre from the star	ere <b>cleaned/brush controlled</b> would you expect a n nds?	iet change YES	_ NO
13b. If yes, what percent	age change do you expect?	+/	_ %
13c. Would <b>cleaning/brush</b> final harvest?	<b>control</b> reduce the rotation age or time till	YES	_ NO
13d. If yes, how many ye	ears would the reduction be?		years

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



#### **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.

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

5a. If existing stands were <b>thinned</b> 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. Wor	Id <b>thinning</b> reduce the rotation age or time till final harvest?	YES	NO

#### **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.

	0/ Cl	Softwood	Hardwood	Mixedwoo	d
	% Change Period of Effect	% years	% years		% years
10a. If fibre (the second seco	regenerated stands were <b>th</b> inining plus final harvest) f	<b>nned</b> would you expect from the stands?	a net change in useable	YES	_NO
10b.	If yes, what percentage cl	nange do you expect?		+/	_ %
10c. W	ould <b>thinning</b> reduce the re	otation age or time till fi	nal harvest?	YES	NO
10d.	If yes, how many years w	ould the reduction be?			years
11a. If in useal	regenerated stands were <b>ju</b> ble fibre from the stands?	<b>venile spaced</b> would yo	u expect a net change	YES	NO
11b.	If yes, what percentage cl	nange do you expect?		+/	_ %
11c. W	ould <b>juvenile spacing</b> redu	ce the rotation age or ti	me till final harvest?	YES	NO
11d.	If yes, how many years w	ould the reduction be?			years
12a. If in useal	regenerated stands were <b>ge</b> ble fibre from the stands?	netically improved wo	uld you expect a net change	YES	NO
12b.	If yes, what percentage cl	nange do you expect?		+/	_ %
12c. W harvest	ould <b>genetic improvement</b> ?	reduce the rotation age	or time till final	YES	NO
12d.	If yes, how many years w	ould the reduction be?			years
13a. If in usea	13a. If regenerated stands were <b>cleaned/brush controlled</b> would you expect a net change in useable fibre from the stands? YES NO				

13b.	If yes, what percentage change do you expect?	+/ %
13c. W final h	Yould <b>cleaning/brush control</b> reduce the rotation age or time till arvest?	YES NO
13d.	If yes, how many years would the reduction be?	years

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



#### **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.

	1
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.

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

5a. If existing stands were <b>thinned</b> would you expect a net change in useable fibre (thinning plus final harvest) from the stands?			NO
5b.	If yes, what percentage change do you expect?	+/	%
5c. Woi	ald <b>thinning</b> reduce the rotation age or time till final harvest?	YES	NO

\_ years

vears

YES \_\_\_\_ NO \_\_\_\_

#### **REGENERATED STANDS**

in useable fibre from the 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

	Softwood	WIIXeuwoous
Mean Age at Harvest	vears	vears

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?

U		Softwood	Mixedwoods	Hardwood
	% Change	%	%	%
	Period of Effect	years	years	years
10a. If regenerated stands were <b>thinned</b> would you expect a net change in useable fibre (thinning plus final harvest) from the stands?				YES NO
10b.	If yes, what percentage cl	hange do you expect?		+/ %
10c. We	ould <b>thinning</b> reduce the re	otation age or time till fina	l harvest?	YES NO
10d.	If yes, how many years w	ould the reduction be?		years
11a. If 1 in useat	regenerated stands were <b>ju</b> ble fibre from the stands?	venile spaced would you e	expect a net change	YES NO
11b.	If yes, what percentage cl	hange do you expect?		+/ %
11c. We	ould <b>juvenile spacing</b> redu	ce the rotation age or time	till final harvest?	YES NO
11d.	If yes, how many years w	ould the reduction be?		years
12a. If 1 in useat	regenerated stands were <b>ge</b> ally be the stands?	netically improved would	l you expect a net change	YES NO
12b.	If yes, what percentage cl	hange do you expect?		+/ %
12c. Would <b>genetic improvement</b> reduce the rotation age or time till final harvest?				YES NO
12d.	If yes, how many years w	ould the reduction be?		years
13a. If 1	regenerated stands were cle	eaned/brush controlled w	ould you expect a net chang	ge

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13b.	If yes, what percentage change do you expect?	+/ %
13c. W final h	Yould <b>cleaning/brush control</b> reduce the rotation age or time till arvest?	YES NO
13d.	If yes, how many years would the reduction be?	years

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



#### **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 percent	ntages for increases in MAI and	(-) or negative percentages for dec	reases 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

	Softwood
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.

		Softwood	Mixedwoods	Hardwood
	% Change	%	%	%
	Period of Effect	years	years	years
10a. If regenerated stands were <b>thinned</b> would you expect a net change in useable fibre (thinning plus final harvest) from the stands?				YES NO
10b.	If yes, what percentage c	change do you expect?		+/%
10c. W	Yould <b>thinning</b> reduce the r	rotation age or time till	final harvest?	YES NO
10d.	If yes, how many years w	would the reduction be?	?	years
11a. If in usea	regenerated stands were <b>ju</b> ble fibre from the stands?	<b>wenile spaced</b> would y	ou expect a net change	YES NO
11b.	If yes, what percentage c	change do you expect?		+/ %
11c. W	ould <b>juvenile spacing</b> red	uce the rotation age or	time till final harvest?	YES NO
11d.	If yes, how many years w	would the reduction be?	?	years
12a. If in usea	regenerated stands were <b>g</b> ble fibre from the stands?	enetically improved w	ould you expect a net change	YES NO
12b.	If yes, what percentage c	change do you expect?		+/ %
12c. Would <b>genetic improvement</b> reduce the rotation age or time till final harvest?				YES NO

12d.	If yes, how many years would the reduction be?		years
13a. If r in useab	egenerated stands were <b>cleaned/brush controlled</b> would you expect a net change le fibre from the stands?	YES	_ NO
13b.	If yes, what percentage change do you expect?	+/	_ %
13c. Wo final har	ould <b>cleaning/brush control</b> reduce the rotation age or time till vest?	YES	_NO
13d.	If yes, how many years would the reduction be?	:	years
#### **Quebec - Boreal** ADMINISTRATIVE / BIOLOGICAL REGION:



### **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 n	egative percentages for dec	creases 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 <b>thinned</b> 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. Woi	uld <b>thinning</b> reduce the rotation age or time till final harvest?	YES	_NO
5d.	If yes, how many years would the reduction be?		years

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

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?

,	0	1	
Softwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140	40 150 160 170 180 190 200 210 220 230 240 250 >250	
Hardwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140	40 150 160 170 180 190 200 210 220 230 240 250 >250	
Mixedwood MAI (%)	<50 50 60 70 80 90 MAI 110 120 130 140	40 150 160 170 180 190 200 210 220 230 240 250 >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.

Softwood

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

Mixedwood

	% Change Period of Effect	% years	% years		% years
10a. If 1 fibre (th	regenerated stands were <b>thinned</b> ninning plus final harvest) from t	l would you expect a net the stands?	change in useable	YES	NO
10b.	If yes, what percentage change	e do you expect?		+/	_ %
10c. W	ould <b>thinning</b> reduce the rotation	n age or time till final ha	rvest?	YES	_NO
10d.	If yes, how many years would	the reduction be?			years
11a. If a in useat	regenerated stands were <b>juvenile</b> ole fibre from the stands?	e <b>spaced</b> would you expo	ect a net change	YES	NO
11b.	If yes, what percentage change	e do you expect?		+/	_ %
11c. W	ould <b>juvenile spacing</b> reduce the	e rotation age or time till	final harvest?	YES	NO
11d.	If yes, how many years would	the reduction be?			years
12a. If 1 in useat	regenerated stands were <b>genetic</b> ole fibre from the stands?	<b>ally improved</b> would yo	u expect a net change	YES	NO
12b.	If yes, what percentage change	e do you expect?		+/	_ %
12c. We harvest	ould <b>genetic improvement</b> redu ?	ce the rotation age or tin	ne till final	YES	NO
12d.	If yes, how many years would	the reduction be?			years
13a. If 1 in useat	regenerated stands were <b>cleaned</b> ble fibre from the stands?	/ <b>brush controlled</b> woul	d you expect a net change	YES	NO
13b.	If yes, what percentage change	e 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



### **EXISTING STANDS**

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates?

YES \_\_\_\_ NO \_\_\_\_

YES \_\_\_\_ NO \_\_\_\_

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 Hard	
% 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?

5b. If yes, what percentage change do you expect?

5c. Would thinning reduce the rotation age or time till final harvest?

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	l M
	% Change Period of Effect	% years	% years		% years
10a. If fibre (t	regenerated stands were <b>th</b> hinning plus final harvest)	inned would you experience from the stands?	ct a net change in useable	YES	NO
10b.	If yes, what percentage cl	hange do you expect?		+/	%
10c. W	ould <b>thinning</b> reduce the re	otation age or time till	final harvest?	YES	NO
10d.	If yes, how many years w	ould the reduction be?	,		years
11a. If in usea	regenerated stands were <b>ju</b> ble fibre from the stands?	<b>venile spaced</b> would y	ou expect a net change	YES	NO
11b.	If yes, what percentage cl	hange do you expect?		+/	%
11c. W	ould <b>juvenile spacing</b> redu	ce the rotation age or t	ime till final harvest?	YES	NO
11d.	If yes, how many years w	ould the reduction be?	,		years
12a. If in usea	regenerated stands were <b>ge</b> ble fibre from the stands?	netically improved we	ould you expect a net change	YES	NO
12b.	If yes, what percentage cl	hange do you expect?		+/	%
12c. W harvest	ould <b>genetic improvemen</b> ?	t reduce the rotation ag	e or time till final	YES	NO
12d.	If yes, how many years w	ould the reduction be?			_years
13a. If in usea	regenerated stands were <b>cle</b> ble fibre from the stands?	eaned/brush controlle	<b>d</b> would you expect a net chang	ge YES	NO

13b.	If yes, what percentage change do you expect?	+/ %
13c. W final h	Yould <b>cleaning/brush control</b> reduce the rotation age or time till arvest?	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



### **EXISTING STANDS**

1. Are you sufficiently knowledgeable about this region to provide growth and yield estimates?

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.

YES \_\_\_\_ NO \_\_\_\_

YES \_\_\_\_ NO \_\_\_\_

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

	<u> </u>
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?

5b.	If yes, what percentage change do you expect?	+/	%
5c. Wou	ld <b>thinning</b> reduce the rotation age or time till final harvest?	YES	NO

\_\_\_\_ years

\_\_\_\_\_ 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

	Softwood	Hardwood	
Mean Age at Harvest	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 esti	mate 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 MAL(%)	<50 50 60 70 80 90 MAL 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?

U	% Change Period of Effect	Softwood % years	Hardwood % years	Mixedwood % years
10a. If fibre (tl	regenerated stands were <b>th</b> hinning plus final harvest)	<b>inned</b> would you expect from the stands?	a net change in useable	YES NO
10b.	If yes, what percentage c	hange do you expect?		+/%
10c. W	ould <b>thinning</b> reduce the r	otation age or time till fin	al harvest?	YES NO
10d.	If yes, how many years w	vould the reduction be?		years
11a. If in usea	regenerated stands were <b>ju</b> ble fibre from the stands?	wenile spaced would you	expect a net change	YES NO
11b.	If yes, what percentage c	hange do you expect?		+/%
11c. W	ould <b>juvenile spacing</b> redu	uce the rotation age or tim	ne till final harvest?	YES NO
11d.	If yes, how many years w	vould the reduction be?		years
12a. If in usea	regenerated stands were <b>ge</b> ble fibre from the stands?	enetically improved wou	ld you expect a net change	YES NO
12b.	If yes, what percentage c	hange do you expect?		+/%
12c. W harvest	ould <b>genetic improvemen</b> ?	t reduce the rotation age	or time till final	YES NO
12d.	If yes, how many years w	vould 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. Wo final har	ould <b>cleaning/brush control</b> reduce the rotation age or time till rvest?	YES	_NO
13d.	If yes, how many years would the reduction be?	y	/ears

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

**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.

	Softwo	ood		Mixedw	ood		Hardw	ood
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 aggrega	ated estimates	(rounded) fi	om your estima	ates reported abov	ve.	
1b. W	hat propo	rtion of the area in the	e region is mar	naged by un	even-aged man	agement?		
101 11	Softwo	ood %		Mixedwo	ood %		Hardwo	ood %
1c. W	hat growtl	h per ha/year do you e	expect on areas	s managed b	y uneven-aged	management?		
	Softwo	ood m3/ha/yr	-	Mixedwo	ood m3/	/ha/yr	Hardwo	ood m3/ha/yr
1d. W	hat after-c	cut growing stock leve	el do vou expe	ct to be left	on areas manag	ged by uneven-age	ed manage	ment?
	Softwo	ood m3/ha	j	Mixedwo	ood m	3/ha	Hardwo	ood m3/ha
1e. W	hat would	be the average cuttin	g cycle used o	n areas mar	aged by unever	n-aged manageme	ent?	
	Softwo	ood years		Mixedwo	ood ye	ars	Hardwo	ood years
<b>2.</b> From	m Questic	onnaire #1 your collec	ctive (mean) re	sponses to f	f <b>ertilization</b> of	existing stands in	dicated fer	tilization would result in
yield i	ncreases a	and may have a period	d of effect as fe	ollows:				
	Softwo	od 4.25%		Mixedwo	od 4.25%		Hardwo	bod 5.5%
	Softwo	ood 5 years		Mixedwo	ood 5 year	s	Hardwo	bod 5 years
Howe	ver your c	comments indicated co	oncern over fe	rtilizing "all	stands', "all sit	es", "age of stand	s fertilized	" and "amount of fertilizer".
Please	answer tl	he following question	s to account fo	or these con	cerns:			
2a. At	what star	nd age range would yo	ou fertilize? Ai	nswer shoul	d be range betw	veen a low figure a	and a high	figure expressed in years of
Softwo	boc	& years old	Mixed	wood	& years o	old Hardv	wood	& years old
2h A+	what rate	of fortilizor (ka/ba)	yould you app	19				
Softwo	ood	kg/ha	Mixed	wood	kg/ha		Hardwo	ood kg/ha
2c. If s	sites are d	istinguished as Good	, Medium and	Poor what p	proportion of sit	es would you fert	ilize?	96
	0000	/0		mountill	/	,	1 001	/0

2d. What increase in growth (m3/ha/yr) v	vould you expect?	
Softwood	Mixedwood	Hardwood
2e. How long would the increased growth	h indicated above last (years)?	

now long would the mereused	growth maleated 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 t	his change in growth	last?				
Softwoody	ears	Mixedwood	years		Hardwood years	
3ac. Change in rotation	based on harvestable	e 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?

$\mathbf{S} = \mathbf{f}_{1} + \mathbf{f}_{2}$ $\mathbf{m} = \mathbf{M}_{1} + \mathbf{m} = \mathbf{M}_{1} + \mathbf{m} = \mathbf{M}_{2} +$	ha/vr
Softwood +/m5/na/yr Mixedwood +/m5/na/yr Hardwood +/m5/l	aa/yi
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 +/ year	S
3bd. Change in rotation based on maximum MAI?	
Softwood +/ years Mixedwood +/ years Hardwood +/ year	S

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 t	his change in growth la	st?			
Softwood	years	Mixedwood	years	Hardwood years	
3cc. Change in rotation	n based on harvestable ti	ree size?			
Softwood +/-	years	Mixedwood +/	years	Hardwood +/	_ years
3cd. Change in rotation	n based on maximum M	AI?			
Softwood +/-	years	Mixedwood +/	years	Hardwood +/	_ years

**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).

	Softwo	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 mana Softwood%	ged by uneven-aged management? Mixedwood%	Hardwood%
4c. What growth per ha/year do you expect on areas Softwood m3/ha/yr	managed by uneven-aged management? Mixedwood m3/ha/yr	Hardwood m3/ha/yr
4d. What after-cut growing stock level do you expec Softwood m3/ha	to be left on areas managed by uneven Mixedwood m3/ha	-aged management? Hardwood m3/ha
4e. What would be the average cutting cycle used on Softwood years	areas managed by uneven-aged managed Mixedwood years	ement? Hardwood years
5. From Questionnaire #1 your collective (mean) resp yield increases and may have a period of effect as for Softwood 8 %	ponses to <b>fertilization</b> of regenerated st lows: Mixedwood 8 %	ands indicated fertilization would result in Hardwood 8 %
Softwood 5.7 years However your comments indicated concern over fert	Mixedwood 5.7 years ilizing "all stands', "all sites", "age of st	Hardwood 5.7 years ands fertilized" and "amount of fertilizer".
5a. At what stand age range would you fertilize? Ansage.	wer should be range between a low figu	are and a high figure expressed in years of
Softwood & years old	Mixedwood & years old Ha	ardwood & 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 P Good%	oor what proportion of sites would you Medium%	fertilize? Poor%
5d. What increase in growth (m3/ha/yr) would you e Softwood	xpect? Mixedwood	Hardwood
5e. How long would the increased growth indicated a Softwood	bove last (years)? 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	e size?			
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
6ad. Change in rotation based on maximum MA	[?			
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. I	How long would this cha	inge in growth last?				
	Softwood	years	Mixedwood	years Ha	rdwood years	
6bc. (	Change in rotation based	on harvestable tree size	e?			
	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 cha	inge in growth last?				
Softwood	years	Mixedwood	years	Hardwood years	
6cc. Change in rotation based	on harvestable tree size	e?			
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 of	lo you expect for ge	enetic improvement?			
	Softwood	m3/ha/yr	Mixedwood	m3/ha/yr	Hardwood	_m3/ha/yr
7h	What change in rotatio	on based on barvesta	able tree size would you ex	xpect?		
70.	Softwood +/-	vears	Mixedwood +/-	vears	Hardwood +/-	vears
		5				
7c.	What change in rotation	on based on Maximu	Im MAI would you expect	t?		
	Softwood +/	years	Mixedwood +/	years	Hardwood +/	years

**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.

	Softwo	ood		Mixedwo	od		Hardwo	od	
Age	MAI	New MAI	Age	MAI N	Jew 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 aggr	regated estimates	(rounded) fro	om your estimates rep	orted above	2.		
1b. Wł	nat propoi	rtion of the area in	the region is mar	naged by une	ven-aged managemer	nt?			
	Softwo	od %	U	Mixedwoo	od %		Hardwoo	od	%
1c. Wł	nat growtł	n per ha/year do ye	ou expect on areas	s managed by	y uneven-aged manag	gement?			
	Softwo	od m3/ha	/yr	Mixedwoo	od m3/ha/yr		Hardwoo	od	m3/ha/yr
1d. Wł	nat after-c	ut growing stock	level do you expe	ect to be left o	on areas managed by	uneven-age	d managem	ent?	
	Softwo	od m3/h	a	Mixedwoo	od m3/ha		Hardwoo	od	m3/ha
1e. Wł	nat would	be the average cu	tting cycle used o	on areas mana	iged by uneven-aged	managemer	nt?		
	Softwo	od years		Mixedwoo	od years		Hardwoo	od	years
<b>2.</b> From	n Questio	onnaire #1 your co	llective (mean) re	esponses to <b>fe</b>	ertilization of existing	g stands ind	icated fertil	lization wo	ould result in
yield h	Softwo	and may have a period $4.2%$	filled of effect us f	Mixedwor	nd 3.3%		Hardwoo	od 5	0%
	Softwo	od 8 years		Mixedwoo	od 3 years		Hardwoo	od 3	years
Howev Please	ver your c answer th	omments indicate ne following quest	d concern over fe ions:	rtilizing "all	stands', "all sites", "a	ge of stands	fertilized"	and "amou	int of fertilizer".
2a. At age.	what stan	d age range would	l you fertilize? Ai	nswer should	be range between a l	ow figure a	nd a high fi	igure expre	essed in years of
Softwo	ood	& years old	Mixed	lwood d	& years old	Hardw	ood &	k yea	rs old
2b. At	what rate	of fertilizer (kg/h	a) would you app	ly?					
	Softwo	od kg/ha	l II	Mixedwoo	od kg/ha		Hardwoo	od	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	a/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 s	ize?			
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 cha	nge in growth last?				
Softwood	years	Mixedwood	years Ha	ardwood years	
3bc. Change in rotation based	on harvestable tree size	e?			
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 g	rowth last?			
Softwood years	Mixedwood	years	Hardwood years	
3cc. Change in rotation based on harve	estable tree size?			
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
3cd. Change in rotation based on maximum	mum MAI?			
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years

**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. AG	E: Your Est.		
	Softwor	bd	1.68		2.23	59			
	Mixedu	vood	1 74		2 39	57 4	5		
	Hardwo	od	1.58		2.00	51.3	7		
4a. Ple	ase compl	ete the table bel	ow with your revis	ed estima Miyod	tes of MAI (A	ge in years and MA	AI in m3/ha/y	yr). yood	
	Soltwoo	Ju		WIIXCu	woou		Haruw	oou	
Age	MAI	New MAI	Age	MAI	New MAI	Age	e 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		
70	1.07		78	2.37		72	1.57		
00	1.97 MA		78	2.05 NA		02	1.57 NA		
99	INA	* Bas	90 ed on aggregated e	stimates (	(rounded) from	92 vour estimates rei	nA ported above		
		2005	ea on aBB10Barea e	Series (	(10011000) 11011				
4b. Wł	nat proport	tion of the area i	n the region is man	haged by	uneven-aged m	nanagement?			
	Softwoo	od%		Mixed	wood	%	Hardwo	bod	_%
4 - 3371	4				4	1			
4c. wr	hat growth	per na/year do	you expect on areas	s manageo	a by uneven-ag	ged management?	<b>TT</b> 1	1	24 /
	Sonwoo	0d m3/	na/yr	Mixed	wood	m3/na/yr	Hardwo	000	m3/na/yr
Ad WI	nat after_ci	it growing stock	level do vou expe	ct to be le	eft on areas ma	naged by uneven-s	aged manage	ment?	
<i>τ</i> α. <i>w</i> 1	Softwor	$m^2$ m <sup>3</sup> /	ha	Mixed	wood	m3/ha	Hardwo	nont.	m3/ha
	Soliwoo		nu	WIIXeu	wood	mo/na	Thatawa		
4e. Wł	nat would l	be the average c	utting cycle used o	n areas m	anaged by une	ven-aged manager	ment?		
	Softwoo	od year	's	Mixed	wood	years	Hardwo	bod bod	years
						•			
<b>5.</b> From	n Questior	nnaire #1 your c	ollective (mean) re	sponses to	o <b>fertilization</b>	of regenerated star	nds indicated	fertilization	would result in
yield in	ncreases an	nd may have a p	eriod of effect as f	ollows:					
	Softwoo	od 10 %		Mixed	wood 6.7 %		Hardwo	ood 6.7 %	
	Softwoo	od 6.7 years		Mixed	wood 4 years		Hardwo	ood 4 years	
					-			-	
Howev	ver your co	omments indicat	ed concern over fe	rtilizing "	all stands', "all	sites", "age of star	nds fertilized	" and "amoun	t of fertilizer".
To help	p clarify th	nese concerns pl	ease answer the fol	llowing q	uestions:				
- •	1					1 (1		c	1.
5a. At	what stand	l age range wou	ld you fertilize? Ai	nswer sho	ould be range b	etween a low figur	e and a high	figure expres	sed in years of
age.									
Coftwa	ad (		1	Minad	wood %		dwood	e	ald
Sollwo	bou e	c years on	l	Mixed	wood $\alpha$ _	years old har	awood		solu
5h At	what rate	of fertilizer (kg/	ha) would you ann	1v?					
50.71	Softwor	d kg/h	na) would you app	Iy: Miyadı	wood	ka/ha	Uarduy	and	ka/ha
	Soliwoo	Ju kg/1	ia	WIIACU	wood	_ Kg/IIa	Hardwo		Kg/11a
5c If s	ites are di	stinguished as G	ood Medium and	Poor wha	t proportion of	sites would you fe	ertilize?		
20.115	Good	% % stinguistica us	iood, mediani ana	Mediu	m	%	Poor	(	0/6
	000u _	70		wiculu		/0	1 001		/0
5d. Wł	nat increas	e in growth (m3	/ha/yr) would you	expect?					
2 111	Softwor			Mixed	wood		Hardwe	bod	
	SOLLWOU	Ju		WIINCU	······································		Tatuw		
5e Ho	w long wo	ould the increase	d growth indicated	above la	st (vears)?				
50.110	Softwor	nd	5 510 min maiedieu	Mixed	wood		Hardwo	bod	
						-			

**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 s	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 ch	ange in growth last?				
Softwood	_ years	Mixedwood	years	Hardwood years	
6bc. Change in rotation base	d on harvestable tree siz	e?			
Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	years
6bd. Change in rotation base	d 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 gr	owth last?			
Softwood years	Mixedwood	years	Hardwood years	
6cc. Change in rotation based on harve	stable tree size?			
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
6cd. Change in rotation based on maxi	mum 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. W	/hat change in MAI (	to you expect for ge	enetic improvement?			
	Softwood	m3/ha/yr	Mixedwood	m3/ha/yr	Hardwood	_m3/ha/yr
7b. W	/hat change in rotatio	on based on harvest	able tree size would you e	xpect?		
	Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
7c. W	hat change in rotatio	on based on Maximu	m MAI would you expect	t?		
	Softwood +/	years	Mixedwood +/	years	Hardwood +/	years

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.

	Softwo	od			Mixed	wood			Hardy	vood	
Age	MAI	New MA	AI	Age	MAI	New MA	AI	Age	MAI	New M	AI
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 re	ported above	e.		
1b. Wh	at propor	tion of the	area in the re	gion is man	aged by ı	uneven-age	ed manageme	ent?			
	Softwo	od	%		Mixedy	wood	%		Hardw	ood	%
1c. Wh	at growth Softwo	n per ha/ye od	ar do you exp _ m3/ha/yr	ect on areas	managed Mixedy	d by uneve wood	n-aged mana m3/ha/yr	gement?	Hardw	rood	m3/ha/yr
1d. Wh	at after-c	ut growin	g stock level d	o you expe	ct to be le	eft on areas	managed by	uneven-age	d manage	ement?	
	Softwo	od	m3/ha		Mixedy	wood	m3/ha		Hardw	ood	m3/ha
1e. Wh	at would	be the ave	erage cutting c	ycle used o	n areas m	anaged by	uneven-aged	l managemer	nt?		
	Softwo	od	years		Mixedy	wood	years		Hardw	ood	years
<b>2.</b> From yield in	a Questio creases a Softwo Softwo	nnaire #1 ind may ha od od	your collective ave a period of 2.3% 6.7 years	e (mean) res effect as fo	sponses to ollows: Mixedy Mixedy	o <b>fertilizat</b> wood wood	<b>ion</b> of existir 2.4% 10 years	ng stands ind	licated fe Hardw Hardw	rtilization rood rood	would result in 2.0% 5 years
Howev Please	er your co answer th	omments i ne followin	indicated conc ng questions to	ern over fer account fo	tilizing " r these co	all stands', oncerns:	"all sites", "a	age of stands	fertilized	1" and "an	nount of fertilizer".
2a. At v age.	what stan	d age rang	e would you f	ertilize? Ar	iswer sho	uld be rang	ge between a	low figure a	nd a high	i figure exp	pressed in years of

Softwood \_\_\_\_\_ & \_\_\_\_ years old Mixedwood \_\_\_\_\_ & \_\_\_\_ years old Hardwood \_\_\_\_\_ & \_\_\_\_ years old of

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 Pe Good %	oor what proportion of Medium	f sites would you fertili %	ze? Poor9	6
2d. What increase in growth (m3/ha/yr) would you ex Softwood	xpect? Mixedwood	-	Hardwood	_
2e. How long would the increased growth indicated a Softwood	bove last (years)? Mixedwood	-	Hardwood	_
<b>3.</b> From Questionnaire #1 your collective (mean) resp there would be a net change in yield due to thinning, rotation age would be reduced by a mean of 5 years	ponses to thinning of e and the mean of the cl	existing stands were as hange was a (-) 2.0 %	follows: 20% of respo . 20% of respondents	ndents felt felt the
Significant comments were made regarding "what to stands only", and "is rotation set by achieving a certa <b>responses</b> please answer the following:	thin", "would never th in tree size or maximu	nin in mature stands", " Im mean annual increm	I assume thinning of in ent". To help clarify 7	nmature <b>Fhinning</b>
3a. For existing immature stands what do you expect	from <b>cleaning</b> / <b>brush</b>	ning (assume no utilizat	tion) 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 Hardwo	od years	
<ul> <li>3ac. Change in rotation based on harvestable tree size</li> <li>Softwood +/- years</li> <li>3ad. Change in rotation based on maximum MAI2</li> </ul>	e? Mixedwood +/	years	Hardwood +/	_ years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
3b. For existing immature stands what do you expect regarding:	from <b>juvenile spacin</b>	g/ pre-commercial thi	<b>nning</b> (assume no util	lization)
<ul> <li>3ba. Change in growth?</li> <li>Softwood +/ m3/ha/yr</li> <li>3bb. How long would this change in growth last?</li> </ul>	Mixedwood +/	m3/ha/yr	Hardwood +/	_ m3/ha/yr
Softwood years 3bc. Change in rotation based on harvestable tree size	Mixedwood	years Hardwo	od years	
Softwood +/ years 3bd. Change in rotation based on maximum MAI?	Mixedwood +/	years	Hardwood +/	_ years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
3c. For existing immature stands what do you expect	from <b>commercial thi</b>	<b>nning</b> (include thinnin	ig plus final harvest) re	egarding:
3ca. Change in growth?         Softwood +/ m3/ha/yr         3cb. How long would this change in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	_ m3/ha/yr
Softwood years 3cc. Change in rotation based on harvestable tree size Softwood +/ years	Mixedwood e? Mixedwood +/	years Hardwo	od years Hardwood +/	_ years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years

**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).

	Softwo	ood		Mixed	wood		Hardv	vood	
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI	
27	NA		29	NA		1	NA		
27 47	/ 38		2) /9	3.8/		21	2 56		
	4.06			1.67		21 41	2.30		
*87	4.90 5.11		*80	4.02		*61	3.50		
107	J.11 4.63		100	4.71		01	3.03		
107	4.05 NA		109	4.52 NA		91 111	5.05 NA		
127	INA	* Based or	n aggregated e	stimates (	(rounded) from your e	estimates repor	ted above	 e.	
4b. W	hat propo	rtion of the area in the	e region is mar	naged by	uneven-aged manage	ment?			
	Softwo	ood%		Mixed	wood%		Hardw	ood%	
4c W	nat orowf	h per ha/vear do vou e	expect on area	s manage	d by uneven-aged ma	nagement?			
10. 11	Softwo	ood m3/ha/yi		Mixed	wood m3/ha	a/yr	Hardw	ood n	n3/ha/yr
4d. W	hat after-o Softwo	cut growing stock leve ood m3/ha	el do you expe	ct to be le Mixed	eft on areas managed wood m3/ha	by uneven-age a	d manage Hardw	ement? ood n	n3/ha
4e. W	nat would	be the average cuttin	g cvcle used o	n areas m	anaged by uneven-as	ged manageme	nt?		
	Softwo	ood years	8 • 9 • 1• • • • • • •	Mixed	wood years	500	Hardw	ood y	ears
<b>5.</b> From yield i	m Questio	onnaire #1 your collec and may have a period	tive (mean) re d of effect as f	sponses t ollows:	o <b>fertilization</b> of reg	enerated stands	s indicated	d fertilization wou	ıld result in
•	Softwo	od 8.0 %		Mixed	wood 4.2 %		Hardw	ood 5.0 %	
	Softwo	ood 12.2 years		Mixed	wood 13.3 years		Hardw	ood 15.0 years	
Howe <sup>*</sup> Please	ver your c answer t	comments indicated control to the following question	oncern over fe s:	rtilizing "	all stands', "all sites",	, "age of stands	s fertilized	l" and "amount of	f fertilizer".
5a. At	what star	nd age range would yo	ou fertilize? Ai	nswer sho	ould be range betweer	n a low figure a	ind a high	figure expressed	in years of
Softwo	ood	& years old		Mixed	wood & y	ears old Hardw	/ood	& years old	d
5b. At	what rate	e of fertilizer (kg/ha) v	vould you app	ly?					
	Softwo	ood kg/ha	<b>7</b> 11	Mixed	wood kg/ha		Hardw	ood k	g/ha
5c. If s	sites are d	istinguished as Good.	Medium and	Poor wha	t proportion of sites v	would you ferti	lize?		
	Good	%		Mediu	m%	5	Poor _	%	
5d. W	hat increa	se in growth (m3/ha/y	r) would you	expect?					
	Softwo	ood	,,	Mixed	wood		Hardw	ood	
5e. Ho	w long w	ould the increased groups	owth indicated	l above la	st (years)?				
	Softwo	ood		Mixed	wood		Hardw	ood	

**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	ge in growth last?				
Softwood y	/ears	Mixedwood	years 1	Hardwood years	
6ac. Change in rotation based o	n harvestable tree size	?			
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
6ad. Change in rotation based o	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 growt	h?				
Softwood +/	m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	_m3/ha/yr
6bb. How long would	this change in growth la	st?			
Softwood	years	Mixedwood	years	Hardwood years	
6bc. Change in rotatio	on based on harvestable the	ree size?			
Softwood +/	years	Mixedwood +/	years	Hardwood +/	_ years
6bd. Change in rotatio	on based on maximum M	AI?			
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 cha	inge in growth last?				
Softwood	years	Mixedwood	years 1	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 chan	ige in MAI do	you expect for genetic in	provement?			
Softv	vood	m3/ha/yr	Mixedwood	_m3/ha/yr	Hardwood	_m3/ha/yr
71. XV1 1	• • • • •	1 1 1				
/b. what chan	ige in rotation	based on harvestable tree	size would you expec	ct?		
Softv	vood +/	years	Mixedwood +/	years	Hardwood +/	years
7c. What chan	ige in rotation	based on Maximum MAI	would you expect?			
Softv	wood +/-	vears	Mixedwood +/-	vears	Hardwood +/-	vears
		)		)		

**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.

	Softwoo	od			Mixedv	wood			Hardw	vood	
Age	MAI	New MA	AI	Age	MAI	New MA	I	Age	MAI	New MA	AI
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 e	stimates (1	rounded)	from your	estimates repo	orted above	2.		
1b. What	at proport	tion of the	area in the regi	on is mana	aged by u	ineven-age	d management	?			
	Softwoo	od	%		Mixedv	vood	%		Hardw	ood	%
1c. What	at growth Softwoo	per ha/ye	ar do you expec _ m3/ha/yr	t on areas	managed Mixedv	l by uneve wood	n-aged manage m3/ha/yr	ment?	Hardw	ood	_m3/ha/yr
1d. What	at after-cu	ut growing	g stock level do	you expec	t to be le	ft on areas	managed by u	neven-age	d manage	ement?	
	Softwoo	od bc	m3/ha		Mixedw	wood	m3/ha	U	Hardw	ood	m3/ha
1e. Wha	at would	be the ave	erage cutting cyc	le used on	areas ma	anaged by	uneven-aged n	nanagemer	nt?		
	Softwoo	od	years		Mixedv	vood	years		Hardw	ood	years
<b>2.</b> From yield in	Question creases an Softwoo Softwoo	nnaire #1 nd may ha od od	your collective ( ave a period of e 5% 10 years	mean) res	ponses to llows: Mixedv Mixedv	o <b>fertilizat</b> vood vood	<b>ion</b> of existing 5% 10 years	stands ind	icated fer Hardw Hardw	rtilization v ood ood	would result in 10% 10 years
Howeve Please a	er your co inswer the	omments i e followir	ndicated concer ag questions to a	n over fert ccount for	tilizing "a these co	all stands', ncerns:	"all sites", "ag	e of stands	fertilized	l" and "am	ount of fertilizer".
2a. At wage.	vhat stanc	d age rang	e would you fer	tilize? An	swer shou	uld be rang	ge between a lo	w figure a	nd a high	figure exp	pressed in years of

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 Pe Good %	oor what proportion of Medium	sites would you fertili_%	ze? Poor%	, D
2d. What increase in growth (m3/ha/yr) would you ex Softwood	xpect? Mixedwood		Hardwood	_
2e. How long would the increased growth indicated a Softwood	bove last (years)? Mixedwood		Hardwood	_
<b>3.</b> From Questionnaire #1 your collective (mean) resp there would be a net change in yield due to thinning, rotation age would be reduced by a mean of NA y	ponses to thinning of e and the mean of the ch ears.	xisting stands were as hange was a (-) 2.5 %	follows: 50% of respondents f	ndents felt felt the
Significant comments were made regarding "what to stands only", and "is rotation set by achieving a certa <b>responses</b> please answer the following:	thin", "would never th in tree size or maximu	in in mature stands", " m mean annual increm	I assume thinning of in ent". To help clarify <b>T</b>	nmature T <b>hinning</b>
3a. For existing immature stands what do you expect	from <b>cleaning /brush</b>	<b>ing</b> (assume no utiliza	tion) 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         3ac. Change in rotation based on harvestable tree size	Mixedwood	years Hardwo	od years	
Softwood +/ years 3ad. Change in rotation based on maximum MAI?	Mixedwood +/	years	Hardwood +/	_ years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
3b. For existing immature stands what do you expect regarding:	from <b>juvenile spacin</b>	g/ pre-commercial th	<b>nning</b> (assume no util	ization)
<ul> <li>3ba. Change in growth? Softwood +/ m3/ha/yr</li> <li>3bb. How long would this change in growth last?</li> </ul>	Mixedwood +/	m3/ha/yr	Hardwood +/	_ m3/ha/yr
Softwood years 3bc. Change in rotation based on harvestable tree size	Mixedwood	years Hardwo	od years	
Softwood +/ years 3bd Change in rotation based on maximum MAI?	Mixedwood +/	years	Hardwood +/	_ years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
3c. For existing immature stands what do you expect	from <b>commercial thi</b>	nning (include thinnir	ng plus final harvest) re	garding:
3ca. Change in growth? Softwood +/ m3/ha/yr 3cb. How long would this change in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	_ m3/ha/yr
Softwood years 3cc. Change in rotation based on harvestable tree size	Mixedwood	years Hardwo	od years	
Softwood +/ years 3cd. Change in rotation based on maximum MAI?	Mixedwood +/	years	Hardwood +/	_ years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years

**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).

	Softwo	ood		Mixed	wood		Hardv	vood
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		57 77	2.07		25 45	3.36	
*115	3.68		*97	3.62		*65	3.84	
135	3.08		117	3.02		85	3.54	
155	5.45 NA		117	5.20 NA		105	5.55 NA	
155	NA	* Based of	n aggregated e	stimates (	(rounded) from your	estimates repor	ted above	 2.
4b. WI	hat propo	rtion of the area in the	e region is mar	naged by	uneven-aged manage	ement?		
	Softwo	ood%		Mixed	wood%		Hardw	vood%
4c. Wł	nat growtl	h per ha/year do you e	expect on areas	s manage	d by uneven-aged ma	anagement?		
	Softwo	bod m3/ha/y	r	Mixed	wood m3/ha	a/yr	Hardw	rood m3/ha/yr
4d. WI	hat after-c	cut growing stock leve	el do you expe	ct to be le	eft on areas managed	by uneven-age	d manage	ement?
	Softwo	ood m3/ha		Mixed	wood m3/ha	a	Hardw	vood m3/ha
4e. Wł	nat would	be the average cuttin	g cycle used o	n areas m	anaged by uneven-ag	ged manageme	nt?	
	Softwo	ood years		Mixed	wood years		Hardw	yood years
5. From	n Questic	onnaire #1 your collec	ctive (mean) re	sponses t	o <b>fertilization</b> of reg	enerated stands	s indicate	d fertilization would result in
yield i	ncreases a	and may have a perio	d of effect as f	ollows:	_			
	Softwo	ood 6%		Mixed	wood 6%		Hardw	vood 10%
	Softwo	ood 8.5 years		Mixed	wood 8.5 years		Hardw	rood 10 years
Howey To hel	ver your c p clarify (	comments indicated co these concerns please	oncern over fea answer the fol	rtilizing " llowing q	all stands', "all sites" uestions:	, "age of stands	s fertilized	d" and "amount of fertilizer"
5a. At	what star	nd age range would yo	ou fertilize? Ai	nswer sho	ould be range between	n a low figure a	ind a high	figure expressed in years o
age. Softwo	ood	& years old		Mixed	wood & y	ears old Hardw	/ood	& years old
5b. At	what rate	e of fertilizer (kg/ha) v	would you app	ly?				
	Softwo	ood kg/ha		Mixed	wood kg/ha	L	Hardw	vood kg/ha
5c. If s	sites are d	istinguished as Good	, Medium and	Poor wha	t proportion of sites	would you ferti	lize?	
	Good_	%		Mediu	m%	-	Poor _	%
5d. WI	hat increa	se in growth (m3/ha/y	yr) would you	expect?				
	Softwo	ood		Mixed	wood		Hardw	vood
5e. Ho	w long w	ould the increased group	owth indicated	above la	st (years)?			
	Softwo	ood		Mixed	wood		Hardw	vood

**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. Cha	ange in growth?					
	Softwood +/	_ m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
6ab. Ho	w long would this cha	nge in growth last?				
	Softwood	years	Mixedwood	years	Hardwood years	
6ac. Cha	inge in rotation based	on harvestable tree size	2?			
	Softwood +/	_ years	Mixedwood +/	years	Hardwood +/	years
6ad. Cha	ange 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 g	owth?					
Softwoo	d +/	_ m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
6bb. How long w	ould this cha	inge in growth last?				
Softwoo	d	years	Mixedwood	years	Hardwood years	
6bc. Change in ro	tation based	on harvestable tree siz	e?			
Softwoo	d +/	_ years	Mixedwood +/	years	Hardwood +/	years
6bd. Change in ro	tation based	on maximum MAI?				
Softwoo	d +/	_ 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 chan	nge in growth last?				
Softwood	years	Mixedwood	years Ha	rdwood years	
6cc. Change in rotation based	on harvestable tree size	e?			
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 yo Softwood m	ou expect for genetic im 13/ha/yr	provement? Mixedwood	m3/ha/yr	Hardwood	m3/ha/yr
7b. What change in rotation ba Softwood +/	ased on harvestable tree _ years	size would you expect Mixedwood +/	? years	Hardwood +/	years
7c. What change in rotation ba Softwood +/	ased on Maximum MAI _ years	would you expect? Mixedwood +/	years	Hardwood +/	years

**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.

	Softwoo	bd		Mixed	wood			Hardw	ood	
Age	MAI	New MAI	Age	MAI	New MA	Л	Age	MAI	New MA	A
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 reporte	ed above.			
1b. Wha	1b. What proportion of the area in the region is managed by uneven-aged management?         Softwood%         Mixedwood%							%		
1c. What	at growth	per ha/year	do you expect on areas	manageo	d by uneve	n-aged managem	ent?			
	Softwoo	od m	3/ha/yr	Mixedy	wood	m3/ha/yr		Hardwo	ood	_m3/ha/yr
1d. Wha	at after-cu Softwoo	it growing st od r	ock level do you exped n3/ha	ct to be le Mixedy	eft on areas wood	managed by une m3/ha	ven-aged	manager Hardwo	ment? ood	m3/ha
1e. Wha	t would b Softwoo	be the averaged determined y	e cutting cycle used or rears	n areas m Mixedy	anaged by wood	uneven-aged mai years	nagement	t? Hardwo	ood	years
<b>2.</b> From	Question s and ma	naire #1 you v have a per	ar collective (mean) res	sponses to	o <b>fertilizat</b>	<b>ion</b> of existing sta	ands indi	cated fert	tilization w	vould result in
	Softwoo	d 22	.6%	Mixedy	wood	3.3%		Hardwo	ood	3.3%
	Softwoo	$d = \frac{1}{8}$	years	Mixedy	wood	10 years		Hardwo	bod	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 fig	gure and a high figure	e expressed in years of
age. Softwood & years old Mix	edwood & ye	ears old H	lardwood &	years old
2b. At what rate of fertilizer (kg/ha) would you at	vloc?			
Softwood kg/ha	Mixedwood	kg/ha	Hardwood	kg/ha
2c. If sites are distinguished as Good, Medium an Good %	d Poor what proportion Medium	of sites would you	ı fertilize? Poor	%
2d. What increase in growth (m3/ha/yr) would yo Softwood	u expect? Mixedwood		Hardwood	
2e. How long would the increased growth indicat Softwood	ed above last (years)? Mixedwood		Hardwood _	
<b>3.</b> From Questionnaire #1 your collective (mean) there would be a net change in yield due to thinni rotation age would be reduced by a mean of 15 ye	responses to thinning of ng, and the mean of the ears.	existing stands w change was a (+)	ere as follows: 60% 6.0 % . 40 % of res	of respondents felt pondents felt the
Significant comments were made regarding "what stands only", and "is rotation set by achieving a corresponses please answer the following:	t to thin", "would never ertain tree size or maxin	thin in mature star num mean annual	nds", "I assume thinr increment". To help	ing of immature clarify <b>Thinning</b>
3a. For existing immature stands what do you exp	ect from <b>cleaning /bru</b>	shing (assume no	utilization) regarding	<b>;</b> .
3aa. Change in growth? Softwood +/ m3/ha/yr 3ab. How long would this shange in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +,	/ m3/ha/yr
Softwood years	Mixedwood	years H	Iardwood	years
3ac. Change in rotation based on harvestable tree Softwood +/ years	size? 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 expregarding:	bect from <b>juvenile spac</b>	ing/ pre-commerc	cial thinning (assun	ne no utilization)
3ba. Change in growth?				
Softwood +/ m3/ha/yr 3bb. How long would this change in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +,	/ m3/ha/yr
Softwood years	Mixedwood	years H	lardwood	years
Softwood +/ years 3bd Change in rotation based on maximum MAI	Size ? Mixedwood +/?	years	Hardwood +	/ years
Softwood +/ years	Mixedwood +/	years	Hardwood +	/years
3c. For existing immature stands what do you exp	ect from <b>commercial t</b>	hinning (include	thinning plus final ha	arvest) regarding:
3ca. Change in growth?		24.4	<b>T</b> 1 1 .	24
3cb. How long would this change in growth last?	Mixedwood	m3/na/yr	Hardwood	voors
3cc. Change in rotation based on harvestable tree	size?			_ years
Softwood +/ years 3cd. Change in rotation based on maximum MAI	Mixedwood +/?	years	Hardwood +,	/ years
Softwood +/ years	Mixedwood +/	years	Hardwood +,	/ years

**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).

	Softwo	ood		Mixed	lwood		Hardy	wood	
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	2.21 2.40		57	2.03		
/↓ *94	3.05		*93	2.40 2.41		*77	2.05		
114	3.14		113	2.41 2.14		97	1.80		
13/	ΝΔ		133	Δ.1- NΔ		117	ΝΔ		
151	1111	* Based or	n aggregated e	stimates	(rounded) from y	your estimates rep	orted abov	e	
46 W	hat propo	rtion of the grass in the	ragion is mo	and by	unavan agad ma	nacomont?			
40. W	Softwo	bod%	e legion is mai	Mixed	wood%		Hardv	vood	_%
4c. W	hat growf	h per ha/year do you e	expect on area	s manage	d by uneven-age	d management?			
	Softwo	bod m3/ha/yi	r	Mixed	wood r	n3/ha/yr	Hardw	vood	_m3/ha/yr
4d W	hat after-d	cut growing stock leve	el do vou expe	ct to be le	eft on areas man	aged by uneven-a	oed manao	ement?	
	Softwo	ood m3/ha	er do you expe	Mixed	wood 1	n3/ha	Hardv	vood	_m3/ha
le W	hat would	be the average cuttin	a cycle used o	n areas m	anaged by uney	en-aged managen	pent?		
4C. W	Softwo	ood years	g cycle useu o	Mixed	woody	years	Hardv	vood	vears
<b>5</b> E		······································	· · · · · · · · · · · · · · · · · · ·		e	C	1. 1. 1	1.6	
5. Fro	m Questio	onnaire #1 your collec	tive (mean) re	sponses t	o <b>ierunzation</b> o	of regenerated stan	as indicate	a fertilization v	ould result in
yield i	ncreases	and may have a period	a of effect as f	onows:	wood <b>5</b> 0/		Handy	upped <b>5</b> 0/	
	Softwo	20%		Mixed	wood 15 years		Hardy	wood 15 voors	
	Soltwo	Jou 10 years		Mixeu	wood 15 years		Пации	voou 15 years	
Howe To hel	ver your o p clarify	comments indicated co these concerns please	oncern over fe answer the fo	rtilizing " llowing q	all stands', "all suestions:	ites", "age of stan	ds fertilize	d" and "amount	of fertilizer".
5a. At	what star	nd age range would yo	ou fertilize? A	nswer sho	ould be range bet	tween a low figure	e and a higl	h figure express	ed in years of
Softwo	boc	& years old		Mixed	wood &	years old Hard	lwood	_ & years	old
5b. At	what rate	e of fertilizer (kg/ha) v	would you app	ly?					
	Softwo	ood kg/ha		Mixed	wood ł	kg/ha	Hardw	vood	_kg/ha
5c. If	sites are d	listinguished as Good.	Medium and	Poor wha	at proportion of s	sites would vou fe	rtilize?		
	Good	%	,	Mediu	m	_%	Poor _	%	, )
5d. W	hat increa	use in growth (m3/ha/y	r) would you	expect?					
	Softwo	ood	-	Mixed	wood	_	Hardw	vood	_
5e. Ho	w long w	ould the increased gro	owth indicated	l above la	st (years)?				
	Softwo	ood bod		Mixed	wood		Hardv	vood	_

**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. C	Change in growth?					
	Softwood +/	m3/ha/yr	Mixedwood +/	_m3/ha/yr	Hardwood +/	_m3/ha/yr
6ab. I	How long would this ch	ange in growth last?				
	Softwood	_ years	Mixedwood	years	Hardwood years	
6ac. (	Change in rotation base	d on harvestable tree siz	e?			
	Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	years
6ad. (	Change in rotation base	d 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 cha	nge in growth last?				
Softwood	years	Mixedwood	years	Hardwood years	
6bc. Change in rotation based	on harvestable tree size	e?			
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 cl	nange in growth last?				
Softwood	years	Mixedwood	years	Hardwood years	
6cc. Change in rotation base	d on harvestable tree siz	e?			
Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	_ years
6cd. Change in rotation base	d 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 o	lo you expect for ge	enetic improvement?			
	Softwood	m3/ha/yr	Mixedwood	m3/ha/yr	Hardwood	m3/ha/yr
7b.	What change in rotation	on based on harvesta	able tree size would you ex	pect?		
	Softwood +/-	years	Mixedwood +/	years	Hardwood +/	years
		<b>·</b>				•
7c.	What change in rotation	n based on Maximu	am MAI would you expect	?		
	Softwood +/	years	Mixedwood +/	years	Hardwood +/	years

**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.

	Softwo	bd		Mixed	wood		Hardy	vood
Age	MAI	New MAI	Age	MAI	New MAI	Ag	e MAI	New MAI
100	NA		105	NA		95	NA	
120	2.86		125	3.25		115	5 2.20	
140	2.90		145	2.96		135	5 2.36	
*160	2.64		*165	2.89		*15	55 2.20	
180	2.64		185	2.74		175	5 2.04	
200	NA		205	NA		195	5 NA	
		* Based on aggregated e	estimates (	rounded)	from your est	imates reported at	oove.	
1b. Wh	at propor	tion of the area in the regi	on is man	aged by ι	ineven-aged m	nanagement?		
	Softwoo	od %		Mixedy	wood	%	Hardw	vood %
1c. What	at growth	per ha/year do you expec	ct on areas	manageo	l by uneven-ag	ged management?	II	24.4
	Softwoo	od m3/na/yr		Mixedy	wood 1	n3/na/yr	Hardw	/ood m3/na/yr
1d. Wh	at after-ci	it growing stock level do	vou expec	et to be le	ft on areas ma	naged by uneven-	aged manage	ement?
	Softwoo	od m3/ha	J	Mixedy	wood	m3/ha	Hardw	wood m3/ha
1e. Wha	at would	be the average cutting cyc	cle used or	n areas m	anaged by une	ven-aged manage	ment?	
	Softwoo	od years		Mixedy	wood	years	Hardw	yood years
<b>2.</b> From yield in	Question	nnaire #1 your collective nd may have a period of e	(mean) res	sponses to ollows:	o <b>fertilization</b>	of existing stands	indicated fe	rtilization would result in
	Softwoo	od 6.0%		Mixedy	wood 7.5	%	Hardw	vood 10.0%
	Softwoo	bd 8.0 years		Mixedy	wood 10.	0 years	Hardw	vood 10.0 years
Howeve Please a	er your co answer th	omments indicated concer e following questions to a	rn over fer account fo	tilizing "a r these co	all stands', "all oncerns:	sites", "age of sta	nds fertilized	d" and "amount of fertilizer".
20 At $x$	what stand	l ago rango would you for	tilizo? An	ower cho	uld be renge b	otwoon a low figu	ro and a high	figure expressed in years of

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 P Good %	oor what proportion o Medium	f sites would you fertili %	ze? Poor%	6
2d. What increase in growth (m3/ha/yr) would you ex Softwood	xpect? Mixedwood	-	Hardwood	_
2e. How long would the increased growth indicated a Softwood	above last (years)? Mixedwood	-	Hardwood	_
<b>3.</b> From Questionnaire #1 your collective (mean) resp there would be a net change in yield due to thinning, rotation age would be reduced by a mean of 15 year	ponses to thinning of e and the mean of the cl rs.	existing stands were as hange was a (+) 8.3 %	follows: 33% of respo . 33 % of respondents	ndents felt s felt the
Significant comments were made regarding "what to stands only", and "is rotation set by achieving a certa <b>responses</b> please answer the following:	thin", "would never th in tree size or maximu	nin in mature stands", " Im mean annual increm	I assume thinning of in ent". To help clarify T	nmature Γ <b>hinning</b>
3a. For existing immature stands what do you expect	from <b>cleaning /brus</b> ł	ning (assume no utilizat	tion) 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 Hardwo	ood years	
3ac. Change in rotation based on harvestable tree size Softwood +/ years	e? 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 regarding:	from <b>juvenile spacin</b>	g/ pre-commercial thi	<b>nning</b> (assume no util	ization)
<ul> <li>3ba. Change in growth? Softwood +/ m3/ha/yr</li> <li>3bb. How long would this change in growth last?</li> </ul>	Mixedwood +/	m3/ha/yr	Hardwood +/	_ m3/ha/yr
Softwood years 3bc. Change in rotation based on harvestable tree siz	Mixedwood	years Hardwo	od years	
Softwood +/ years 3bd. Change in rotation based on maximum MAI?	Mixedwood +/	years	Hardwood +/	_ years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
3c. For existing immature stands what do you expect	from <b>commercial thi</b>	nning (include thinnin	ıg plus final harvest) re	garding:
3ca. Change in growth?Softwood +/ m3/ha/yr3cb. How long would this change in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	_ m3/ha/yr
Softwood years 3cc. Change in rotation based on harvestable tree size Softwood +/ years	Mixedwood e? Mixedwood +/	years Hardwo	od years Hardwood +/	years
3cd. Change in rotation based on maximum MAI? Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
**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

	Softwo	ood		Mixed	wood		Hardv	wood	
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 of	on aggregated e	estimates	(rounded) from your e	estimates repor	ted above	e.	
4b. Wl	nat propo	rtion of the area in th	e region is mai	naged by	uneven-aged manage	ment?			
	Softwo	ood%	0	Mixed	wood%		Hardw	vood	%
4c. Wł	at growth Softwo	h per ha/year do you ood m3/ha/y	expect on area /r	s manage Mixed	d by uneven-aged ma wood m3/ha	nagement? a/yr	Hardw	vood	m3/ha/yr
4d. Wl	at after-o Softwo	cut growing stock lev ood m3/ha	el do you expe	ect to be le Mixed	eft on areas managed wood m3/ha	by uneven-age a	d manage Hardw	ement? vood	m3/ha
4e. Wł	nat would	be the average cutti	ng cycle used o	on areas m	nanaged by uneven-ag	ged manageme	nt?		
	Softwo	ood years	-8-9	Mixed	wood years		Hardw	vood	years
5. From	n Questic	onnaire #1 your colle	ctive (mean) re	esponses t	o <b>fertilization</b> of reg	enerated stands	s indicate	d fertilizatio	n would result in
yield in	ncreases a	and may have a perio	od of effect as f	ollows:					
	Softwo	ood 40.0		Mixed	wood 7.5 %		Hardw	vood 10.0	%
	Softwo	ood 8.0 years		Mixed	wood 10.0 years		Hardw	vood 10.0 yea	ars
Howey To hel	ver your c p clarify	comments indicated c these concerns please	concern over fe e answer the fo	rtilizing " llowing q	all stands', "all sites", uestions:	, "age of stands	s fertilized	d" and "amo	unt of fertilizer".
5a. At age.	what star	nd age range would y	ou fertilize? A	nswer sho	ould be range between	n a low figure a	and a high	n figure expr	essed in years of
Softwo	ood	& years old		Mixed	wood & y	ears old Hardw	vood	_ & yea	ars old
5b. At	what rate	of fertilizer (kg/ha)	would you app	lv?					
	Softwo	ood kg/ha		Mixed	wood kg/ha		Hardw	vood	kg/ha
5c. If s	ites are d Good <u>-</u>	istinguished as Good	l, Medium and	Poor wha Mediu	nt proportion of sites v m%	would you ferti	ilize? Poor _		_%
5d. Wl	nat increa	se in growth (m3/ha/	yr) would you	expect?					
	Softwo	ood		Mixed	wood		Hardw	vood	

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

 Mixedwood \_\_\_\_\_
 Hardwood \_\_\_\_\_\_
 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 cha	inge in growth last?				
Softwood	years	Mixedwood	years H	lardwood years	
6ac. Change in rotation based	on harvestable tree size	e?			
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 tre	e size?			
Softwood +/ years	Mixedwood +/	years	Hardwood +/	_ years
6bd. Change in rotation based on maximum MA	I?			
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 ch	ange in growth last?				
Softwood	_ years	Mixedwood	years	Hardwood years	
6cc. Change in rotation base	d on harvestable tree siz	e?			
Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	years
6cd. Change in rotation base	d 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. W	hat change in MAI do you	expect for genetic im	provement?			
	Softwood m3/	/ha/yr	Mixedwood	m3/ha/yr	Hardwood	_m3/ha/yr
71. 11	1	. 1 1		40		
/b. w	hat change in rotation base	ed on narvestable tree	size would you expec			
	Softwood +/y	years	Mixedwood +/	years	Hardwood +/	years

. .

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

. . . . . . .

**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.

	Softwoo	bd		Mixedv	vood		Hardw	ood
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 est	timates (r	ounded)	from your estimates re	eported above.		
1b. Wha	at proport	ion of the area in the region	n is mana	iged by u	neven-aged manageme	ent?		
	Softwoo	od %		Mixedw	vood %		Hardwo	ood%
1c. Wha	t growth	per ha/year do you expect	on areas	managed	by uneven-aged mana	igement?		
	Softwoo	od m3/ha/yr		Mixedw	vood m3/ha/yr	-	Hardwo	ood m3/ha/yr
1d. Wha	at after-cu	it growing stock level do y	ou expec	t to be lef	t on areas managed by	uneven-aged	manager	ment?
	Softwoo	od m3/ha		Mixedw	vood m3/ha	C	Hardwo	ood m3/ha
1e. Wha	t would l	be the average cutting cycle	e used on	areas ma	naged by uneven-aged	d management	t?	
	Softwoo	od years		Mixedw	yood years	-	Hardwo	ood years
<b>2.</b> From yield in	Questior creases ar	nnaire #1 your collective (n nd may have a period of eff	nean) resp fect as fol	ponses to llows:	fertilization of existing	ng stands indi	cated fert	tilization would result in
	Softwoo	od 6.5%		Mixedw	vood 10.0%		Hardwo	ood 10.0%
	Softwoo	od 6.5 years		Mixedw	rood 10.0 years		Hardwo	bod 10.0 years
Howeve Please a	er your co nswer the	omments indicated concern e following questions to ac	over fert count for	ilizing "a these co	ll stands', "all sites", "a ncerns:	age of stands t	fertilized	" and "amount of fertilizer".
20 1 + 1	that stand	l aga ranga would you farti	lize? And	war show	ld ha ranga hatwaan a	low figure on	d a high	figure expressed in years of

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	r?			
Softwood	kg/ha	Mixedwood	_ kg/ha	Hardwood	kg/ha
2c. If sites are distinguished	as Good, Medium and P	oor what proportion of	f sites would you ferti	lize?	
Good	%	Medium	%	Poor	%
24 Wilsot in another in another	(				
2d. what increase in growth	(m5/na/yr) would you ex	Minadurood		Handwood	
Softwood			-	Hardwood	
2e. How long would the incr	eased growth indicated a	bove last (vears)?			
Softwood		Mixedwood		Hardwood	
			-		
<b>3.</b> From Questionnaire #1 yo there would be a net change rotation age would be reduce	ur collective (mean) resp in yield due to thinning, ed by a mean of 10.0 yea	ponses to thinning of e and the mean of the cl rs.	existing stands were a nange was a (+) 10.0	s follows: 50% of resp % . 50% of responde	ondents felt nts felt the
Significant comments were r stands only", and "is rotation <b>responses</b> please answer the	nade regarding "what to set by achieving a certa following:	thin", "would never th in tree size or maximu	nin in mature stands", Im mean annual incre	"I assume thinning of i ment". To help clarify	mmature <b>Thinning</b>
3a. For existing immature sta	ands what do you expect	from cleaning /brush	<b>iing</b> (assume no utiliz	ation) regarding:	
3aa. Change in growth?					
Softwood +/	m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3ab. How long would this ch	ange in growth last?		·		•
Softwood	_ years	Mixedwood	years Hardw	vood years	
3ac. Change in rotation based	d on harvestable tree size	e?			
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3ad. Change in rotation base	d on maximum MAI?	Minadmond 1/		Handwood +/	110.040
Softwood +/		WIIXedwood +/		Haluwoou +/	years
3b. For existing immature staregarding:	ands what do you expect	from <b>juvenile spacin</b>	g/ pre-commercial t	hinning (assume no ut	ilization)
3ba Change in growth?					
Softwood +/-	m3/ha/vr	Mixedwood +/-	m3/ha/vr	Hardwood +/-	m3/ha/vr
3bb. How long would this ch	ange in growth last?		5		
Softwood	_ years	Mixedwood	years Hardw	vood years	
3bc. Change in rotation base	d on harvestable tree size	e?			
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3bd. Change in rotation base	d on maximum MAI?				
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3c. For existing immature sta	ands what do you expect	from <b>commercial thi</b>	nning (include thinn	ing plus final harvest) r	egarding:
3ca. Change in growth?					
Softwood +/	m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3cb. How long would this ch	ange in growth last?		·		•
Softwood	_ years	Mixedwood	years Hardw	vood years	
3cc. Change in rotation based	d on harvestable tree size	e?		<b></b>	
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3cd. Change in rotation base	d on max1mum MAI?	Mono dance 1 + /		Handara 1 · /	
S0ItW00d +/	years	wiixeawooa +/	years	Hardwood +/	years

**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

	Softwo	bod		Mixed	wood		Hardv	vood	
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI	
60	NA		40	NA		20	NA		
80	1.86		60	1 53		20 40	1 22		
100	2.42		80	2.07		40 60	1.22		
*120	2.42		*100	2.07		*80	1.40		
140	2.40		120	2.10		100	1.02		
140	2.07 NA		120	2.07 NA		100	1.40 NA		
100	INA	* Based on	aggregated e	stimates (	(rounded) from your	estimates repor	ted above	 2.	
4h W	nat propo	rtion of the area in the	region is man	aged by	uneven-aged manage	ment?			
10. 11	Softwo	ood%	region is mun	Mixed	wood%		Hardw	rood	%
4c Wi	nat orowt	h per ha/year do you e	xnect on areas	manage	d by uneven-aged ma	inagement?			
10. 111	Softwo	ood m3/ha/yr	Apoor on arou	Mixed	wood m3/ha	a/yr	Hardw	rood	m3/ha/yr
4d. Wl	nat after-o Softwo	cut growing stock leve	l do you expe	ct to be le Mixed	eft on areas managed wood m3/ha	by uneven-age a	d manage Hardw	ement? rood	m3/ha
4e Wi	nat would	be the average cutting	r cycle used o	n areas m	anaged by uneven-ag	red manageme	nt?		
	Softwo	ood years	g cycle used of	Mixed	wood years	ged managemen	Hardw	vood	years
5. From	n Questic ses and m	onnaire #1 your collect ay have a period of ef	tive (mean) rea	sponses t s:	o <b>fertilization</b> of reg	enerated stands	s indicated	d fertilization w	ould result in
	Softwo	ood 55.0 %		Mixed	wood 10.0 %		Hardw	rood 10.0 %	
	Softwo	ood 7.0 years		Mixed	wood 10.0 years		Hardw	ood 10.0 years	
Howey To hel	ver your c p clarify	comments indicated co these concerns please a	ncern over fer answer the fol	tilizing " lowing q	all stands', "all sites", uestions:	, "age of stands	s fertilized	d" and "amount	of fertilizer".
5a. At	what star	nd age range would yo	u fertilize? Ar	nswer sho	ould be range betweer	n a low figure a	und a high	i figure expresse	d in years of
Softwo	ood	& years old		Mixed	wood & y	ears old Hardw	/ood	_ & years o	old
5b. At	what rate	e of fertilizer (kg/ha) w	ould you appl	ly?					
	Softwo	ood kg/ha	, 11	Mixed	wood kg/ha		Hardw	vood	kg/ha
5c. If s	ites are d	istinguished as Good,	Medium and I	Poor wha	t proportion of sites v	would you ferti	lize?		
	Good	%		Mediu	m%	5	Poor _	%	
5d. WI	nat increa	se in growth (m3/ha/y	r) would you	expect?					
	Softwo	ood	,	Mixed	wood		Hardw	rood	
5e. Ho	w long w	ould the increased gro	wth indicated	above la	st (vears)?				
	Softwo	ood		Mixed	wood		Hardw	rood	

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 ii	1 growth?					
Softv	wood +/	_ m3/ha/yr	Mixedwood +/	_m3/ha/yr	Hardwood +/	m3/ha/yr
6ab. How long	g would this cha	nge in growth last?				
Softv	vood	years	Mixedwood	years	Hardwood years	
6ac. Change in	n rotation based	on harvestable tree size	e?			
Softv	vood +/	_ years	Mixedwood +/	years	Hardwood +/	years
6ad. Change in	n rotation based	on maximum MAI?				
Softv	wood +/	_ 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. I	How long would this cha	inge in growth last?				
	Softwood	years	Mixedwood	years Hardy	wood years	
6bc. (	Change in rotation based	on harvestable tree size	e?			
	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 char	nge in growth last?				
Softwood	years	Mixedwood	years H	Hardwood years	
6cc. Change in rotation based	on harvestable tree size	2?			
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 Softwood	you expect for genetic in _m3/ha/yr	nprovement? Mixedwood	_ m3/ha/yr	Hardwood	_m3/ha/yr
7b. What change in rotation Softwood +/	based on harvestable tree years	e size would you exped Mixedwood +/	ct? years	Hardwood +/	years
7c. What change in rotation Softwood +/	based on Maximum MA	I would you expect? Mixedwood +/	years	Hardwood +/	years

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.

	Softwo	od			Mixedy	wood			Hardv	vood	
Age	MAI	New MAI		Age	MAI	New MA	AI	Age	MAI	New MA	AI
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 or	n aggregated es	stimates (	rounded)	from you	estimates rep	ported above	•		
1b. Wh	at propor	tion of the a	rea in the regio	on is mana	aged by u	ineven-age	ed managemen	nt?			
	Softwoo	od bc	%		Mixedv	wood	%		Hardw	ood	%
1c. Wh	at growth	per ha/year	do you expect	on areas	managed	l by uneve	n-aged manag	gement?			
	Softwo	od r	n3/ha/yr		Mixedv	wood	m3/ha/yr		Hardw	ood	m3/ha/yr
1d. Wh	at after-ci	ut growing s	stock level do y	ou expec	t to be le	ft on areas	managed by	uneven-ageo	1 manage	ement?	
	Softwoo	od bo	m3/ha		Mixedv	wood	m3/ha	C	Hardw	ood	m3/ha
1e. Wh	at would	be the avera	ge cutting cycl	le used or	areas ma	anaged by	uneven-aged	managemen	ıt?		
	Softwoo	od bc	years		Mixedv	wood	years	-	Hardw	ood	years
<b>2.</b> From vield in	n Question	nnaire #1 yo nd may hay	our collective (	mean) res	ponses to	) <b>fertiliza</b> t	ion of existin	g stands ind	icated fer	rtilization	would result in
y tera m	Softwor	rad 1110 rad 7	4%	1001 ub 10	Mixedy	boov	4 5%		Hardw	hoo	3 5%
	Softwoo	od 8	.1 years		Mixedy	wood	5.2 years		Hardw	ood	5.2 years
Howev Please	er your co answer th	omments ind e following	licated concerr questions to ac	n over fer count for	tilizing "a these co	all stands', oncerns:	"all sites", "a	ge of stands	fertilized	d" and "am	ount of fertilizer".
age.	anat stan	a age range	would you left		5 51100			iow inguie al	na a mgn	i inguie exp	ressed in years of

Softwood \_\_\_\_\_ & \_\_\_\_ years old Mixedwood \_\_\_\_\_ & \_\_\_\_ years old Hardwood \_\_\_\_\_ & \_\_\_\_ years old of

2b. At what rate of fertilizer (kg/ha) would you app Softwood kg/ha	oly? Mixedwood	kg/ha	Hardwood	kg/ha
2c. If sites are distinguished as Good, Medium and Good %	Poor what proportion Medium	n of sites would y	ou fertilize? Poor	%
2d. What increase in growth (m3/ha/yr) would you Softwood	expect? Mixedwood		Hardwood	
2e. How long would the increased growth indicated Softwood	l above last (years)? Mixedwood		Hardwood	
<b>3.</b> From Questionnaire #1 your collective (mean) re there would be a net change in yield due to thinning rotation age would be reduced by a mean of 13.3 ye	esponses to thinning og, and the mean of the ears.	of existing stands e change was a (+	were as follows: 100% of ) 15.0 % . 86 % of respon	respondents felt indents felt the
Significant comments were made regarding "what t stands only", and "is rotation set by achieving a cer <b>responses</b> please answer the following:	to thin", "would neve tain tree size or maxi	r thin in mature so mum mean annua	tands", "I assume thinning l increment". To help clar	of immature rify <b>Thinning</b>
3a. For existing immature stands what do you expe-	ct from <b>cleaning /br</b>	<b>ushing</b> (assume n	o 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 ye	ars
<ul> <li>3ac. Change in rotation based on harvestable tree si Softwood +/ years</li> <li>3ad. Change in rotation based on maximum MAI2</li> </ul>	ize? Mixedwood +/	years	Hardwood +/	years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	years
3b. For existing immature stands what do you experegarding:	ct from <b>juvenile spa</b> e	cing/ pre-comme	rcial thinning (assume n	o utilization)
3ba. Change in growth? Softwood +/ m3/ha/yr 3bb. How long would this change in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
Softwood years 3bc. Change in rotation based on harvestable tree si	Mixedwood ize?	years	Hardwood yea	ars
Softwood +/ years 3bd. Change in rotation based on maximum MAI?	Mixedwood +/	years	Hardwood +/	years
Softwood +/ years	Mixedwood +/	years	Hardwood +/	years
3c. For existing immature stands what do you expe	ct from <b>commercial</b>	thinning (includ	e thinning plus final harve	st) regarding:
3ca. Change in growth? Softwood +/ m3/ha/yr 3cb. How long would this change in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
Softwood years 3cc. Change in rotation based on harvestable tree si Softwood $\pm/a$ years	Mixedwood ize? Mixedwood ±/	years	Hardwood yea	ars
3cd. Change in rotation based on maximum MAI? Softwood +/years	Mixedwood +/-	years	Hardwood +/-	years
<i>y</i>				

**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

	Softwo	ood		Mixed	wood		Hardv	vood	
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	1.91		55	2.11		41	2.13		
*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 o	n aggregated e	stimates (	(rounded) from your	estimates repor	ted above	 2.	
4b. W	hat propo	rtion of the area in the	e region is mar	naged by	uneven-aged manage	ement?			
	Softwo	ood%		Mixed	wood%		Hardw	ood%	
4c. W	nat growt	h per ha/year do you a	expect on areas	s manage	d by uneven-aged ma	anagement?			
10. 11	Softwo	ood m3/ha/y	r	Mixed	wood m3/h	a/yr	Hardw	ood m3/ha/	yr
44 W	hat aftar (	out growing stock low	al do you avra	at to be la	oft on aroas managed	by upoyon ago	d manage	mont?	
4u. wi	Softwo	and m3/ha	ei uo you expe	Mixed	wood m <sup>3</sup> /h	by uneven-age	U manage	and m <sup>3</sup> /ha	
	Soltwo			Mixeu	woou 1115/11	a	паним		
4e W	hat would	be the average cuttin	g cycle used o	n areas m	anaged by uneven-a	ged manageme	nt?		
10. 11	Softwo	od vears	g cycle used o	Mixed	wood vears	ged managemen	Hardw	ood vears	
5. From yield in	m Questic ncreases a Softwo Softwo	onnaire #1 your collect and may have a perio- ood 8.7 %	ctive (mean) re d of effect as fo	sponses t ollows: Mixed Mixed	o <b>fertilization</b> of reg	generated stands	indicated Hardw Hardw	d fertilization would res	sult in
	Soliwo	ou o.o years		WIIACU	wood 5.2 years		Haiuw	oou 5.2 years	
Howey To hel	ver your c p clarify	comments indicated contrast of the second end age range would we	oncern over fer answer the fol	rtilizing " llowing q	all stands', "all sites" uestions:	, "age of stands	fertilized	I" and "amount of fertil	izer".
Ja. At	what star	id age range would ye	Ju tertilize : Al	iswei siie	und de range detwee	ii a low liguic a	ind a mgn	inguie expressed in yea	
Softwo	ood	& years old		Mixed	wood & y	ears old Hardw	ood	& years old	
5b. At	what rate	e of fertilizer (kg/ha) v	would you app	lv?					
	Softwo	od kg/ha	<b>J</b>	Mixed	wood kg/ha	ı	Hardw	ood kg/ha	
						-			
5c. If s	sites are d	istinguished as Good	Medium and	Poor wha	t proportion of sites	would you ferti	lize?		
	Good	%	, ,	Mediu	m%	5	Poor _	%	
5d $W$	hat increa	se in growth (m3/ha/	vr) would vou	expect?					
24. 11	Softwo	ood	,_,	Mixed	wood		Hardw	ood	
5e Ho	w long w	rould the increased or	owth indicated	above la	st (vears)?				
50.110	Softwo	od	s maieatea	Mixed	wood		Hardw	ood	

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 grow	th last?			
Softwood years	Mixedwood	_ years	Hardwood years	
6ac. Change in rotation based on harvesta	ble tree size?			
Softwood +/ years	Mixedwood +/	_ years	Hardwood +/	years
6ad. Change in rotation based on maximu	m 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 cha	ange in growth last?				
	Softwood	years	Mixedwood	years	Hardwood years	
6bc.	Change in rotation based	on harvestable tree size	e?			
	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. Ch	ange 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. Ch	ange in rotation based	on harvestable tree size	e?			
	Softwood +/	_ years	Mixedwood +/	_ years	Hardwood +/	years
6cd. Ch	ange 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 Softwood	you expect for genetic in m3/ha/yr	nprovement? Mixedwood	_ m3/ha/yr	Hardwood	_m3/ha/yr
7b.	What change in rotation Softwood +/	based on harvestable tree years	e size would you expe Mixedwood +/	ect? years	Hardwood +/	years
7c. '	What change in rotation Softwood +/	based on Maximum MA years	I would you expect? Mixedwood +/	years	Hardwood +/	years

**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.

	Softwoo	od		Mixedv	wood		Hardw	ood
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	<u> </u>
*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 es	timates (1	ounded)	from your estima	tes reported above.		
1b. Wh	at proport	ion of the area in the regio	n is mana	iged by u	neven-aged mana	agement?		
	Softwoo	od %		Mixedv	wood %		Hardwo	ood%
1c. What	at growth	per ha/year do you expect	on areas	managed	by uneven-aged	management?		
	Softwoo	od m3/ha/yr		Mixedv	wood m3/	ha/yr	Hardwo	ood m3/ha/yr
1d. Wh	at after-cu	it growing stock level do y	ou expec	t to be let	ft on areas manag	ed by uneven-aged	manage	ment?
	Softwoo	od m3/ha		Mixedv	vood m3	3/ha	Hardwo	ood m3/ha
1e. Wha	at would l	be the average cutting cycle	e used on	areas ma	anaged by uneven	-aged management	t?	
	Softwoo	od years		Mixedv	vood yea	ars	Hardwo	ood years
<b>2.</b> From yield in	Question	nnaire #1 your collective (r nd may have a period of ef	nean) res fect as fo	ponses to llows:	<b>fertilization</b> of e	existing stands indi	cated fer	tilization would result in
-	Softwoo	od 4.0%		Mixedv	vood 4.0%		Hardwo	bod 2.0%
	Softwoo	od 6.7 years		Mixedv	vood 3.3 yea	urs	Hardwo	2.5 years
Howeve Please a	er your co inswer the	omments indicated concern e following questions to ac	over fert count for	ilizing "a these co	ll stands', "all site ncerns:	es", "age of stands	fertilized	" and "amount of fertilizer".
2. 4+	hat stone	l and non an evented you fami	1:		1d ha manaa hatuu	aan a law fiawaa an	dahiah	figure armeasad in yoons of

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	r (kg/ha) would you apply	?			
Softwood	_kg/ha	Mixedwood	_ kg/ha	Hardwood	kg/ha
2c. If sites are distinguished Good	l as Good, Medium and P %	oor what proportion o Medium	f sites would you f %	ertilize? Poor	%
2d. What increase in growth Softwood	n (m3/ha/yr) would you ex -	xpect? Mixedwood	-	Hardwood	
2e. How long would the inc Softwood	reased growth indicated a	bove last (years)? Mixedwood	_	Hardwood	
<b>3.</b> From Questionnaire #1 y there would be a net change rotation age would be reduc	our collective (mean) resp e in yield due to thinning, yied by a mean of 20.0 ye	ponses to thinning of e and the mean of the c ars.	existing stands wer hange was a (+) 2	re as follows: 71% of respon 9.3 % . 57 % of respon	spondents felt dents felt the
Significant comments were stands only", and "is rotatio <b>responses</b> please answer the	made regarding "what to n set by achieving a certa e following:	thin", "would never th in tree size or maximu	nin in mature stand 1m mean annual in	ls", "I assume thinning o crement". To help clarit	of immature fy <b>Thinning</b>
3a. For existing immature s	tands what do you expect	from <b>cleaning /brush</b>	ning (assume no ut	tilization) regarding:	
3aa. Change in growth?	m3/ha/vr	Mixedwood +/-	m3/ha/vr	Hardwood +/-	m3/ha/vr
3ab. How long would this c	hange in growth last?	Mixedwood	veers He	rdwood ver	1113/114/ y1
3ac. Change in rotation base	years ed on harvestable tree size	e?		ruwoou year	3
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3ad. Change in rotation base Softwood +/	ed on maximum MAI? years	Mixedwood +/	years	Hardwood +/	years
3b. For existing immature s regarding:	tands what do you expect	from <b>juvenile spacin</b>	g/ pre-commercia	al thinning (assume no	utilization)
3ba. Change in growth?	m3/ha/vr	Mixedwood +/-	m3/ha/vr	Hardwood $\pm/$ -	m3/ha/vr
3bb. How long would this c	hange in growth last?		III3/ IId/ yI		III5/IId/ yI
Softwood	years ed on harvestable tree size	Mixedwood	years Ha	rdwood year	.'S
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3bd. Change in rotation bas Softwood +/	ed on maximum MAI?	Mixedwood +/	years	Hardwood +/	years
3c. For existing immature s	tands what do you expect	from <b>commercial thi</b>	inning (include th	inning plus final harvest	t) regarding:
3ca. Change in growth?					
Softwood +/ 3cb. How long would this c	m3/ha/yr hange in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
Softwood	years	Mixedwood	years Ha	rdwood year	.s
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
Softwood +/	ed on maximum MAI?	Mixedwood +/	years	Hardwood +/	years

**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

	Softwo	ood		Mixed	wood		Hardv	vood	
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI	
27	NA		21	NA		21	NA		
27 47	2 79		21 /1	2 78		21 41	3.06		
+7 67	2.19		41 61	2.78		41 61	2.00		
07 *97	2.62		01 *91	2.91		01 *91	2.92		
107	2.50 2.21		101	2.40 2.12		101	2.08		
107	2.31 NA		101	2.15 NA		101	2.40 NA		
127	INA	* Based or	n aggregated e	stimates	(rounded) from your	estimates repor	ted above	 e.	
4h W	hat nrono	rtion of the area in the	region is ma	naged by	uneven-aged manage	ment?			
-0. 11	Softwo	ood%	region is mai	Mixed	wood%	ment:	Hardw	yood%	
Ac W	hat growt	h par ha/yaar da yay a	vnoot on aroa	managa	d by unavan agad ma	nagamant?			
4C. W	Softwo	ood m3/ha/yr		Mixed	wood m3/ha	a/yr	Hardw	rood m3/ha/yr	
4d. W	hat after-o Softwo	cut growing stock leve ood m3/ha	el do you expe	ct to be le Mixed	eft on areas managed wood m3/ha	by uneven-age a	ed manage Hardw	ement? rood m3/ha	
4e. W	hat would	be the average cuttin	g cycle used o	n areas m	anaged by uneven-ag	ged manageme	nt?		
	Softwo	ood years	6.,	Mixed	wood years		Hardw	rood years	
<b>5.</b> Fro	m Questio	onnaire #1 your collec and may have a period	tive (mean) re l of effect as f	sponses t ollows:	o <b>fertilization</b> of reg	enerated stands	s indicate	d fertilization would result	in
-	Softwo	od 4.0 %		Mixed	wood 3.7 %		Hardw	rood 3.0 %	
	Softwo	ood 5.7 years		Mixed	wood 2.0 years		Hardw	rood 2.0 years	
Howe To he	ver your o p clarify	comments indicated co these concerns please	oncern over fe answer the fo	rtilizing " llowing q	all stands', "all sites", uestions:	, "age of stands	s fertilized	d" and "amount of fertilize	r".
5a. At	what star	nd age range would yo	ou fertilize? A	nswer sho	ould be range betweer	n a low figure a	und a high	figure expressed in years	of
age. Softw	ood	& years old		Mixed	wood & y	ears old Hardw	vood	_ & years old	
5b. At	what rate	e of fertilizer (kg/ha) v	vould you app	ly?					
	Softwo	ood kg/ha	• • • •	Mixed	wood kg/ha		Hardw	rood kg/ha	
5c. If	sites are d	istinguished as Good,	Medium and	Poor wha	t proportion of sites v	would you ferti	lize?		
	Good	%		Mediu	m%	2	Poor _	%	
5d. W	hat increa	se in growth (m3/ha/v	r) would vou	expect?					
	Softwo	ood	,,	Mixed	wood		Hardw	rood	
5e. Ho	ow long w	ould the increased groups	owth indicated	above la	st (years)?				
	Softwo	ood		Mixed	wood		Hardw	rood	

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 cl	hange in growth last?				
	Softwood	years	Mixedwood	years	Hardwood years	
6ac.	Change in rotation base	ed on harvestable tree si	ze?			
	Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	_ years
6ad.	Change in rotation base	ed 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 c	hange in growth last?				
Softwood	years	Mixedwood	_ years	Hardwood years	
6bc. Change in rotation bas	ed on harvestable tree si	ze?			
Softwood +/	years	Mixedwood +/	years	Hardwood +/	_ years
6bd. Change in rotation bas	ed 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 cha	inge in growth last?				
Softwood	years	Mixedwood	years	Hardwood years	
6cc. Change in rotation based	on harvestable tree size	2?			
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 Softwood	you expect for genetic in _m3/ha/yr	nprovement? Mixedwood	_ m3/ha/yr	Hardwood	_m3/ha/yr
7b. What change in rotation Softwood +/	based on harvestable tree years	e size would you exped Mixedwood +/	ct? years	Hardwood +/	years
7c. What change in rotation Softwood +/	based on Maximum MA	I would you expect? Mixedwood +/	years	Hardwood +/	years

**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.

	Softwo	od		Mixedv	wood		Hardw	rood
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 aggregate	ed estimates (	rounded)	from your estimate	es reported above		
1b. Wh	at propor	tion of the area in the	region is man	aged by u	neven-aged manag	gement?		
	Softwo	od %	0	Mixedv	vood %		Hardwo	
1c. Wh 1d. Wh	at growth Softwo at after-c Softwo	n per ha/year do you ex od m3/ha/yr ut growing stock level	pect on areas do you expec	managed Mixedv ct to be lef	by uneven-aged n wood m3/h ft on areas manage	hanagement? a/yr d by uneven-ageo	Hardwo d manage	bod m3/ha/yr ment?
10 Wh	ot would	be the everage outting	avala usad o		negod by upoyon	agad managamar	11a1awa	
ie. wi	Softwo	od years	cycle used of	Mixedv	vood year	is aged managements	Hardwo	ood years
<b>2.</b> From yield in	n Questio acreases a	nnaire #1 your collecti and may have a period	ve (mean) res	sponses to ollows:	<b>fertilization</b> of ex	xisting stands ind	icated fer	tilization would result in
	Softwo	od 8.4%		Mixedv	vood 8.4%		Hardwo	ood 7.5%
	Softwo	od 5.7years		Mixedv	vood 5.7 year	s	Hardwo	bod 5.4years
Howev Please	er your co answer th	omments indicated con ne following questions	ncern over fer to account fo	tilizing "a r these co	ill stands', "all sites ncerns:	s", "age of stands	fertilized	" and "amount of fertilizer".
2a. At	what stan	d age range would you	fertilize? An	swer shou	ald be range betwee	en a low figure a	nd a high	figure expressed in years of

age.

 Softwood \_\_\_\_\_ & \_\_\_\_ years old
 Mixedwood \_\_\_\_\_ & \_\_\_\_ years old Hardwood \_\_\_\_\_ & \_\_\_\_ years old

2b. At what rate of fertilizer (kg/h	a) would you apply?		1 4	<b>XX 1 1</b>	1 /1
Softwood kg/ha	L	Mixedwood	_ kg/ha	Hardwood	kg/ha
2c. If sites are distinguished as Go Good %	ood, Medium and Po	or what proportion of Medium	f sites would you f %	ertilize? Poor	%
2d. What increase in growth (m3/l Softwood	na/yr) would you ex	pect? Mixedwood	-	Hardwood	
2e. How long would the increased Softwood	growth indicated at	oove last (years)? Mixedwood	-	Hardwood	
<b>3.</b> From Questionnaire #1 your co there would be a net change in yie rotation age would be reduced by	llective (mean) resp ld due to thinning, a a mean of 13.2 year	onses to thinning of e and the mean of the ch rs.	xisting stands wer nange was a (+) 1	re as follows: 92% of res 3.3 % . 75 % of respon-	pondents felt dents felt the
Significant comments were made stands only", and "is rotation set b <b>responses</b> please answer the follo	regarding "what to t y achieving a certain wing:	hin", "would never th n tree size or maximu	iin in mature stand m mean annual in	ls", "I assume thinning o crement". To help clarif	f immature fy <b>Thinning</b>
3a. For existing immature stands v	what do you expect f	from <b>cleaning /brush</b>	<b>ing</b> (assume no ut	ilization) regarding:	
3aa. Change in growth? Softwood +/ má	3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3ab. How long would this change Softwood yea	in growth last? rs	Mixedwood	years Ha	rdwood year	'S
3ac. Change in rotation based on h Softwood +/ ye	arvestable tree size	? Mixedwood +/	years	Hardwood +/	years
Softwood +/ ye	ars	Mixedwood +/	years	Hardwood +/	years
3b. For existing immature stands v regarding:	what do you expect	from <b>juvenile spacin</b>	g/ pre-commercia	al thinning (assume no	utilization)
3ba. Change in growth? Softwood +/ m3	3/ha/yr in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
Softwood yea 3bc. Change in rotation based on 1	rs narvestable tree size	Mixedwood?	years Ha	rdwood year	'S
Softwood +/ ye 3bd. Change in rotation based on t	ars maximum MAI?	Mixedwood +/	years	Hardwood +/	years
Softwood +/ ye	ars	Mixedwood +/	years	Hardwood +/	years
3c. For existing immature stands v	what do you expect f	from <b>commercial thi</b>	nning (include th	inning plus final harvest	) regarding:
3ca. Change in growth? Softwood +/ m2 3cb. How long would this change	3/ha/yr in growth last?	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
Softwood yea 3cc. Change in rotation based on h Softwood +/ ye	rs narvestable tree size' ars	Mixedwood ? Mixedwood +/	years Ha: years	rdwood year Hardwood +/	s years
3cd. Change in rotation based on a Softwood +/ ye	maximum MAI? ars	Mixedwood +/	years	Hardwood +/	years

**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

Softwood			Mixed	wood		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	2.2 + 2.2		73	2.37 2 47		20 48	2.07	
*90	2.27 2.12		*03	2.47		*68	2.77	
110	2.12 2.17		113	2.23		88	2.04	
130	2.17 ΝΔ		13	NA		108	2.00 NA	
150		* Based o	n aggregated e	stimates (	(rounded) from your	estimates repor	ted above	 2.
4h W	hat propo	rtion of the area in the	e region is mar	naged by	uneven-aged manage	ement?		
10. 11	Softwo	ood%		Mixed	wood%	incht.	Hardw	ood%
4c. W	nat growt	h per ha/vear do vou	expect on areas	s manage	d by uneven-aged ma	anagement?		
	Softwo	ood m3/ha/y	r	Mixed	wood m3/h	a/yr	Hardw	ood m3/ha/yr
4d. W	hat after-o	cut growing stock leve	el do you expe	ct to be le	eft on areas managed	by uneven-age	d manage	ement?
	Softwo	ood m3/ha		Mixed	wood m3/h	a	Hardw	ood m3/ha
4e. W	hat would	be the average cuttin	g cycle used o	n areas m	nanaged by uneven-a	ged managemen	nt?	
	Softwo	ood years		Mixed	wood years		Hardw	ood years
<b>5.</b> From	m Questio	onnaire #1 your collect	ctive (mean) re	sponses t	o <b>fertilization</b> of reg	generated stands	s indicated	d fertilization would result in
yield I	Softwo	and may have a period od $113\%$	a of effect as f	Mixed	wood 125%		Hardw	ood 128%
	Softwo	ood 6.7 years		Mixed	wood 7.7 years		Hardw	ood 6.6 years
Howe <sup>w</sup> To hel	ver your c p clarify	comments indicated contract these concerns please	oncern over fea answer the fol	rtilizing " llowing q	all stands', "all sites" uestions:	, "age of stands	s fertilized	l" and "amount of fertilizer".
5a. At	what star	nd age range would ye	ou fertilize? Ai	nswer sho	ould be range betwee	n a low figure a	und a high	figure expressed in years of
Softwo	ood	& years old		Mixed	wood & y	ears old Hardw	/ood	&years old
5b. At	what rate	e of fertilizer (kg/ha)	would you app	ly?				
	Softwo	ood kg/ha		Mixed	wood kg/ha	l	Hardw	ood kg/ha
5c. If	sites are d	istinguished as Good	, Medium and	Poor wha	t proportion of sites	would you ferti	lize?	
	Good	%		Mediu	m%		Poor _	%
5d. W	hat increa	se in growth (m3/ha/	yr) would you	expect?				
	Softwo	ood		Mixed	wood		Hardw	ood
5e. Ho	w long w	ould the increased gr	owth indicated	above la	st (years)?			
	Softwo	ood		Mixed	wood		Hardw	ood

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 i	n growth?					
Softv	wood +/	_ m3/ha/yr	Mixedwood +/	_m3/ha/yr	Hardwood +/	m3/ha/yr
6ab. How long	g would this cha	nge in growth last?				
Softv	wood	years	Mixedwood	years 1	Hardwood years	
6ac. Change i	n rotation based	on harvestable tree size	2?			
Softv	wood +/	_ years	Mixedwood +/	years	Hardwood +/	years
6ad. Change i	n rotation based	on maximum MAI?				
Softv	wood +/	_ 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 ch	ange in growth last?				
	Softwood	_ years	Mixedwood	years	Hardwood years	
6bc.	Change in rotation based	d on harvestable tree siz	e?			
	Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	_ years
6bd.	Change in rotation base	d 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 char	ige 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. Wha	at change in MAI do you expect for gene Softwood m3/ha/yr	etic improvement? Mixedwood m3/ha/yr	Hardwood m3/ha/yr
7b. Wha	at change in rotation based on harvestab Softwood +/ years	le tree size would you expect? Mixedwood +/ years	Hardwood +/ years
7c. Wha	at change in rotation based on Maximum Softwood +/ years	n MAI would you expect? Mixedwood +/ years	Hardwood +/ years

**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.

	Softwoo	bd		Mixedv	vood			Hardw	ood
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 es	timates (1	counded)	from your e	stimates reporte	ed above.		
1b. Wh	at proport Softwoo	tion of the area in the region of the area in the region of the area in the region of the second sec	on is mana	aged by u Mixedw	neven-aged vood	management? %		Hardwo	ood %
1c. What	at growth Softwoo	per ha/year do you expect od m3/ha/yr	on areas	managed Mixedw	by uneven- wood	aged manageme _ m3/ha/yr	ent?	Hardwo	ood m3/ha/yr
1d. Wh	at after-cı	it growing stock level do y	ou expec	t to be lef	ft on areas n	nanaged by une	ven-aged	manage	ment?
	Softwoo	od m3/ha	•	Mixedw	vood	m3/ha	-	Hardwo	ood m3/ha
1e. What	at would l	be the average cutting cycl	e used on	areas ma	anaged by u	neven-aged mai	nagemen	t?	
	Softwoo	od years		Mixedw	vood	years		Hardwo	ood years
<b>2.</b> From yield in	Question	maire #1 your collective (in the may have a period of effective of the may have a period of effective of the may have a period of effective of the may have a period of the maximum data and the maximum data an	nean) res fect as fo	ponses to llows:	fertilizatio	<b>n</b> of existing sta	ands indi	cated fer	tilization would result in
•	Softwoo	od 10.0%		Mixedw	vood 6	.2%		Hardwo	ood 3.8%
	Softwoo	od 11.2 years		Mixedw	vood 1	0.0 years		Hardwo	ood 8.3 years
Howeve Please a	er your co answer the	omments indicated concern e following questions to ac	over fert count for	ilizing "a these con	ll stands', "ancerns:	lll sites", "age o	f stands :	fertilized	" and "amount of fertilizer".
<b>a</b>	1	1 11 0			1 1 1	1. 1	C*	1 1 1 1	c. 1. c

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	?			
Softwoodk	ag/ha	Mixedwood	kg/ha	Hardwood	_kg/ha
2c. If sites are distinguished a	s Good, Medium and Po	oor what proportion of	sites would you ferti	lize?	
Good	_ %	Medium	%	Poor	%
2d. What increase in growth (	m3/ha/yr) would you ex	spect?			
Softwood		Mixedwood		Hardwood	_
2e. How long would the incre	ased growth indicated a	bove last (years)?		** 1 1	
Softwood		Mixedwood		Hardwood	
<b>3.</b> From Questionnaire #1 you there would be a net change in rotation age would be reduced	r collective (mean) resp n yield due to thinning, l by a mean of 15 years	bonses to thinning of e and the mean of the ch a.	xisting stands were as nange was a (+) 13.0	follows: 80% of respo %. 40% of responder	ondents felt nts felt the
Significant comments were m stands only", and "is rotation <b>responses</b> please answer the f	ade regarding "what to set by achieving a certa following:	thin", "would never th in tree size or maximu	in in mature stands", m mean annual incren	"I assume thinning of in nent". To help clarify '	nmature <b>Fhinning</b>
3a. For existing immature star	nds what do you expect	from <b>cleaning /brush</b>	ing (assume no utiliz	ation) regarding:	
3aa. Change in growth?					
Softwood +/	_ m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3ab. How long would this cha	inge in growth last?				
Softwood	years	Mixedwood	years Hardw	ood 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 star regarding:	nds what do you expect	from <b>juvenile spacin</b>	g/ pre-commercial tl	<b>hinning</b> (assume no uti	lization)
3ba. Change in growth?					
Softwood +/	_ m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3bb. How long would this cha	ange in growth last?				•
Softwood	years	Mixedwood	years Hardw	ood years	
3bc. Change in rotation based	on harvestable tree size	e?			
Softwood +/	_ years	Mixedwood +/	years	Hardwood +/	years
3bd. Change in rotation based	l on maximum MAI?				
Softwood +/	_ years	Mixedwood +/	years	Hardwood +/	years
3c. For existing immature star	nds what do you expect	from <b>commercial thi</b>	nning (include thinni	ing plus final harvest) re	egarding:
3ca. Change in growth?					
Softwood +/-	m3/ha/vr	Mixedwood +/-	m3/ha/vr	Hardwood +/-	m3/ha/vr
3cb. How long would this cha	inge in growth last?				
Softwood	years	Mixedwood	years Hardw	ood years	
3cc. Change in rotation based	on harvestable tree size	e?			
Softwood +/	_ years	Mixedwood +/	years	Hardwood +/	years
3cd. Change in rotation based	on maximum MAI?				
Softwood +/	_ years	Mixedwood +/	years	Hardwood +/	years

**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

	Softwo	ood		Mixed	wood		Hardv	vood	
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI	
16	NA		6	NA		0	NA		
36	0.86		26	0.9/		16	1 09		
56	1.15		20 46	1.58		36	1.07		
30 *76	1.15		40 *66	1.56		50 *56	1.71		
96	1.24		86	1.75		76	1.99		
116	1.04 NA		106	1.49 NA		70	1.71 NA		
110	INA	* Based or	n aggregated e	stimates (	(rounded) from your	estimates repor	ted above	2.	
4b. W	hat propo	rtion of the area in the	region is man	naged by	uneven-aged manage	ment?			
	Softwo	ood%	0	Mixed	wood%		Hardw	ood%	
4c. WI	hat growt	h per ha/year do you e	expect on area	s manage	d by uneven-aged ma	inagement?			
	Softwo	ood m3/ha/yi		Mixed	wood m3/ha	a/yr	Hardw	ood m3/ha/yr	
4d. W	hat after-o Softwo	cut growing stock leve	el do you expe	ct to be le Mixed	eft on areas managed	by uneven-age	ed manage Hardw	ement?	
	Soltwo			WIIACU		u	1 Iui u w		
4e. W	hat would	be the average cuttin	g cycle used o	n areas m	hanaged by uneven-ag	ged manageme	nt?	1	
	Softwo	ood years		Mixed	wood years		Hardw	ood years	
<b>5.</b> From	m Questio	onnaire #1 your collec	tive (mean) re l of effect as f	sponses t	o <b>fertilization</b> of reg	enerated stands	s indicate	d fertilization would result	in
<i>j</i>	Softwo	od 13.8 %		Mixed	wood 13.8. %		Hardw	rood 11.2 %	
	Softwo	ood 11.2 years		Mixed	wood 11.2 years		Hardw	ood 10.0 years	
Howev To hel	ver your c p clarify	comments indicated co these concerns please	oncern over fe answer the fo	rtilizing " llowing q	all stands', "all sites" uestions:	, "age of stands	s fertilized	l" and "amount of fertilizer	:".
5a. At age?	what star	nd age range would yo	u fertilize? A	nswer sho	ould be range between	n a low figure a	and a high	figure expressed in years	of
Softwo	ood	& years old		Mixed	wood & y	ears old Hardw	vood	&years old	
5b. At	what rate	e of fertilizer (kg/ha) v	vould you app	ly?					
	Softwo	ood kg/ha	2 11	Mixed	wood kg/ha		Hardw	ood kg/ha	
5c. If s	sites are d	istinguished as Good,	Medium and	Poor wha	at proportion of sites v	would you ferti	lize?		
	Good	%		Mediu	m%	5	Poor _	%	
5d. W	hat increa	se in growth (m3/ha/y	r) would you	expect?					
	Softwo	ood	,,	Mixed	wood		Hardw	ood	
5e. Ho	w long w	ould the increased groups	owth indicated	above la	st (vears)?				
	Softwo	ood		Mixed	wood		Hardw	ood	

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. Chang	e in growth?					
Se	oftwood +/	_m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
6ab. How l	ong would this cha	nge in growth last?				
Se	oftwood	years	Mixedwood	years Ha	ardwood years	
6ac. Chang	e in rotation based	on harvestable tree size	?			
Se	oftwood +/	_ years	Mixedwood +/	years	Hardwood +/	years
6ad. Chang	e in rotation based	on maximum MAI?				
Se	oftwood +/	_ 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 cha	ange in growth last?				
Softwood	years	Mixedwood	years	Hardwood years	
6bc. Change in rotation based	on harvestable tree size	e?			
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 cha	ange in growth last?				
Softwood	_ years	Mixedwood	years	Hardwood years	
6cc. Change in rotation based	on harvestable tree size	e?			
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 Softwood	you expect for genetic in _m3/ha/yr	nprovement? Mixedwood	m3/ha/yr	Hardwood	_m3/ha/yr
7b. What change in rotation Softwood +/	based on harvestable tree years	e size would you expec Mixedwood +/	et? years	Hardwood +/	years
7c. What change in rotation Softwood +/	based on Maximum MA	I would you expect? Mixedwood +/	years	Hardwood +/	years

**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.

	Softwoo	bd		Mixed	wood		Hardwo	ood
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 aggregate	d estimates (	(rounded)	from your estimat	es reported above	•	
1b. Wh	at proport Softwoo	tion of the area in the r	egion is man	aged by u Mixedv	neven-aged mana vood %	gement?	Hardwo	od %
1 a Wh	at anowith	non ha kuaan da way aw	a at an area		hu unavan agada	nonocomont?		
1C. WII	Softwoo	od m3/ha/yr	pect on areas	Mixedy	vood m3/h	nanagement? na/yr	Hardwo	od m3/ha/yr
1d. Wh	at after-cu	it growing stock level	do you expe	ct to be le	ft on areas manage	d by uneven-aged	l managen	nent?
	Softwoo	od m3/ha		Mixedv	wood m3/	ha	Hardwo	od m3/ha
1e. What	at would l	be the average cutting	cycle used o	n areas m	anaged by uneven-	aged managemen	ıt?	
	Softwoo	od years		Mixedv	wood yea	rs	Hardwo	od years
<b>2.</b> From vield in	Questior	naire #1 your collective nd may have a period of	ve (mean) re of effect as fo	sponses to ollows:	<b>fertilization</b> of e	xisting stands ind	icated ferti	ilization would result in
5	Softwoo	od 5.0%		Mixedy	vood 8.3%		Hardwo	od 10.0%
	Softwoo	od 8.3 years		Mixedv	wood 10.0 ye	ars	Hardwo	od 10.0 years
Howeve Please a	er your co answer the	omments indicated con e following questions t	cern over fer o account fo	rtilizing "a or these co	all stands', "all site ncerns:	s", "age of stands	fertilized"	and "amount of fertilizer".
2a. At wage.	what stand	l age range would you	fertilize? Ar	nswer sho	uld be range betwe	en a low figure a	nd a high f	igure expressed in years of
	Softwoo	od & years	old	Mixedv	wood &	years old Hardwo	ood 6	&years old
2b. At v	what rate	of fertilizer (kg/ha) wo	uld vou ann	lv?				
	Softwoo	od kg/ha	J PP	Mixedv	wood kg/	ha	Hardwo	od kg/ha
2c. If si	tes are dis	stinguished as Good. N	fedium and	Poor what	proportion of site	s would vou fertil	ize?	
	Good	%		Mediur	n%	, <u></u>	Poor	%

2d. What increase in growth (m3/ha/yr) would you expect?								
Softwood	Mixedwood	Hardwood						
2e. How long would the increased gro	owth 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 c	hange in growth last?				
Softwood	years	Mixedwood	_ years	Hardwood years	
3ac. Change in rotation base	ed on harvestable tree si	ze?			
Softwood +/	years	Mixedwood +/	years	Hardwood +/	_ years
3ad. Change in rotation bas	ed 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 cha	inge in growth last?				
Softwood	years	Mixedwood	years	Hardwood years	
3bc. Change in rotation based	on harvestable tree size	e?			
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 l	ast?							
Softwood	years	Mixedwood	years	Hardwood years					
3cc. Change in rotation ba	sed on harvestable	tree size?							
Softwood +/	years	Mixedwood +/	years	Hardwood +/	_ years				
3cd. Change in rotation ba	3cd. Change in rotation based on maximum MAI?								
Softwood +/	years	Mixedwood +/	years	Hardwood +/	_ years				

**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

	Softwo	bod		Mixed	wood		Hardy	vood	
Age	MAI	New MAI	Age	MAI	New MAI	Age	MAI	New MAI	
0	NA		10	NA		50	NA		
18	0.44		30	0.90		50 70	1 22		
38	0.44		50	1.52		90	1.22		
*58	1.64		*70	1.52		*110	1.71		
78	1.04		90	1.72		130	1.07		
70 08	1.45 NA		110	1.00 NA		150	1.01 NA		
90	INA	* Based or	n aggregated e	stimates	(rounded) from your e	estimates report	ted above	 2.	
4b. W	hat propo	rtion of the area in the	e region is mai	naged by	uneven-aged manage	ment?			
101 11	Softwo	ood%		Mixed	wood%		Hardw	ood%	
4c. W	hat growf	h per ha/year do you e	expect on area	s manage	d by uneven-aged ma	nagement?			
	Softwo	ood m3/ha/yi		Mixed	wood m3/ha	ı/yr	Hardw	ood m3/ha/yr	
4d. W	hat after-o	cut growing stock leve	el do you expe	ct to be le	eft on areas managed	by uneven-age	d manage	ement?	
	Softwo	ood m3/ha		Mixed	wood m3/ha	l	Hardw	ood m3/ha	
4e. W	hat would	be the average cuttin	g cycle used o	n areas n	anaged by uneven-ag	ed managemer	nt?		
	Softwo	ood years		Mixed	wood years		Hardw	ood years	
<b>5.</b> From	m Questio	onnaire #1 your collec	tive (mean) re	sponses t	o <b>fertilization</b> of rege	enerated stands	indicate	d fertilization would resul	t in
yield i	ncreases	and may have a period	d of effect as f	ollows:					
	Softwo	ood 11.0 %		Mixed	wood 9.3 %		Hardw	ood 9.3 %	
	Softwo	ood 11.7 years		Mixed	wood 11.7 years		Hardw	ood 11.7 years	
Howe To hel	ver your c p clarify	comments indicated co these concerns please	oncern over fe answer the fo	rtilizing " llowing q	all stands', "all sites", uestions:	"age of stands	fertilized	l" and "amount of fertilize	r".
5a. At	what star	nd age range would yo	ou fertilize? A	nswer sho	ould be range between	a low figure a	nd a higł	i figure expressed years of	•
age.	Softwo	ood & year	s old	Mixed	wood & ye	ears old Hardw	ood	_& years old	
5b. At	what rate	e of fertilizer (kg/ha) v	vould you app	ly?					
	Softwo	ood kg/ha		Mixed	wood kg/ha		Hardw	ood kg/ha	
5c. If	sites are d	listinguished as Good,	Medium and	Poor wha	t proportion of sites v	vould you fertil	lize?		
	Good _	%		Mediu	m%		Poor _	%	
5d. W	hat increa	se in growth (m3/ha/y	r) would you	expect?					
	Softwo			Mixed	wood		Hardw	ood	
5e. Ho	w long w	ould the increased group	owth indicated	l above la	st (years)?				
	Softwo	ood bod		Mixed	wood		Hardw	ood	

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. Ch	ange in growth?					
	Softwood +/	_ m3/ha/yr	Mixedwood +/	_m3/ha/yr	Hardwood +/	_m3/ha/yr
6ab. Ho	ow long would this cha	inge in growth la	ast?			
	Softwood	years N	Mixedwood years		Hardwood years	
6ac. Ch	ange in rotation based	on harvestable	tree size?			
	Softwood +/	_ years	Mixedwood +/	_ years	Hardwood +/	_ years
6ad. Ch	ange in rotation based	on maximum M	IAI?			
	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 c	hange in growtl	h last?			
Softwood	years	Mixedwood years		Hardwood years	
6bc. Change in rotation bas	ed on harvestab	le tree size?			
Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	_ years
6bd. Change in rotation bas	ed on maximun	n 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 harvest	able tree size?					
Softwood +/ years	Mixedwood +/	_ years	Hardwood +/	_ years		
6cd. Change in rotation based on maxim	um 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. V	Vhat change in MAI do	you expect for genetic in	mprovement?			
	Softwood	m3/ha/yr	Mixedwood	_m3/ha/yr	Hardwood	_m3/ha/yr
		2		- •		-
7b. V	What change in rotation	based on harvestable tre	e size would you expe	ct?		
	Softwood +/-	vears	Mixedwood +/-	vears	Hardwood +/-	vears
7c. V	What change in rotation	based on Maximum MA	I would you expect?			
	Softwood +/-	vears	Mixedwood +/-	vears	Hardwood +/-	vears
		、				

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 Mix		Mixedv	edwood			Hardwood				
Age	MAI	New MAI		Age	MAI	New MA	I	Age	MAI	New MA	I
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 o	n aggregated es	timates (1	ounded)	from you	estimates repo	orted above			
1b. Wh	at proport	tion of the a	rea in thye regi	on is mai	naged by	uneven-ag	ged manageme	nt?			0/
	Softwoo	bc	%		Mixedv	wood	%		Hardw	00d	%
1c. Wh	at growth	per ha/yea	do you expect	on areas	managed	l by uneve	n-aged manage	ement?			
	Softwoo	od 1	n3/ha/yr		Mixedv	wood	m3/ha/yr		Hardw	ood	_m3/ha/yr
1d. Wh	at after-cu	ut growing	stock level do y	ou expec	t to be let	ft on areas	managed by u	ineven-ageo	d manage	ement?	
	Softwoo	od bc	m3/ha		Mixedv	wood	m3/ha		Hardw	ood	m3/ha
1e. Wh	at would	be the avera	ige cutting cycl	e used on	areas ma	anaged by	uneven-aged r	nanagemer	nt?		
	Softwoo	od bc	years		Mixedv	wood	years		Hardw	ood	years
<b>2.</b> From yield in	Question creases an	nnaire #1 ye nd may hav	our collective (r e a period of ef	nean) res fect as fo	ponses to llows: Mixedu	o <b>fertilizat</b>	<b>ion</b> of existing	stands ind	icated fer	rtilization v	vould result in
	Softwor	nd t	0 voors		Mixedy	vood	10 voors		Hardw	ood	1070 10 yoors
	SOLLWOO	Ju I	0 years		WIINEUV	voou	10 years		TIALUW	oou	10 years
Howev Please	er your co answer the	omments in e following	dicated concern questions to ac	over fert count for	ilizing "a these co	all stands', ncerns:	"all sites", "ag	e of stands	fertilized	l" and "ame	ount of fertilizer".
2a. At v age.	vhat stand	d age range	would you ferti	ilize? An	swer shou	uld be rang	ge between a lo	ow figure a	nd a high	figure exp	ressed in years of

Softwood \_\_\_\_\_ & \_\_\_\_ years old Mixedwood \_\_\_\_\_ & \_\_\_\_ years old Hardwood \_\_\_\_\_ & \_\_\_\_ years old of

2b. At what rate of fertilize Softwood	r (kg/ha) would you apply kg/ha	y? Mixedwood	kg/ha	Hardwood	kg/ha
	_ 0 **		_ 6 **		8
2c. If sites are distinguished	as Good, Medium and F	oor what proportion o	of sites would you	fertilize?	0⁄~
0000	70		70	r 001	70
2d. What increase in growt	h (m3/ha/yr) would you e	xpect?			
Softwood	_	Mixedwood	_	Hardwood	
2. How long would the in	reased growth indicated	abova last (vaara)?			
Softwood	reased growth indicated	Mixedwood		Hardwood	
5011W0004	_		_		
<b>3.</b> From Questionnaire #1 y there would be a net change rotation age would be reduce	your collective (mean) res e in yield due to thinning, ced by a mean of 5.0 yea	ponses to thinning of and the mean of the curs.	existing stands wer hange was a (+) 1	re as follows: 50% of res 0 % . 50 % of respond	spondents felt lents felt the
Significant comments were stands only", and "is rotation <b>responses</b> please answer the	made regarding "what to on set by achieving a certa e following:	thin", "would never thin tree size or maximum	hin in mature stand um mean annual ir	ds", "I assume thinning on crement". To help clarit	f immature fy <b>Thinning</b>
3a. For existing immature s	tands what do you expect	t from <b>cleaning / brus</b>	shing (assume no u	utilization) regarding:	
3aa. Change in growth?					
Softwood +/	m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3ab. How long would this c	change in growth last?				-
3ac Change in rotation has	years wilkedw	e?	5 Па	irdwood year	.8
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3ad. Change in rotation bas	ed on maximum MAI?				
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3b. For existing immature s regarding:	stands what do you expect	t from <b>juvenile spacir</b>	ng / pre-commerc	ial thinning (assume no	utilization)
3ba. Change in growth?					
Softwood +/	m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3bb. How long would this of	change in growth last?		TT		
Softwood	years Mixedv	vood years	s Ha	ardwood year	S
Softwood +/-	vears	Mixedwood +/-	vears	Hardwood +/-	vears
3bd. Change in rotation bas	sed on maximum MAI?		2		5
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years
3c. For existing immature s	tands what do you expect	t from <b>commercial th</b>	inning (include th	ninning plus final harvest	t) regarding:
3ca. Change in growth?					
Softwood +/	m3/ha/yr	Mixedwood +/	m3/ha/yr	Hardwood +/	m3/ha/yr
3cb. How long would this c	change in growth last?		, TT.	udwood	
SOILWOOD	years Mixedv ed on harvestable tree size	e?	s Ha	uruwood year	8
Softwood +/-	years	Mixedwood +/-	years	Hardwood +/-	years
3cd. Change in rotation bas	ed on maximum MAI?				
Softwood +/	years	Mixedwood +/	years	Hardwood +/	years

**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

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	2.10		55	2.07	
*115	2.10		*105	2.00		*75	2.07	
135	2.05		125	2.5 + 2.41		95	2.07	
155	1.90 NA		145	2.71 NA		115	2.54 NA	
155		* Based or	n aggregated e	stimates (	(rounded) from your	estimates repor	ted above	 2.
4b. W	nat propo	rtion of the area in the	e region is mar	aged by	uneven-aged manag	ement?		
	Softwo	ood%		Mixed	wood%		Hardw	rood%
4c. W1	nat growt	h per ha/year do you ε	expect on areas	s manage	d by uneven-aged m	anagement?		
	Softwo	ood m3/ha/yr		Mixed	wood m3/h	na/yr	Hardw	rood m3/ha/yr
4d. WI	hat after-o	cut growing stock leve	el do vou expe	ct to be le	eft on areas managed	l by uneven-age	d manage	ement?
	Softwo	ood m3/ha		Mixed	wood m3/h	ia	Hardw	rood m3/ha
4e. Wł	nat would	be the average cuttin	g cycle used o	n areas m	anaged by uneven-a	iged manageme	nt?	
	Softwo	ood years	6	Mixed	wood years	8	Hardw	rood years
<b>5.</b> From	n Questio	onnaire #1 your collec	tive (mean) re	sponses t	o <b>fertilization</b> of reg	generated stands	s indicate	d fertilization would result in
yield i	ncreases	and may have a period	d of effect as fo	ollows:				
	Softwo	ood 10 %		Mixed	wood 10 %		Hardw	rood 10 %
	Softwo	ood 10 years		Mixed	wood 10 years		Hardw	rood 10 years
Howey To hel	ver your c p clarify	comments indicated co these concerns please	oncern over fer answer the fol	rtilizing " lowing q	all stands', "all sites' uestions:	", "age of stands	s fertilized	d" and "amount of fertilizer"
5a. At	what star	nd age range would yo	ou fertilize? Ar	nswer sho	ould be range betwee	en a low figure a	und a high	figure expressed in years of
age.	Softwo	ood & year	s old	Mixed	wood &	years old Hardw	vood	& years old
5b. At	what rate	e of fertilizer (kg/ha) v	vould you app	ly?				
	Softwo	ood kg/ha	2 11	Mixed	wood kg/ha	a	Hardw	rood kg/ha
5c. If s	ites are d	istinguished as Good,	Medium and	Poor wha	t proportion of sites	would you ferti	lize?	
	Good	%		Mediu	m%	·	Poor _	%
5d. WI	nat increa	se in growth (m3/ha/y	r) would you	expect?				
	Softwo	ood		Mixed	wood		Hardw	rood
5e. Ho	w long w	ould the increased group	owth indicated	above la	st (years)?			
	Softwo	ood		Mixed	wood		Hardw	ood
**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 cl	hange in growt	h last?			
Softwood	years	Mixedwood years		Hardwood years	
6ac. Change in rotation base	ed on harvestab	le tree size?			
Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	_ years
6ad. Change in rotation base	ed on maximun	n 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 cl	hange in growth	n last?			
	Softwood	years	Mixedwood years		Hardwood years	
6bc.	Change in rotation base	ed on harvestabl	le tree size?			
	Softwood +/	years	Mixedwood +/	_ years	Hardwood +/	_ years
6bd.	Change in rotation base	ed on maximum	n 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? Mixedwood \_\_\_\_\_years Hardwood \_\_\_\_\_ years Softwood \_\_\_\_\_ years 6cc. Change in rotation based on harvestable tree size? Mixedwood +/- years Hardwood +/- years Softwood +/- 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 Softwood	you expect for genetic in m3/ha/yr	mprovement? Mixedwood	_m3/ha/yr	Hardwood	_m3/ha/yr
7b.	What change in rotation Softwood +/	based on harvestable tre years	e size would you expec Mixedwood +/	ct? years	Hardwood +/	years
7c.	What change in rotation Softwood +/	based on Maximum MA years	I would you expect? 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.

	Softv	wood			Mixed	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?

ie. Windt ib the	Stown per ma j	eur on areas mai	agea of ano ten	ugea managemer	
Soft	twood:	Mix	edwood:	Har	dwood:
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 stoc	k level is left on	areas managed b	y uneven-aged n	nanagement?
Soft	twood:	Mix	edwood:	Har	dwood:
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 ar	eas managed by u	ineven-aged mar	agement?
C		Minoday	aad.	Handwood	-

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 w	ould you fertilize? Answer s	hould range between X	K and Y years of age.			
Softwood:	Mixed	lwood:	Hardwood:			
Survey result: 38 & 50 yrs o	ld Survey result: 4	3 & 60 yrs old	Survey result: 43 & 65 yrs old			
Your est & yrs o	Id Your est	& yrs old	Your est & yrs old			
2b. At what rate of fertilizer (	kg/ha) would you apply?					
Softwood:	Mixedwood:	Hardwood	1:			
Survey result: 200 kg/ha	Survey result: 200 kg/ha	Survey result: 200 k	xg/ha			
Your est kg/ha	Your est kg/ha	Your est kg	g/ha			
2c. If sites are distinguished a <b>Good:</b>	s Good, Medium and Poor w Medium:	hat proportion of sites <b>Poor:</b>	would you fertilize?			
Survey result: 35% Su	rvey result: 55 % Survey	y result: 10 %				
Your est % Y	our est% Your e	est %				
2d. What increase in growth (	m3/ha/yr) would you expect?	,				
Softwood:	Mixedwood:	Ha	rdwood:			
Survey result: 0.2 m3/ha/yr	Survey result: 0.2 m3/ha	a/yr Survey resul	t: 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 incre	ased growth indicated above	last (years)?				
Softwood:	Mixedwood:	Hardwood:				
Survey result: 5 years	Survey result: 5 years	Survey result: 5 years	5			
Your est years	Your est years	Your est yea	ırs			

**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	:	Hardwo	od:	
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. +/ r	n3/ha/yr	Your est. +/	m3/ha/yr	
3ab. How long would this cha	inge in growth last?				
Softwood:	Mixedwood:	Hard	wood:		
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 re	esult: -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 re	esult: -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 ch	ange 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	d 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	s Your est. +/ years
3bd. Change in rotation based	d on maximum MAI?	
Softwood:	Mixedwood:	Hardwood:
Survey result: 3 years	Survey result: 3 years	Survey result: 3 years
Your est. +/ years	Your est. +/ years	s Your est. +/ years
3c. For existing immature sta	nds what do you expect from	<b>commercial thinning</b> (include thinning plus final harvest) regarding:
3ca. Change in growth?		
Softwood:	Mixedwood	1: Hardwood:
Survey result: 0.6 m3/ha/yr	Survey result: 0.6 m <sup>2</sup>	3/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 cha	ange 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	I 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	s Your est. +/ years
3cd. Change in rotation based	l on maximum MAI?	
Softwood:	Mixedwood:	Hardwood:
Survey result: +3 years	Survey result: +3 years	Survey result: +3 years
Your est. +/ years	Your est. +/ year	s 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 propo Softwood:	ortion of the are Survey result: Your est	ea will be mana 2 % %	ged by uneven-a Mixedwood:	ged management? Survey result: 7 % Your est %	Hardwood:	Survey result 20 % Your est %
4c. What grow <b>Softwood:</b>	th per ha/year c Survey result: Your est	lo you expect o 1.9 m3/ha/yr m3/ha/yr	n areas that will Mixedwood:	be managed by uneven- Survey result: 1.8 m Your est m3/	aged management? 3/ha/yr <b>Hardwo</b> /ha/yr	od: Survey result 1.9 m3/ha/yr Your est m3/ha/yr
4d. What after- Softwood:	-cut growing sto Survey result: Your est	ock level do you 77 m3/ha m3/ha	a expect to be lef Mixedwood:	t on areas that will be n Survey result: 73 m3/ Your est m3/	nanaged by uneven- ha <b>Hardwoo</b> /ha	-aged management? d: Survey result 73 m3/ha Your est m3/ha
4e. What would <b>Softwood:</b>	d be the averag Survey result: Your est	e cutting cycle 20 years years	used on areas tha Mixedwood:	t will be managed by u Survey result: 22 years Your est years	neven-aged manage Hardwood:	ement? Survey result 20 years Your est years
<b>5.</b> From Questi review these fi application (co if in one or mo	onnaire #2 the gures and provious ments from to ore cases they an	results regardin ide any revised he previous rou re identical to th	g <b>fertilization</b> o figures that you and suggested tha sose of the surve	f regenerated stands hav deem more representati t number of application y results.	ve been aggregated ve of the region. Ba s be clarified). Plea	and are given below. Please ase your figures on one-time ase enter your estimates even
5a. At what sta Survey result Your est	nd age range w Softwood: : 33 & 45 yrs o & yrs c	ould you fertili ld Su ld Y	ze? Answer shou Mixedwo الالالالالالالالالالالالالالالالالالال	Ild range between X and od: & 50 yrs old yrs old	d Y years of age. Hardwoo Survey result: 38 & Your est & _	d: 2 55 yrs old yrs old
5b. At what rat Softy Survey result Your est.	e of fertilizer (l <b>vood:</b> : 200 kg/ha kg/ha	kg/ha) would yc Mix Survey result Your est	ou apply? edwood: : 200 kg/ha kg/ha	<b>Hardwood:</b> Survey result: 200 kg/ha Your est kg/ha	1	
5c. If sites are Good Survey result Your est	distinguished a 1: : 35 % Su % Ye	s Good, Mediun Medium: arvey result: 55 our est	n and Poor what 3 % Survey re % Your est.	proportion of sites wou Poor: esult: 10 % %	ld you fertilize?	
5d. What incre Sof Survey result Your est	ase in growth ( twood: : 0.3 m3/ha/yr m3/ha/yr	m3/ha/yr) woul N Survey res Your est	d you expect? Iixedwood: ult: 0.2 m3/ha/yr m3/ha/yr	Hardw Survey result: 0.2 Your est	<b>ood:</b> 2 m3/ha/yr _ m3/ha/yr	
5e. How long v Softw Survey result Your est	would the incre- vood: : 5 years years	ased growth ind Mixed Survey result: Your est.	licated above last dwood: 5 years Su years Yo	t (years)? Hardwood: nvey result: 5 years our est years		
6. Comments f	rom Questionn	aire #1 regardin	g thinning indica	ated this topic had to be	split into several ca	ategories 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: Survey result: 0.6 m3/ha/yr Your est. +/ m3/ha/yr	Mixedwood: Survey result: 0.5 m3/ha/yr yr Your est. +/ m3/ha/	Hardwood: Survey result: 0.5 m3/ha/yr Tr Your est. +/ m3/ha/yr
6ab. How long would this cha Softwood: Survey result: 13 years Your est years	nge in growth last? <b>Mixedwood:</b> Survey result: 13 years Your est years Your f	Hardwood: y result: 13 years est years
6ac. Change in rotation based Softwood: Survey result: -2 years Your est. +/ years	on harvestable tree size? <b>Mixedwood:</b> Survey result: -2 years Your est. +/ years	Hardwood: Survey result: -2 years Your est. +/ years
6ad. Change in rotation based Softwood: Survey result: +4 years Your est. +/ years 6b. For regenerated immature	on maximum MAI? <b>Mixedwood:</b> Survey result: +4 years Your est. +/ years stands what do you expect from <b>in</b>	Hardwood: Survey result: +4 years Your est. +/ years enile spacing/pre-commercial thinning (assume no utilization)
regarding:	stands what do you expect nom <b>ju</b>	
6ba. Change in growth? Softwood: Survey result: 22 m3/ha/yr Your est. +/ m3/ha/	<b>Mixedwood:</b> Survey result: 2.2 m3/ha/yr yr Your est. +/ m3/ha/y	Hardwood: Survey result: 2.3 m3/ha/yr Your est. +/ m3/ha/yr
6bb. How long would this cha Softwood: Survey result: 20 years Your est years	ange in growth last? <b>Mixedwood:</b> Survey result: 20 years Your est years Your	Hardwood: y result: 20 years est years
6bc. Change in rotation based Softwood: Survey result: +7 years Your est. +/ years	on harvestable tree size? <b>Mixedwood:</b> Survey result: +7 years Your est. +/ years	Hardwood: Survey result: +7 years Your est. +/ years
6bd. Change in rotation based Softwood: Survey result: +13 years Your est. +/ years	on maximum MAI? <b>Mixedwood:</b> Survey result: +14 years Your est. +/ years	Hardwood: Survey result: +15 years Your est. +/ years
6c. For regenerated immature	stands what do you expect from con	nmercial thinning (include thinning plus final harvest) regarding
6ca. Change in growth? Softwood: Survey result: 0.7 m3/ha/yr Your est. +/ m3/ha/y	<b>Mixedwood:</b> Survey result: 0.7 m3/ha/yr yr Your est. +/ m3/ha/	Hardwood: Survey result: 0.7 m3/ha/yr r Your est. +/ m3/ha/yr
6cb. How long would this cha Softwood: Survey result: 13 years Your est years	nge in growth last? <b>Mixedwood:</b> Survey result: 13 years Your est years Your	Hardwood: y result: 13 years est years
6cc. Change in rotation based Softwood: Survey result: -5 years Your est. +/ years	on harvestable tree size? <b>Mixedwood:</b> Survey result: -5 years Your est. +/ years	Hardwood: Survey result: -5 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?

, al i i i a ci i a ci a ci a ci a ci a c	Jou emprete moningreuter improven		
Softwood:	Mixedwood:	Hardwood:	
Survey result: 0.5 m3/ha/yr	Survey result: 0.3 m3/ha/yr	Survey result: 0.3 m3/ha/y	
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 wou	ld 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 yo	ou 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.

	Softv	wood			Mixed	wood			Hardwo	bod	
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	d:	
Survey result: 2 %	Survey result: 3 %	Survey res	sult: 3 %	
Your est %	Your est 9	% Your est.	%	
1c. What is the growth per	ha/year on areas ma	anaged by uneven-	-aged management?	
Softwood:	M	ixedwood:	Hardw	vood:
Survey result: 1.7 m3/ha/	yr Survey resu	ılt: 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	g stock level is left o	on areas managed b	oy uneven-aged man	agement?
Softwood:	Μ	ixedwood:	Hardw	vood:
Survey result: 75 m3/ha	Survey resu	ılt: 100 m3/ha	Survey result: 12	25 m3/ha
Your est m3/ha	Your est.	m3/ha	Your est.	_ m3/ha
1e. What is the average cut	ting cycle used on a	areas managed by	uneven-aged manag	ement?
Softwood:	Mixed	wood:	Hardwood:	
Survey result: 20 years	Survey result: 1	5 years Surv	ey result: 10 years	
Your est years	Your est.	_years Your	r 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 w	ould you fertilize? Answer sh	hould range between $\lambda$	X and Y years of age.		
Softwood:	Mixed	wood:	Hardwood:		
Survey result: 50 & 70 yrs ol	d Survey result: 4	5 & 55 yrs old	Survey result: NA & NA yrs old		
Your est & yrs o	d Your est	& yrs old	Your est & yrs old		
2b. At what rate of fertilizer (l	g/ha) would you apply?				
Softwood:	Mixedwood:	Hardwood	l:		
Survey result: 200 kg/ha	Survey result: 150 kg/ha	Survey result: NA k	g/ha		
Your est kg/ha	Your est kg/ha	Your est kg	g/ha		
Good: Survey result: 50 % Su Your est% Yo	Medium:         rvey result: 30 %       Survey         pur est.       %       Your e	Poor: result: 20 % st %	would you leftilize?		
2d. What increase in growth (i	n3/ha/yr) would you expect?				
Softwood:	Mixedwood:	Ha	rdwood:		
Survey result: 1.5 m3/ha/yr	Survey result: 1.0 m3/ha	/yr Survey resul	t: NA m3/ha/yr		
Your est m3/ha/yr	Your est m3/ha/	/yr Your est	m3/ha/yr		
2e. How long would the increa	ased growth indicated above	last (years)?			
Softwood:	Mixedwood:	Hardwood:			
Survey result: 10 years	Survey result: 5 years	Survey result: NA ye	ars		
Your est years	Your est years	Your est yea	rs		

**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	l: Hardwood:	Hardwood:	
Survey result: 1.0 m3/ha/yr	Survey result: 1.3 m3	3/ha/yr Survey result: 1.5 m3/ha/yr	r	
Your est. +/ m3/ha/	yr Your est. +/	m3/ha/yr Your est. +/ m3/ha	l/yr	
3ab. How long would this cha	ange 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. +/ year	s Your est. +/ years		
3ad. Change in rotation based	l on maximum MAI?			
Softwood:	Mixedwood:	Hardwood:		
Survey result: -5 years	Survey result: -3 years	Survey result: -3 years		
Your est. +/ years	Your est. +/ year	s Your est. +/ years		

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

 Softwood:
 Mixedwood:

 Survey result: 1.8 m3/ha/yr
 Survey result: 2.3 m3/ha/yr

 Your est. +/-\_\_\_\_ m3/ha/yr
 Your est. +/-\_\_\_\_ m3/ha/yr

Hardwood: Survey result: 2.5 m3/ha/yr r 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	S 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	S Your est. +/ years	
3c. For existing immature stan	nds what do you expect from o	commercial thinning (include thinning plus final harv	est) 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/y	r Your est. +/ r	m3/ha/yr Your est. +/ m3/ha/yr	
3cb. How long would this cha	nge in growth last?		
Softwood	Mixedwood	Hardwood	

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	l on harvestable tree size?	Handwood		
Softwood:	Mixeawoou:	naruwoou:		
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	l on maximum MAI?			

Softwood:	Mixedwood:
Survey result: NA years	Survey result: NA years
Your est. +/ years	Your est. +/ years

Hardwood: Survey result: NA 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 prop	ortion of the area will be managed	ged by uneven-ag	ged management?					
Softwood:	Survey result: 3 %	Mixedwood:	Survey result: 3 %	Hardwood:	Survey result 3 %			
	Your est %		Your est %		Your est %			
4c. What grow	th per ha/year do you expect or	n areas that will b	e managed by uneven-aged	d management?				
Softwood:	Survey result: 1.8 m3/ha/yr	Mixedwood:	Survey result: 1.9 m3/ha	/yr Hardwoo	d: Survey result 2.0 m3/ha/yr			
	Your est m3/ha/yr		Your est m3/ha/y	r	Your est m3/ha/yr			
4d. What after	-cut growing stock level do you	a expect to be left	on areas that will be mana	ged by uneven-	aged management?			
Softwood:	Survey result: 85 m3/ha	Mixedwood:	Survey result: 110 m3/ha	Hardwood	I: Survey result 135 m3/ha			
	Your est m3/ha		Your est m3/ha		Your est m3/ha			
4e. What woul	d be the average cutting cycle u	used on areas that	t will be managed by uneve	en-aged manager	ment?			
Softwood:	Survey result: 20 years	Mixedwood:	Survey result: 15 years	Hardwood:	Survey result 10 years			
	Your est years		Your est years		Your est years			
<b>5.</b> From Questireview these fi application (co if in one or mo	5. From Questionnaire #2 the results regarding <b>fertilization</b> 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 f in one or more cases they are identical to those of the survey results.							
5a. At what sta	5a. At what stand age range would you fertilize? Answer should range between X and Y years of age.							
	Softwood:	Mixedwo	od:	Hardwood	1:			

Softwood:	Mixeawood:	Hardwood:
Survey result: 30 & 50 yrs old	Survey result: 35 & 45 yrs old	Survey result: NA & NA 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: 100 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? Medium: Good: 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: NA m3/ha/yr Survey result: 1.8 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: NA years Survey result: 10 years Survey result: 50 years Your est. \_\_\_\_\_ years Your est. \_\_\_\_\_ years Your est. \_\_\_\_\_ years 6. Comments from Ouestionnaire #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?

Your est. +/- years

ouo. non iong would this e	nunge in growth fuse.	
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 base	ed on harvestable tree size?	
Softwood:	Mixedwood:	Hardwood:
Survey result: -15 years	Survey result: -10 years	Survey result: -10 year

 Survey result: -10 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?
 Mixedwood:
 Hardwood:

 Softwood:
 Mixedwood:
 Survey result: -5 years

 Survey result: -10 years
 Survey result: -5 years
 Survey result: -5 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:	Mixedwoo	d:	Hardwood:
Survey result: 1.5 m3/ha/yr	Survey result: 25 n	13/ha/yr Surve	ey result: 2.8 m3/ha/yr
Your est. +/ m3/ha/y	yr Your est. +/	m3/ha/yr Your	est. +/ m3/ha/yr
6bb. How long would this cha	inge in growth last?		
Softwood:	Mixedwood:	Hardwood	1:
Survey result: 25 years	Survey result: 20 years	Survey result: 15 ye	ears
Your est years	Your est years	Your est ye	ears
6bc. Change in rotation based	on harvestable tree size?		
Softwood:	Mixedwood:	Hard	lwood:
Survey result: -18 years	Survey result: -20 years	Survey result:	-15 years
Your est. +/ years	Your est. +/ year	rs Your est. +/	years

6bd. Change in rotation based or <b>Softwood:</b>	n maximum MAI? <b>Mixedwood:</b>	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 sta	ands what do you expect from <b>c</b>	ommercial thinning (include	e thinning plus final harvest) regarding:
6ca. Change in growth?			
Softwood:	Mixedwood:	Hardwoo	d:
Survey result: 1.0 m3/ha/yr	Survey result: 1.3 m3/ha/y	r Survey result: 1.5 1	n3/ha/yr
Your est. +/ m3/ha/yr	Your est. +/ m3/ha	a/yr Your est. +/	_ m3/ha/yr
6cb. How long would this chang         Softwood:         Survey result: 20 years       Survey result: 20 years         Your est.       years       Y	e in growth last? <b>Mixedwood:</b> urvey result: 10 years Surv four est years You	Hardwood: rey result: 10 years r est years	
6cc. Change in rotation based or	n 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 or	n 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	
<b>7.</b> From Questionnaire #2, the rebelow. Please review these figure estimates even if, in one or more	esults regarding <b>genetic improve</b> res and provide any revised figu e cases, they are identical to thos	ement of regenerated stands res that you deem more repre- e of the survey results.	have been aggregated and are given esentative of the region. Please enter your

7a What change in MAI do you expect from greater improvement?

7a. What change in MAT uo you	expect nom greater improveme	111.		
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 base	ed on harvestable tree size would	l 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 base	ed on Maximum MAI would you	a 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		

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.

	Soft	wood			Mixed	wood			Hardy	wood	
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:	Hardwoo	od:	
Survey result: 5 %	Survey result: 5 %	Survey re	sult: 0 %	
Your est %	Your est %	Your est.	%	
1c. What is the growth per ha	a/year on areas managed	by uneven-age	ed management?	
Softwood:	Mixe	dwood:	-	Hardwood:
Survey result: 2.5 m3/ha/yr	Survey result:	2.5 m3/ha/yr	Survey re	esult: 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 s	tock level is left on areas	managed by u	uneven-aged man	agement?
Softwood:	Mixedwo	od:	Hardw	ood:
Survey result: 250 m3/ha	Survey result: 200	m3/ha	Survey result: 15	50 m3/ha
Your est m3/ha	Your est r	n3/ha	Your est	_ m3/ha
1e. What is the average cutting	ng cycle used on areas m	anaged by une	even-aged manage	ement?
Softwood:	Mixedwood:		Hardwood:	
Survey result: 20 years	Survey result: 20 years	s Survey	result: 10 years	
Your est years	Your est years	Your es	t 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 v	vould you fertilize? Answer sho	uld range between X	and Y years of age.		
Softwood:	Mixedw	ood:	Hardwood:		
Survey result: 0 & 25 yrs ol	d Survey result: 0 &	25 yrs old	Survey result: 0 & 25 yrs old		
Your est & yrs o	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 k	g/ha		
Your est kg/ha	Your est kg/ha	Your est kg	ha		
2c. If sites are distinguished a <b>Good:</b>	us Good, Medium and Poor wha Medium:	t proportion of sites v <b>Poor:</b>	would you fertilize?		
Survey lesuit. 10 % Si	livey lesult. 50 % Sulvey I	esuit. 10 %			
2d. What increase in growth (	(m3/ha/yr) would you expect?				
Softwood:	Mixedwood:	Har	dwood:		
Survey result: 1.5 m3/ha/yr	Survey result: 1.5 m3/ha/y	vr Survey result	: 2.0 m3/ha/yr		
Your est m3/ha/yr	Your est m3/ha/y	r Your est	m3/ha/yr		
2e. How long would the incre	eased growth indicated above last	st (years)?			
Softwood:	Mixedwood:	Hardwood:			
Survey result: 15 years	Survey result: 15 years S	urvey result: 15 year	S		
Your est years	Your est years Y	our est year	s		
<b>3.</b> Comments from Question	naire #1 regarding thinning indic	cated this topic had to	be split into several categories and the split into several categories and the spize immature stands only. Each give		

**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:	Mixedwoo	d: Hardwood:	
Survey result: +1.0 m3/ha/y	r Survey result: +1.0 r	n3/ha/yr Survey result: +0.5 m3/h	na/yr
Your est. +/ m3/ha/	yr Your est. +/	m3/ha/yr Your est. +/ m3/	/ha/yr
3ab. How long would this cha	ange 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. +/ year	Your est. +/ years	
3ad. Change in rotation based	l on maximum MAI?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: -5 years	Survey result: -5 years	Survey result: 00 years	
Your est. +/ years	Your est. +/ year	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?	Mandana	Handara d
	Mixedwood:	Hardwood:
Survey result: -0.2 m3/na/yr	Survey result: -0.5 ms	/na/yr Survey result: -0.5 m5/na/yr
Your est. $+/-$ m3/na/	yr Your est. +/ m	13/na/yr Your est. $+/-$ m $3/na/yr$
3bb. How long would this cha	ange 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 star	nds what do you expect from <b>c</b>	ommercial thinning (include thinning plus final harvest) regarding:
200 Change in growth?		
Sea. Change in growin?	Minadwood	Handwood
Survey regult: 0.2 m2/he/yr	Survey regult: 15 m2	/ho/ur Surriou rocult: 1.5 m2/ho/ur
Your act 1/ m2/ha/yi	Survey result1.5 III5	$\frac{11}{11}$ $11$
1 our est. +/ III5/IIA/	yı 1001 est. +/ II	15/11a/yi four est. $+/ 115/11a/yi$
3cb. How long would this cha	inge 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 prop	ortion of the area w	ill be managed by unever	n-aged management?				
Softwood:	Survey result: 5 %	Mixedwood:	Survey result: 5 %	Hardwood:	Survey result 0 %		
	Your est	%	Your est %		Your est %		
4c. What grow	vth per ha/year do yo	ou expect on areas that w	ill be managed by unev	en-aged manageme	ent?		
Softwood	Survey result: 2.5 r	n3/ha/yr Mixedwood	Survey result: 2.5 1	n3/ha/yr <b>Hardw</b>	oo Survey result 2.5 m3/ha/yr		
:	Your est m.	3/ha/yr :	Your est m	3/ha/yr <b>d:</b>	Your est m3/ha/yr		
4d. What after	r-cut growing stock	level do you expect to be	left on areas that will	be managed by une	ven-aged management?		
Softwood:	Survey result: 200	m3/ha Mixedwood:	Survey result: 200	m3/ha Hardw	ood: Survey result 150 m3/ha		
	Your est.	m3/ha	Your est r	n3/ha	Your est m3/ha		
4e. What would	ld be the average cu	tting cycle used on areas	that will be managed b	y uneven-aged mar	agement?		
Softwood:	Survey result: 20	years Mixedwood:	Survey result: 20 y	ears Hardwoo	<b>d:</b> Survey result 10 years		
	Your est	years	Your est y	ears	Your est years		
<b>5.</b> From Quest review these f application (co if in one or mo	<b>5.</b> From Questionnaire #2 the results regarding <b>fertilization</b> 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 st	and age range would	l you fertilize? Answer sl	hould range between X	and Y years of age			
	Softwood:	Mixed	wood:	Hardy	wood:		
Survey resul	t: 15 & 63 yrs old	Survey result: 0	& 25 yrs old	Survey result: (	) & 25 yrs old		
Your est.	& yrs old	Your est.	& yrs old	Your est	& yrs old		
5b. At what ra	te of fertilizer (kg/h	a) would you apply?					
So	oftwood:	Mixedwood:	Hai	dwood:			
Survey resul	t: 200 kg/ha	Survey result: NA kg/ha	a 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: 5 %	Survey result: 50 %	Survey result: 5	%	
Your est %	Your est %	Your est	_ %	
5d. What increase in growth (m	3/ha/yr) would you expect?			
Softwood:	Mixedwood:		Hardwood:	
Survey result: 1.5 m3/ha/yr	Survey result: 1.5 m3/l	ha/yr	Survey result: 2.0 m3/ha/yr	
Your est m3/ha/yr	Your est m3/h	na/yr	Your est m3/ha/yr	
5e. How long would the increas	ed growth indicated above las	t (years)?		
Softwood:	Mixedwood:	I	lardwood:	
Survey result: 13 years	Survey result: 15 years	Survey rea	sult: 15 years	
Your est years	Your est years	Your est.	years	
<b>6.</b> Comments from Questionnair would occur only on immature s applies only to immature stands revised estimates. If your estim	re #1 regarding thinning indica stands. Several comments on . The mean of your responses ate agrees with the mean figur	ated this topic ha round 2 again er s to round 2 are g re from round 2,	d to be split into several categories and the phasize immature stands only. Each que iven below. Please review these results a please enter this as your estimate.	at thinning stion below and provide
6a. For regenerated immature st	ands what do you expect from	n cleaning/brush	ing (assume no utilization) regarding:	
6aa. Change in growth?				
Softwood:	Mixedwoo	od:	Hardwood:	
Survey result: 0.6 m3/ha/yr	Survey result: 1.0 m	n3/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 chang	ge in growth last?			
Softwood:	Mixedwood:	Ha	rdwood:	
Survey result: 11 years	Survey result: 30 years	Survey resu	It: 10 years	
Your est years	Your est years	Your est	years	
6ac. Change in rotation based of	n harvestable tree size?			
Softwood:	Mixedwood	l:	Hardwood:	
Survey result: -7 years	Survey result: -10 years	ars	Survey result: -5 years	
Your est. +/ years	Your est. +/	years	Your est. +/ years	
6ad. Change in rotation based o	n maximum MAI?			
Softwood:	Mixedwood:		Hardwood:	
Survey result: -5 years	Survey result: -5 years	Su	vev result: 00 years	
Your est. +/ years	Your est. +/ yea	ars Yo	ur est. +/ years	
6b. For regenerated immature st regarding:	ands what do you expect from	n <b>juvenile spaci</b> i	g/pre-commercial thinning (assume no	utilization)
6ba. Change in growth?				
Softwood:	Mixedwoo	od:	Hardwood:	
Survey result: -0.2 m3/ha/yr	Survey result: -0.5 r	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 chang	ge in growth last?			
Softwood:	Mixedwood:		Hardwood:	
Survey result: 10 years	Survey result: 10 years	Survey r	esult: 10 years	
Your est years	Your est years	Your est	years	

6bc. Change in rotation based on harvestable tree size?						
Softwood:	Mixedwood:					
Survey result: -11 years	Survey result: -10 years					
Your est. +/ years	Your est. +/ years					

Your est. \_\_\_\_\_ years

Hardwood: Survey result: -5 years Your est. +/-\_\_\_\_ years

6bd. Change in rotation based on	maximum MAI?	Handmande
Soltwood:	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 star	nds what do you expect from <b>com</b>	mercial 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/h	a/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
<b>7.</b> From Questionnaire #2, the res	ults regarding genetic improvem	ent of regenerated stands have been aggregated and are given

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 e	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 expec	et?
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

#### 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.

	Soft	wood			Mixed	wood			Hardw	vood		
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?

ie. What is the	gio nun per m	a year on areas n	nunugeu og	and ten ages	a managemen			
Sof	twood:	Ν	Mixedwood:			Hardwood:		
Survey result	: 2.0 m3/ha/yr	Survey res	sult: 2.0 m3/	/ha/yr	Survey result:	NA m3/ha/yi		
Your est.	m3/ha/yr	Your est.	m3/	ha/yr	Your est	m3/ha/yr		
1d. What after-	-cut growing s	tock level is left	on areas ma	anaged by u	neven-aged m	nanagement?		
Softwood:		Ν	Mixedwood:			dwood:		
Survey result	: 150 m3/ha	Survey res	sult: 150 m3	3/ha	Survey result:	: NA m3/ha		
Your est.	m3/ha	Your est.	m3/	ha	Your est	m3/ha		
1e. What is the	average cutti	ng cycle used on	areas mana	iged by unev	ven-aged man	agement?		
Softw	vood:	Mixe	dwood:		Hardwood:			
Survey result	: 30 years	Survey result:	30 years	Survey re	esult: NA yea	rs		
Your est.	vears	Your est.	vears	Your est.	. vear	s		

**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 we	ould you fertilize? Answer sl	hould range between	X and Y years of age.
Softwood:	Mixed	lwood:	Hardwood:
Survey result: 0 & 25 yrs old	Survey result: (	) & 25 yrs old	Survey result: 0 & 25 yrs old
Your est & yrs ol	d Your est	& yrs old	Your est & yrs old
2b. At what rate of fertilizer (k	g/ha) would you apply?		
Softwood:	Mixedwood:	Hardwoo	d:
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 k	ag/ha
2c. If sites are distinguished as Good:	Good, Medium and Poor wind Medium:	hat proportion of sites <b>Poor:</b>	s would you fertilize?
Survey result: 10 % Sur	rvey result: 50 % Survey	y result: 10 %	
Your est% Yo	ur est% Your e	est %	
2d. What increase in growth (r	n3/ha/yr) would you expect?	,	
Softwood:	Mixedwood:	Ha	ardwood:
Survey result: 1.0 m3/ha/yr	Survey result: 1.0 m3/ha	a/yr Survey resu	lt: 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 increa	used growth indicated above	last (years)?	
Softwood:	Mixedwood:	Hardwood	:
Survey result: 15 years	Survey result: 15 years	Survey result: 15 yes	ars
Your est years	Your est years	Your est ye	ars

**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?	Miyedwood•	Hardwood
Survey result: 0.5 m3/ba/yr	Survey result: 0.5 m3/h	a/vr Survey result: 0.5 m3/ba/vr
Your est. +/ m3/ha/y	r  Your est. +/- m3	B/ha/yr Your est. +/ m3/ha/yr
3ab. How long would this char	nge in growth last?	
Softwood:	Mixedwood:	Hardwood:
Survey result: 15 years	Survey result: 15 years S	urvey result: 10 years
Your est years	Your est years Y	our 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	l on harvestable tree size?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: -10 years	Survey result: -10 years	Survey result: -5 years	
Your est. +/ years	Your est. +/ year	rs Your est. +/ years	
3bd. Change in rotation based	l on maximum MAI?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years	
Your est. +/ years	Your est. +/ year	rs Your est. +/ years	
3c. For existing immature sta	nds what do you expect from	n commercial thinning (include thinning plus final harvest) regard	ding:
3ca. Change in growth?			
Softwood:	Mixedwoo	d: Hardwood:	
Survey result: -1.5 m3/ha/yr	Survey result: -1.5 n	n3/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 cha	ange 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	l on harvestable tree size?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years	
Your est. +/ years	Your est. +/ year	rs 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:       Survey result: 5 %         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: 2.0 m3/ha/yr         Mixedwood:       Survey result: 1.0 m3/ha/yr         Hardwood:       Survey result: 1.0 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: 150 m3/ha         Mixedwood:       Survey result: 150 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: 30 years         Your est.       years
<b>5.</b> From Questionnaire #2 the results regarding <b>fertilization</b> 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.
Sb. At what rate of fertilizer (kg/ha) would you apply?       Hardwood:         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
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.       %
5d. What increase in growth (m3/ha/yr) would you expect?Softwood:Mixedwood:Survey result: 1.0 m3/ha/yrSurvey result: 1.0 m3/ha/yrSurvey result: 1.0 m3/ha/yrSurvey result: 1.0 m3/ha/yrYour est.m3/ha/yrYour 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
6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning

**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: Survey result: 0.5 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr Mixedwood: Survey result: 0.5 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr Hardwood: Survey result: 0.5 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

6ab. How long would this change in growth last?

Softwoo	od:	Mixe	dwood:
Survey result: 1	5 years	Survey result:	15 years
Your est	_ years	Your est.	years

6ac. Change in rotation based on harvestable tree size?

Softwood:							
Survey result: -5 years							
Your est. +/ years							

Mixedwood: Survey result: -5 years Your est. +/-\_\_\_\_\_ years Hardwood: Survey result: -5 years Your est. +/-\_\_\_\_\_ years

Hardwood: Survey result: 10 years Your est. \_\_\_\_\_ years

6ad. Change in rotation based on maximum MAI?										
Softwood:	Mixedwood:									
Survey result: -5 years	Survey result: -5 years									
Your est. +/ years	Your est. +/ years									

Hardwood: Survey result: -5 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?

Softwo	ood:	Mixedw	ood:
Survey result: -0.5	5 m3/ha/yr	Survey result: -0.	.5 m3/ha/yr
Your est. +/	m3/ha/yr	Your est. +/	m3/ha/y

Hardwood: Survey result: -0.5 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

6bb. How long would this cha	inge 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	
Vour est	Vour est 1/ vours	Vour est 1/ voors	
Years	Tour est. +/ years	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	om commercial thinning (include	e thinning plus final harvest) regarding:
Sca. Change in growin?	Minodenood	Handman	а.
Soltwood:	Iviixedwood:	Harawoo	
Survey result: -1.5 In5/In/yr	Survey result: -1.5 III5	Survey result: -1.5	m3/ma/yr
10ui est. +/ III5/IIa/	yı 1001 est. +/ II	15/11a/yi 1 oui est. +/	_ 1113/11a/ y1
6cb. How long would this cha	inge 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	
6aa Change in rotation based	on harriastable tree size?		
Seftwood	Minadwood	Handmaad	
Survey regult: 5 years	Survey regult: 5 years	naruwoou:	
Survey result5 years	Vour est 1/	Your est 1/ Noors	
four est. +/ years	four est. +/ years	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	
	1. 1		
7. From Questionnaire #2, the	e results regarding genetic imp	<b>provement</b> of regenerated stands	have been aggregated and are given
below. Please review these fi	gures and provide any revised	figures that you deem more repre	esentative of the region. Please enter your
estimates even if, in one or m	ore cases, they are identical to	those of the survey results.	
7a. What change in MAL do y	ou expect from greater improv	vement?	
Va. What change in WAT do y	Mivedwood	Hardwood.	
Survey result: 0.4 m3/ba/yr	Survey result: 0.4 m3/ba	$\sqrt{vr}$ Survey result: 0.7 m <sup>3</sup> /ha	/wr
Your est. m3/ha/vr	Your est. m3/ha/	vr Your est m3/ha/	vr
1 our est mo/ma/yi	10u10st m5/ma/	Ji i our est m5/ma/	J*
7b. What change in rotation b	ased on harvestable tree size v	vould you expect?	
Softwood:	Mixedwood:	Hardwood:	
Survey result: -10 years			
Buivey result. To years	Survey result: -10 years	Survey result: -10 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.

	Soft	wood			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	2	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 p	er ha/year on areas manag	ed 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/y	yr Your est m3/ha/	yr Your est m3/ha/yr
1d. What after-cut growing	stock level is left on areas mana	ged 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 cut	ting cycle used on areas manage	d 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 w	ould you fertilize? Answer sl	nould range between X	and Y years of age.
Softwood:	Nilxed	<b>wood:</b>	
Survey result: 0 & 30 yrs old	Survey result: 0	& 30 yrs old	Survey result: 0 & 20 yrs old
Your est & yrs o	ld Your est	& yrs old	Your est & yrs old
2b. At what rate of fertilizer (k	g/ha) would you apply?		
Softwood:	Mixedwood:	Hardwood	
Survey result: NA kg/ha	Survey result: NA kg/ha	Survey result: NA kg	z/ha
Vour est kg/ha	Vour est kg/ha	Vour est kg	/ha
1 our est kg/na	1 our est kg/na	1 our est kg	lia
2c. If sites are distinguished as Good:         Survey result: 30 %       Su Your est %	s Good, Medium and Poor wl <b>Medium:</b> rvey result: 10 % Survey pur est % Your est.	nat proportion of sites w <b>Poor:</b> y result: 0 % est %	would you fertilize?
2d. What increase in growth (1	n3/ha/yr) would you expect?		
Softwood:	Mixedwood:	Har	dwood:
Survey result: 0.5 m3/ha/yr	Survey result: 0 5m3/ha	vr Survey result	$0.8 \text{ m}^{3/\text{ha/yr}}$
Your est. m3/ha/yr	Your est. m3/ha	vr Your est.	m3/ha/vr
		j1 1001 0001 <u></u>	
2e. How long would the increa	ased growth indicated above	last (years)?	
Softwood:	Mixedwood:	Hardwood:	
Survey result: 15 years	Survey result: 15 years	Survey result: 10 years	S
Your est years	Your est years	Your est year	s
3. Comments from Questionn	aire #1 regarding thinning ind	licated this topic had to	be split into several categories and t

**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. +/ r	m3/ha/yr Your est. +/ m3/ha/yr
3ab. How long would this cha	ange 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	l 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	l 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? <b>Softwood:</b> Survey result: -0.7 m3/ha/yr Your est. +/- m3/ha/yr	Mixedwood: Survey result: -0.7 m3/ha vr Your est. +/- m3/	Hardwood: a/yr Survey result: -0.5 m3/ha/yr ha/yr Your est. +/- m3/ha/yr
3bb. How long would this cha	inge in growth last?	1
Softwood:	Mixedwood:	Hardwood:
Survey result: 15 years	Survey result: 15 years Su	rvey result: 10 years
Your est years	Your est years Yo	bur 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
2hd Change in rotation based	on maximum MA12	
Solu. Change in Iotation based	Miyodwood	Uandwood
Survey result: 00 years	Survey result: 00 years	Hai uwoou.
Your est $\pm/$	Your est $\pm/_{-}$ vears	Survey result. 60 years Vour est $\pm/_{-}$ vears
Tour est. +/ years	Tour est. +/ years	Tour est. +/ years
3c. For existing immature star	nds what do you expect from con	nmercial 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 m <sup>3</sup> /h	a/yr Survey result: -1.5 m3/ha/yr
Your est. $+/-$ m3/ha/y	/r Your est. $+/-$ m3/	ha/yr Your est. +/ m3/ha/yr
3cb. How long would this cha	nge in growth last?	
Softwood:	Mixedwood:	Hardwood:
Survey result: 20 years	Survey result: 20 years Su	rvey result: 15 years
Your est years	Your est years Yo	our est years
3cc. Change in rotation based	on harvestable tree size?	II and and a de
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 %	Mixedwood:	Survey result: 30 %	Hardwood:	Survey result 00 %
	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	: 2.0 m3/ha/yr	Mixedwood:	Survey result	: 1.8 m3/ha/yr	Hardwood:	Survey resul	t 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 yo	ou expect to be le	ft on areas that will be mana	ged by uneven-ag	ged management?				
Softwood:	Survey result: 200 m3/ha	Mixedwood:	Survey result: 150 m3/ha	Hardwood:	Survey result NA m3/ha				
	Your est m3/ha		Your est m3/ha		Your est m3/ha				
4e. What would	4e. What would be the average cutting cycle used on areas that will be managed by uneven-aged management?								
Softwood:	Survey result: 30 years	Mixedwood:	Survey result: 30 years	Hardwood:	Survey result NA years				
	Your est. vears		Your est. vears		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:	Mixedwoo	od:	Hardwoo	d:
Survey result: 0.7 m3/ha/yr	Survey result: 0.7 n	n3/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 cha	ange in growth last?			
Softwood:	Mixedwood:	Ha	rdwood:	
Survey result: 15 years	Survey result: 15 years	Survey resu	lt: 10 years	
Your est years	Your est years	Your est.	years	
6ac. Change in rotation based	l on harvestable tree size?			
Softwood:	Mixedwood:		Hardwood:	
Survey result: -5 years	Survey result: -5 years	Surve	y result: -5 years	
Your est. +/ years	Your est. +/ yea	urs Your e	est. +/ years	
6ad. Change in rotation based	l on maximum MAI?			
Softwood:	Mixedwood:		Hardwood:	
Survey result: -5 years	Survey result: -5 years	Surve	y result: -5 years	
Your est. +/ years	Your est. +/ yea	urs Your e	est. +/ years	
6b. For regenerated immature regarding:	e stands what do you expect	from <b>juvenile</b>	spacing/pre-comme	rcial thinning (assume no utilization)

6ba. Change in growth?			
Softwood:	Mixedwood	: Hardwood	d:
Survey result: -0.7 m3/ha/yr	r Survey result: -0.7 m3	B/ha/yr Survey result: -0.5	m3/ha/yr
Your est. +/ m3/ha/	/yr Your est. +/n	n3/ha/yr Your est. +/	_ m3/ha/yr
6bb. How long would this ch	ange 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	d 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	d 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	
Co. Economica d'immediation			41

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? . . C . M Miyody

vol. 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?

<b>Softwood:</b> Survey result: -5 years Your est. +/- vears	<b>Mixedwood:</b> Survey result: -5 years Your est. +/- vears	Hardwood: Survey result: -5 years Your est. +/- vears
6cd. Change in rotation based o	n 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
<b>7.</b> From Questionnaire #2, the r below. Please review these figuestimates even if, in one or more	esults regarding <b>genetic improv</b> ares and provide any revised figure cases, they are identical to those	<b>ement</b> of regenerated stands have been aggregated and are given ures that you deem more representative of the region. Please enter your se of the survey results.
7a. What change in MAI do you	a expect from greater improvement	ent?
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.

	Soft	wood			Mixed	wood			Hard	lwood	
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?

ie. What is the	Stowin per ma j	cui on areas man	agea of anoten	agea managemen			
Soft	wood:	Mix	edwood:	Hard	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-o Soft	cut growing stoc wood:	ck level is left on Mix	areas managed b edwood:	oy uneven-aged m Hard	anagement? <b>lwood:</b>		
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 w	ould you fertilize? Answer s	hould range between 2	X and Y years of age.			
Softwood:	Mixed	lwood:	Hardwood:			
Survey result: & yrs old	Survey result:	& yrs old	Survey result: & yrs old			
Your est & yrs o	ld Your est	& yrs old	Your est & yrs old			
2b. At what rate of fertilizer (k	cg/ha) would you apply?					
Softwood:	Mixedwood:	Hardwoo	d:			
Survey result: kg/ha	Survey result: kg/ha	Survey result: kg/h	na			
Your est kg/ha	Your est kg/ha	Your est k	g/ha			
2c. If sites are distinguished as <b>Good:</b>	Good, Medium and Poor w Medium:	hat proportion of sites <b>Poor:</b>	would you fertilize?			
Survey result: % Su	rvey result: % Survey	y result: %				
Your est % Yo	our est % Your e	est %				
2d. What increase in growth (i	n3/ha/yr) would you expect?	2				
Softwood:	Mixedwood:	Ha	Hardwood:			
Survey result: m3/ha/yr	Survey result: m3/ha/yr	Survey resu	result: m3/ha/yr			
Your est m3/ha/yr	Your est m3/ha	/yr Your est	m3/ha/yr			
2e. How long would the increa	ased 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 yea	ars			

**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 Su	Survey result: +/- m3/ha/yr			
Your est. +/ m3/ha/yr	Your est. +/ r	n3/ha/yr Yo	our est. +/	m3/ha/yr		
3ab. How long would this chan	ge in growth last?					
Softwood:	Mixedwood:	Hardw	ood:			
Survey result: years S	Survey result: years	Survey result: y	ears			
Your est years Y	our est years	Your est.	_ years			
3ac. Change in rotation based o	n harvestable tree size?					
Softwood:	Mixedwood:	Н	ardwood:			
Survey result: +/- years	Survey result: +/- years	Survey res	ult: +/- years			
Your est. +/ years	Your est. +/ years	Your est. +	-/years			
3ad. Change in rotation based o	n maximum MAI?					
Softwood:	Mixedwood:	Н	Hardwood:			
Survey result: +/- years	Survey result: +/- years	Survey res	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				
2ha Change in notation has	d on homiostable tree size?					
Soc. Change in rotation based	1 on narvestable tree size?	TT I I				
Softwood:	wiixedwood:	Hardwood:				
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years				
Your est. +/ years	Your est. +/ years	S Your est. +/ years				
3bd. Change in rotation based	d on maximum MAI?					
Softwood:	Mixedwood:	Hardwood:				
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years				
Your est. +/ years	Your est. +/ years	S Your est. +/ years				
2. En ministin a immediane ata		commencial thinking (include thinking also final homeset) as and include				
Sc. For existing immature sta	nds what do you expect from	commercial thinning (include thinning plus linal harvest) regarding:				
3ca Change in growth?						
Softwood	Miyedwood	. Hardwood:				
Survey result: +/- m3/ba/yr	Survey result: $\pm/-$ m <sup>3</sup>	$ha/vr$ Survey result: $\pm/- m3/ha/vr$				
Vour est $\pm/_{-}$ m3/ba/	$\sqrt{vr}$ Vour est $\pm/-$	$m_3/ha/yr$ Survey result. $+/-m_3/ha/yr$				
	yı 10u est. 1/	115/11a/yi				
3cb. How long would this ch	ange 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	1 on harvestable tree size?	<b></b> , ,				
Softwood:	Mixedwood:	Hardwood:				
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years				
Your est. +/ years	Your est. +/ years	S Your est. +/ years				
3cd. Change in rotation based	l on maximum MAI?					
Softwood:	Mixedwood:	Hardwood:				
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years				
Your est. +/ years	Your est. +/ years	S 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:       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:       Survey result: xx m3/ha/yr         Mixedwood:       Survey result: xx m3/ha/yr         Hardwood:       Survey result: xx 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: m3/ha         Mixedwood:       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:       Survey result: years         Your est.       years         Your est.       years         Your est.       years
<b>5.</b> From Questionnaire #2 the results regarding <b>fertilization</b> 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.       wrs old       Your est wrs old       Your est wrs old
Sb. At what rate of fertilizer (kg/ha) would you apply?       Hardwood:         Softwood:       Mixedwood:       Hardwood:         Survey result: kg/ha       Survey result: kg/ha       Survey result: 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/yrSurvey result: m3/ha/yrSurvey result: m3/ha/yrYour est m3/ha/yrYour est m3/ha/yrYour 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
<b>6.</b> 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: Survey result: years Your est years	Mixedwood: Survey result: years Your est years	Hardwood: Survey result: years Your est years	
6ac. Change in rotation based	l 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	l on maximum MAI?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years	
Your est. +/ years	Your est. +/ years	Your est. +/ years	
6h For regenerated immature	e stands what do you expect fr	om juvenile snacing/nre-commerci	<b>ial thinning</b> (assume no

6b. For regenerated immature stands what do you expect from **juvenile spacing/pre-commercial thinning** (assume no utilization) regarding:

6ba. Change in growth?

Softwood: Survey result: +/- m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

**Mixedwood:** Survey result: +/- m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

Hardwood: Survey result: +/- m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

6bb. How long would this ch	ange in growth last?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: years	Survey result: years S	urvey result: years	
Your est years	Your est years Y	our est years	
6bc. Change in rotation based	l 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	l 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	e stands what do you expect from	n commercial thinning (include thinn	ing plus final harvest) regarding:
6ca. Change in growth?			
Softwood:	Mixedwood:	Hardwood:	
Survey result: +/- m3/ha/yr	Survey result: +/- m3/h	a/vr Survey result: +/- m3/ha/	vr
Your est. +/ m3/ha/	/yr Your est. +/ m.	3/ha/yr Your est. +/ m3/h	na/yr
6cb How long would this ch	ange in growth last?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: years	Survey result: years S	urvey result: years	
Your est years	Your est years Y	our est years	
6cc. Change in rotation based	l on harvestable tree size?		
Softwood	Mixedwood	Hardwood	
Survey result: $\pm/-$ years	Survey result: $\pm/-$ years	Survey result: $\pm/-$ years	
Your est $\pm/-$ years	Your est $\pm/-$ years	Your est $\pm/-$ years	
10ur est. 17 years	10ur est. 17 years	10ur est. 17 yeurs	
6cd. Change in rotation based	1 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	e results regarding genetic imp	<b>covement</b> of regenerated stands have b	een aggregated and are given
below. Please review these f	igures and provide any revised f	igures that you deem more representat	ive of the region. Please enter your
estimates even if, in one or m	ore cases, they are identical to t	hose of the survey results.	
7a What change in MAI do y	you expect from greater improve	ement?	
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/y	r Your est m3/ha/yr	
7h What change in rotation b	ased on harvestable tree size w	huld you expect?	
Softwood	Mixedwood	Hardwood	
Survey result: $\pm/-$ years	Survey result: $\pm/-$ years	Survey result: +/- years	
Your est. +/- vears	Your est. +/- vears	Your est, +/- vears	
jears		jeuro	

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.

	Soft	wood			Mixed	dwood			Hard	wood	
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?

fer mar is the growth per ma year	i i u eus managea ey ane (en a	Beamanagennenne		
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 Softwood: Survey result: m3/ha	evel is left on areas managed by <b>Mixedwood:</b> Survey result: m3/ha Your est m2/ha	y uneven-aged management? Hardwood: Survey result: m3/ha		
Your est m3/na	Your est m3/na	Your est m3/na		

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 w	ould you fertilize? Answer s	hould range between X	and Y years of age.
Softwood:	Mixed	lwood:	Hardwood:
Survey result: & yrs old	Survey result:	& yrs old	Survey result: & yrs old
Your est & yrs o	Your est	& yrs old	Your est & yrs old
2b. At what rate of fertilizer (	kg/ha) would you apply?		
Softwood:	Mixedwood:	Hardwood	l:
Survey result: kg/ha	Survey result: kg/ha	Survey result: kg/ha	a
Your est kg/ha	Your est kg/ha	Your est kg	r/ha
2c. If sites are distinguished a <b>Good:</b>	s Good, Medium and Poor w Medium:	hat proportion of sites <b>Poor:</b>	would you fertilize?
Survey result: %	rvey result: % Surve	y result: %	
Your est % Y	our est % Your	est %	
2d. What increase in growth (	m3/ha/yr) would you expect	?	
Softwood:	Mixedwood:	Har	dwood:
Survey result: m3/ha/yr	Survey result: m3/ha/yr	r Survey result	t: m3/ha/yr
Your est m3/ha/yr	Your est m3/ha	/yr Your est	m3/ha/yr
2e. How long would the incre	ased 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 year	rs

**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? <b>Softwood:</b> Survey result: +/- m3/ha/yr Your est. +/- m3/ha/yr	Mixedwood: Survey result: +/- m3/h Your est. +/- m	Hardwood: na/yr Survey result: +/- m3/ha/yr 3/ha/yr Your est. +/- m3/ha/yr
3ab. How long would this chan	ge in growth last?	Hardwood
Survey result: years	Survey result: years	Survey result: years
Your est years	Your est years	Your est years
3ac. Change in rotation based of	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 of	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 cha	ange 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	l on harvestable tree size?	
Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/ years	Your est. +/ year	s Your est. +/ years
3bd. Change in rotation based	l on maximum MAI?	
Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/ years	Your est. +/ year	s Your est. +/ years
3c. For existing immature sta	nds what do you expect from	commercial thinning (include thinning plus final harvest) regarding:
3ca. Change in growth?		
Softwood:	Mixedwood	1: Hardwood:
Survey result: +/- m3/ha/yr	Survey result: +/- m3	3/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 cha	ange 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. +/ year	Your est. +/ years
3cd. Change in rotation based	l on maximum MAI?	
Softwood:	Mixedwood:	Hardwood:
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years
Your est. +/ years	Your est. +/ year	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:       Survey result: %         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: xx m3/ha/yr         Mixedwood:       Survey result: xx m3/ha/yr         Hardwood:       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:       Survey result: m3/ha         Your est.       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: years         Your est.       years
<b>5.</b> From Questionnaire #2 the results regarding <b>fertilization</b> 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.       wrs old       Your est wrs old
Sb. At what rate of fertilizer (kg/ha) would you apply?       Hardwood:         Softwood:       Mixedwood:       Hardwood:         Survey result: kg/ha       Survey result: kg/ha       Survey result: 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:       %         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.       Mixedwoyr
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         6. Comments from Questionnaire #1 regarding thinning indicated this topic had to be split into several categories and that thinning

**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:

Softwood:	Mixedwood:	Hardwood:	
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	Survey result: +/- m3/ha/yr	
Your est $\pm/-$ m3/ha/	$Vr$ Your est $\pm/-$ m3/ha/yr	Your est $\pm/-$ m3/ha/yr	
		10u 05t. 17 m5/ma/y1	
6ab. How long would this cha	nge in growth last?		
Softwood:	Mixedwood:	Hardwood:	
Survey result: years	Survey result: years Survey re	sult: 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	vey result: +/- years	
Your est. +/ years	Your est. +/ years You	ir est. +/ years	
6ad Change in rotation based	on maximum MAI?		
Softwood:	Mivadwood.	Hardwood	
Survey result: $\pm/$ years	Survey result: $\pm/$ years Sur	$\mathbf{Har}(\mathbf{w})$	
Vour est $\pm/_{-}$ vears	Vour est $\pm/-$ vers Voi	$\mu = e^{-\frac{1}{2}}$	
Years	Tour est. Tre years Tou	ii est. 17 years	
6b. For regenerated immature regarding:	stands what do you expect from <b>juveni</b>	le spacing/pre-commercial thinning (assume no utiliza	tion)
6ba Change in growth?			
Softwood	Miyadwood	Hardwood	
Survey result: +/- m3/ha/yr	Survey result: +/- m3/ba/yr	Survey result: $\pm/-$ m3/ha/yr	
Your est $\pm/-$ m3/ha/y	$Vr$ Your est $\pm/-$ m3/ha/yr	Your est $\pm/-$ m3/ha/yr	
6bb. How long would this cha Softwood:	inge in growth last? Mixedwood:	Hardwood:	
Survey result: years	Survey result: years Survey re	sult: years	
Your est years	Your est years Your est.	years	
6bc. Change in rotation based	on harvestable tree size?		
Softwood			
Soltwood.	Mixedwood:	Hardwood:	
Survey result: +/- years	Mixedwood: Survey result: +/- years Survey	Hardwood: vey result: +/- years	
Survey result: +/- years Your est. +/ years	Mixedwood: Survey result: +/- years Survey result: +/- years You	Hardwood: vey result: +/- years ur est. +/ years	
Survey result: +/- years Your est. +/ years	Mixedwood: Survey result: +/- years Sur Your est. +/years You	Hardwood: vey result: +/- years ir est. +/ years	
Survey result: +/- years Your est. +/ years 6bd. Change in rotation based	Mixedwood: Survey result: +/- years Survey result: +/- years You Your est. +/- years You on maximum MAI?	Hardwood: vey result: +/- years ir est. +/ years	
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Survey result: +/- years Your est. +/- years 6bd. Change in rotation based Softwood: Survey result: +/- years Your est. +/- years	Mixedwood: Survey result: +/- years Sur Your est. +/- years You on maximum MAI? Mixedwood: Survey result: +/- years Survey Your est. +/- years You	Hardwood: vey result: +/- years ir est. +/ years Hardwood: vey result: +/- years ir est. +/ years	
Survey result: +/- years Your est. +/ years 6bd. Change in rotation based Softwood: Survey result: +/- years Your est. +/ years 6c. For regenerated immature	Mixedwood: Survey result: +/- years Sur Your est. +/- years You on maximum MAI? Mixedwood: Survey result: +/- years Survey Your est. +/- years You stands what do you expect from comm	Hardwood: vey result: +/- years ir est. +/years Hardwood: vey result: +/- years ir est. +/years ercial thinning (include thinning plus final harvest) rega	rding:
Survey result: +/- years Your est. +/- years 6bd. Change in rotation based Softwood: Survey result: +/- years Your est. +/- years 6c. For regenerated immature 6ca. Change in growth?	Mixedwood: Survey result: +/- years Sur Your est. +/years You on maximum MAI? Mixedwood: Survey result: +/- years Survey Your est. +/years You stands what do you expect from comm	Hardwood: vey result: +/- years ir est. +/- years Hardwood: vey result: +/- years ir est. +/- years ercial thinning (include thinning plus final harvest) rega	rding:
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Survey result: +/- years Your est. +/years 6bd. Change in rotation based Softwood: Survey result: +/- years Your est. +/years 6c. For regenerated immature 6ca. Change in growth? Softwood: Survey result: +/- m3/ha/yr Your est. +/m3/ha/yr 6cb. How long would this cha Softwood:	Mixedwood: Survey result: +/- years Sur Your est. +/years You on maximum MAI? Mixedwood: Survey result: +/- years Sur Your est. +/years You stands what do you expect from comm Mixedwood: Survey result: +/- m3/ha/yr yr Your est. +/ m3/ha/yr nge in growth last? Mixedwood: I	Hardwood: vey result: +/- years ir est. +/- years Hardwood: vey result: +/- years ir est. +/- years ercial thinning (include thinning plus final harvest) rega Hardwood: Survey result: +/- m3/ha/yr Your est. +/- m3/ha/yr Hardwood:	rding:
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Survey result: +/- years Your est. +/years 6bd. Change in rotation based Softwood: Survey result: +/- years Your est. +/years 6c. For regenerated immature 6ca. Change in growth? Softwood: Survey result: +/- m3/ha/yr Your est. +/ m3/ha/y 6cb. How long would this cha Softwood: Survey result: years Your est years 6cc. Change in rotation based Softwood:	Mixedwood: Survey result: +/- years Sur Your est. +/years You on maximum MAI? Mixedwood: Survey result: +/- years Sur Your est. +/years You stands what do you expect from comm Mixedwood: Survey result: +/- m3/ha/yr yr Your est. +/ m3/ha/yr nge in growth last? Mixedwood: I Survey result: years Survey re Your est years Your est. on harvestable tree size? Mixedwood:	Hardwood: vey result: +/- years ir est. +/years vey result: +/- years ir est. +/years ercial thinning (include thinning plus final harvest) rega Hardwood: Survey result: +/- m3/ha/yr Your est. +/ m3/ha/yr Hardwood: sult: years years Hardwood:	rding:
Survey result: +/- years Your est. +/- years 6bd. Change in rotation based Softwood: Survey result: +/- years Your est. +/- years 6c. For regenerated immature 6ca. Change in growth? Softwood: Survey result: +/- m3/ha/yr Your est. +/- m3/ha/yr 6cb. How long would this cha Softwood: Survey result: years Your est years 6cc. Change in rotation based Softwood: Survey result: +/ years	Mixedwood: Survey result: +/- years Sur Your est. +/years You on maximum MAI? Mixedwood: Survey result: +/- years Sur- Your est. +/years You stands what do you expect from comm Mixedwood: Survey result: +/- m3/ha/yr yr Your est. +/m3/ha/yr nge in growth last? Mixedwood: Survey result: years Survey re Your estyears Your est. on harvestable tree size? Mixedwood: Survey result: +/- wears Survey result: +/- wears	Hardwood: vey result: +/- years ir est. +/years vey result: +/- years ir est. +/years ercial thinning (include thinning plus final harvest) rega Hardwood: Survey result: +/- m3/ha/yr Your est. +/ m3/ha/yr Hardwood: sult: years years Hardwood: wey result: +/- years	rding:
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ocd. 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 ba	ased on harvestable tree size wou	ld 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 ba	ased on Maximum MAI would yo	ou expect?		
Coffeena de	M? d d.	· · · · · · · · · · · · · · · · · · ·		

Softwood:	Mixedwood:	Hardwood:		
Survey result: +/- years	Survey result: +/- years	Survey result: +/- years		
Your est. +/ years	Your est. +/ years	Your est. +/ years		

# **NWT and Prairies - Boreal**

#### ADMINISTRATIVE / BIOLOGICAL REGION

#### 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.

	Softv	wood			Mixe	dwood			Hardv	vood	
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 m	nanagement?		
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 1	evel is left on areas managed by unev	ven-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 cyc	cle 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 wou	ld you fertilize? Answer should r	ange between X and Y years of age.	
Softwood:	Mixedwood:	Hardwood	l <b>:</b>
Survey result: 25 & 76 yrs old	Survey result: 35 & 78	Syrs 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 G	lood, Medium and Poor what pro	portion 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 increase	d growth indicated above last (ye	ears)?	
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 I	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?
 Mixedwood:

 Softwood:
 Mixedwood:

 Survey result: +0.1 m3/ha/yr
 Survey result: +0.2 m3/ha/yr

 Your est. +/-\_\_\_\_ m3/ha/yr
 Your est. +/-\_\_\_\_ m3/ha/yr

Hardwood: Survey result: +0.2 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 l	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 a	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	
3ca. Change in growth? Softwood: Survey result: +1.0 m3/ha/yr Your est. +/ m3/ha/yr	<b>Mixedwood:</b> Survey result: +1.1 m3/ha/yr Your est. +/ m3/ha/yr	Hardwood: Survey result: +1.1 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 h	narvestable 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 a	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 propo	ortion of the area will b	e managed by uneven-ag	ed management?		
Softwood:	Survey result: 2 %	Mixedwood:	Survey result: 6 %	Hardwood:	Survey result: 13 %
	Your est %		Your est %		Your est %
4c. What growt	th per ha/year do you e	xpect on areas that will b	e managed by uneven-	aged management?	
Softwood:	Survey result: 1.9 m3	/ha/yr Mixedwood:	Survey result: 2.0 m?	3/ha/yr Hardwoo	d Survey result 2.0 m3/ha/yr
	Your est m3/h	a/yr	Your est m3/	ha/yr :	Your est m3/ha/yr
4d. What after-	cut growing stock leve	l do you expect to be left	on areas that will be m	nanaged by uneven-	aged management?
Softwood:		Mixedwood:	Hardw	ood:	
Survey result: 1	12 m3/ha	Survey result: 103 m3/ha	a Survey	result NA m3/ha	
Your est	m3/ha	Your est m3/ha	Your es	t m3/ha	
4e. What would	l be the average cutting	g cycle used on areas that	will be managed by un	neven-aged manage	ment?
Softwood:		Mixedwood:	Hardwo	ood:	
Survey result: 3	32 years	Survey result: 29 years	Survey 1	esult 20 years	
Your est	years	Your est years	Your est	t 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	l, 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 g	rowth 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 g	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 harv	restable 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 max	imum 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 regarding:	what do you expect from <b>juvenile spa</b>	<b>ncing/pre-commercial thinning</b> (assume no utilization)
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. $\pm/-$ m3/ha/yr	Your est. $\pm/-$ m3/ha/yr	Your est. $+/-$ m3/ha/yr
6bb. How long would this change in g	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 harv	vestable 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 max	timum 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 <b>commercial</b>	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. $\pm -m_3/ha/yr$
6cb. How long would this change in g	growth last?	
Softwood:	Mixedwood:	Hardwood:
Survey result: 12 years	Survey result: 11 years	Survey result: 12 years
Y our est years	Y our est years	Y our est years
6cc. Change in rotation based on harv	restable tree size?	
Softwood:	Mixedwood:	Hardwood:
Survey result: -7 years	Survey result: -4 years	Survey result: -2 years
Your est. +/ years	Your est. +/ years	Y our 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	d on harvestable tree size would you ex	pect?
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	l 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

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#### 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.

	Soft	wood			Mixed	wood			Hardw	rood	
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	r on areas managed by uneven-aged m	nanagement?
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 unev	en-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 cy	cle 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 wou	ıld you fertilize? Answer should r	ange 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 C	Good, Medium and Poor what pro	portion 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 (ma	3/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 increase	ed growth indicated above last (ye	ears)?
Softwood:	Mixedwood:	Hardwood:
Survey result: 10 years	Survey result: 10 years	Survey result: 11 years
Your est years	Your est years	Your est years
2 Comments from Orestians		this tonis had to be called into second action and the

**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	n 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 ha	rvestable 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 m	aximum 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:** Survey result: 0.9 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

**Mixedwood:** Survey result: 1.0 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr Hardwood: Survey result: 1.1 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
	1	

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

3ca. Change in growth?	Miyodwood	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 i	n 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 h	arvestable 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 n	naximum 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	Que#2	Final	Age	Que#1	Que#2	Final	Age	Que#1	Que#2	Final
	MAI	MAI	MAI		MAI	MAI	MAI		MAI	MAI	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 prop	ortion of the area will b	e managed by uneven-ag	ed management?	<b>11 1 1</b>	S
Softwood:	Your est %	wiixeawood:	Your est %	Hardwood:	Your est%
4c. What grow	/th per ha/year do you e	xpect on areas that will b	e managed by uneven-ag	ged management?	
Softwood:	Survey result: 1.9 m3/ Your est m3/h	/ha/yr <b>Mixedwood:</b> a/yr	Survey result: 2.1 m3/h Your est m3/ha	ia/yr <b>Hardwo</b> /yr	od: Survey result 2.2 m3/ha/yr Your est m3/ha/yr
4d. What after	-cut growing stock leve	l do you expect to be left	on areas that will be ma	naged by uneven-	aged management?
Softwood:		Mixedwood:	Hardwoo	od:	
Survey result:	47 m3/ha	Survey result: 47 m3/ha	Survey re	sult 46 m3/ha	
Your est	m3/ha	Your est m3/ha	Your est.	m3/ha	
4e. What woul	ld be the average cutting	g cycle used on areas that	will be managed by une	ven-aged manage	ment?
Softwood:		Mixedwood:	Hardwoo	d:	
Survey result:	24 years	Survey result: 21 years	Survey rea	sult 21 years	
Your est	years	Your est years	Your est.	years	
<b>5.</b> From Quest	ionnaire #2 the results r	egarding <b>fertilization</b> of	regenerated stands have	been aggregated a	and are given below. Please
review these fi	igures and provide any 1	revised figures that you d	eem more representative	of the region. Ba	se your figures on one-time
application (co	omments from the previ	ous round suggested that	number of applications l	be clarified). Plea	se enter your estimates even
if in one or mo	ore cases they are identic	cal to those of the survey	results.		
5a. At what sta	and age range would yo	u fertilize? Answer shoul	d range between X and Y	Y years of age.	
	Softwood:	Mixedwoo	od:	Hardwoo	d:
Survey result	t: 13 & 44 yrs old	Survey result: 14 &	45 yrs old S	urvey result: 12 &	38 yrs old
Your est	& yrs old	Your est & _	yrs old Y	our est & _	yrs old
5b. At what rat	te of fertilizer (kg/ha) w	ould you apply?			
5	Softwood:	Mixedwood:		Hardwood:	
Survey result	t: 150 kg/ha	Survey result: 150 kg/	ha Survey 1	esult: 150 kg/ha	
Your est.	kg/ha	Your est kg/h	a 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	t: 28 %	Survey result: 24 %	Survey r	esult: 16 %	
Your est.	%	Your est %	Your est	%	
5d. What incre	ease in growth (m3/ha/y	r) would you expect?			
·	Softwood:	Mixedwood:		Hardwood:	
Survey result	t: 0.5 m3/ha/yr	Survey result: 0.6 m3/	ha/yr Survey r	esult: 0.5 m3/ha/y	r
Your est.	m3/ha/yr	Your est m3/h	na/yr Your est	m3/ha/y	r
5e. How long	would the increased gro	wth indicated above last	(years)?		
S	Softwood:	Mixedwood:		Hardwood:	
Survey result	t: 10 years	Survey result: 10 years	Survey r	esult: 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 g	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 harv	restable 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 max	imum 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 regarding:	what do you expect from <b>juvenile spa</b>	acing/pre-commercial thinning (assume no utilization)
6ba. Change in growth?	Merce large a la	Handana d
Softwood:	Mixedwood:	Hardwood:
Survey result. 0.7 $\text{m}3/\text{h}a/\text{yr}$	Survey result. 0.8 $\text{III}$ /III/yr	Survey result. 0.8 $\frac{113}{113}$
		10ur est. +/ m5/ma/yr
6bb. How long would this change in g	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 harv	vestable 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 max	timum 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 <b>commercial</b>	<b>thinning</b> (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
$1 \text{ our est. } +/-\ \text{m}/\text{m}/\text{yr}$	Your est. +/ m5/na/yr	f our est. +/ m5/na/yr
6cb. How long would this change in g	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 harv	vestable 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 base	d on harvestable tree size would you ex	pect?
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	d 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

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## **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.

	Soft	wood			Mixed	wood			Hard	wood	
	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 o	n areas managed by uneven-aged m	anagement?				
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 lev	vel is left on areas managed by uneve	en-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	ld you fertilize? Answer should ra	ange between X and Y y	years of age.		
Softwood:	Mixedwood:		Hardwood:		
Survey result: 13 & 38 yrs old	Survey result: 13 & 39	yrs old Surv	Survey result: 13 & 39 yrs old		
Your est & yrs old	Your est &	yrs old You	ır est & yrs o	old	
2b. At what rate of fertilizer (kg/l	ha) would you apply?				
Softwood:	Mixedwood:	Hai	rdwood:		
Survey result: 200 kg/ha	Survey result: 200 kg/ha	Survey result	t: 225 kg/ha		
Your est kg/ha	Your est kg/ha	Your est.	kg/ha		
2c. If sites are distinguished as G	ood, Medium and Poor what prop	portion of sites would ye	ou 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 increase	d growth indicated above last (ye	ars)?			
Softwood:	Mixedwood:	Hardwood:			
Survey result: 6 years	Survey result: 6 years	Survey result: 5 years	i i i i i i i i i i i i i i i i i i i		
Your est years	Your est years	Your est yea	rs		

**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 h	narvestable 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 i	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 h	arvestable 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 r	naximum 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 w	what do you expect from <b>commercia</b>	l thinning (include thinning plus final harvest) regardin	g:
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?			

sea: change in rotation sused on				
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 prope	ortion of the area will b	e managed by uneven-a	ged management?		
Softwood:	Survey result: 25 %	Mixedwood:	Survey result: 43 %	Hardwood:	Survey result 45 %
	Your est %		Your est %		Your est%
4c. What grow	th per ha/year do you e	expect on areas that will	be managed by uneven-age	ed 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	a/yr	Your est m3/ha/yr	r <b>:</b>	Your est m3/ha/yr
4d. What after-	-cut growing stock leve	el do you expect to be lef	t on areas that will be man	aged by uneven-	aged management?
Softwood:		Mixedwood:	Hardwoo	d:	
Survey result:	93 m3/ha	Survey result: 93 m3/ha	Survey res	sult 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	1:	
Survey result: 2	23 years	Survey result: 22 years	Survey res	ult 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) v	vould 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/y	r) 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 gro	owth 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	n 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
(as Change in retation based on be		
bac. Change in fotation based on ha	Nivedwood	Handwood
Softwood:	Mixedwood:	Haruwood:
Survey result. $\frac{1}{2}$ years	Survey result. / years Vour est $\pm/$ years	Survey result. / years Vour est $\pm/$ years
Tour est. Tr years	Your est. I/ years	Your est. The years
6ad. Change in rotation based on ma	aximum 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 stand regarding:	s what do you expect from <b>juvenile sp</b> a	acing/pre-commercial thinning (assume no utilization)
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	n 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 ha	rvestable 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
Change in rotation based on m	avimum MAI2	;
Softwood:	Mixedwood:	Hardwood
Survey result: 7 years	Survey result: 7 years	Survey result: 6 years
Your est $\pm/-$ years	Your est +/- years	Your est $\pm/-$ years
		100105t. 17 yours
6c. For regenerated immature stands	s what do you expect from <b>commercia</b>	<b>l thinning</b> (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. $\pm/-$ m3/ha/yr	Your est. $+/-$ m3/ha/yr
6cb. How long would this change in	n 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 ha	rvestable 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 expe	ect 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

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#### 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.

	Softv	wood			Mixed	wood			Hardw	bod	
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 n	nanagement?
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 1	evel is left on areas managed by unev	ven-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 cyc	cle 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 wou	ld you fertilize? Answer should r	ange between X and	Y years of ag	ge.	
Softwood:	Mixedwood:		Har	dwood	:
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 re	esult: 275 kg/	ha	
Your est kg/ha	Your est kg/ha	Your est.	kg/h	a	
2c. If sites are distinguished as G	lood, Medium and Poor what pro	portion of sites woul	d you fertiliz	e?	
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:	Hardwo	od:		
Survey result: 0.9 m3/ha/yr	Survey result: 0.9 m3/ha/yr	Survey result: 1.2	2 m3/ha/yr		
Your est m3/ha/yr	Your est m3/ha/yr	Your est	m3/ha/yr		
2e. How long would the increase	ed growth indicated above last (ye	ears)?			
Softwood:	Mixedwood:	Hardwo	od:		
Survey result: 10 years	Survey result: 10 years	Survey result: 10	years		
Your est years	Your est. years	Your est.	vears		

**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	n 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 ha	rvestable 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 m	aximum 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:** Survey result: 0.7 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

Mixedwood: Survey result: 0.8 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr Hardwood: Survey result: 0.8 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 ha	arvestable 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 m	aximum 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 where	hat do you expect from <b>commercia</b>	l 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	n 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 ha	rvestable 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 m	aximum 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 prop	portion of the area	a will be mana	ged by uneven-ag	ed manageme	ent?			
Softwood:	Survey result: 8	8 %	Mixedwood:	Survey resul	lt: 12 %	Hardwood:	Survey result	5 %
	Your est.	%		Your est.	%		Your est.	%
4c. What grov	wth per ha/year do	o you expect o	n areas that will b	e managed by	uneven-aged	management?		
Softwood:	Survey result: 1	1.1 m3/ha/yr	Mixedwood:	Survey resu	lt: 1.4 m3/ha/y	r Hardwoo	d: Survey 1	esult 1.7 m3/ha/yr
	Your est.	_m3/ha/yr		Your est.	m3/ha/yr		Your est	t m3/ha/yr
4d. What after	r-cut growing sto	ck level do yo	u expect to be left	on areas that	will be manag	ged by uneven-	aged managen	nent?
Softwood:		Mixed	wood:		Hardwood:			
Survey result:	40 m3/ha	Survey	result: 60 m3/ha		Survey resul	t 65 m3/ha		
Your est	m3/ha	Your e	st m3/ha		Your est.	m3/ha		
4e. What wou	ld be the average	cutting cycle	used on areas that	will be mana	iged by unever	n-aged manage	ement?	
Softwood:	-	Mixed	wood:		Hardwood:			
Survey result:	15 years	Survey	result: 13 years		Survey result	t 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 Goo	d, 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	a/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 g	growth indicated above last (years)?					
Softwood:	Mixedwood:	Hardwood:				
Survey result: 10 years	Survey result: 10 years	Survey 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. 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.

Your est. \_\_\_\_\_ years

6a. For regenerated immature stands what do you expect from **cleaning/brushing** (assume no utilization) regarding:

Your est. \_\_\_\_\_ years

6aa. Change in growth?

Your est. \_\_\_\_\_ years

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?	Handana J
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 ha	rvestable 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 ma	aximum 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	s what do you expect from <b>juvenile sp</b> a	acing/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
6hh How long would this shange in	arouth last?	
Softwood	I growth last?	Handwoode
Softwood:	Mixeuwood:	
Survey result: 29 years	Survey result: 25 years	Survey result. 20 years
four est years	four est years	f our est years
6bc. Change in rotation based on ha	rvestable 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
Child Changes in notation based on m	MAI9	
Softwood	Minadmood	Handwood
Survey regult: 00 years	Survey regult: 00 years	
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
four est. +/ years	four est. +/ years	four est. +/ years
6c. For regenerated immature stands	s what do you expect from <b>commercia</b>	l 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
6ch 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 vears	Your est vears	Your est vears
years	Years	1041 000 yours
6cc. Change in rotation based on ha	rvestable 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:** Survey result: 00 years Your est. +/-\_\_\_\_ years **Mixedwood:** Survey result: 00 years Your est. +/-\_\_\_\_ years Hardwood: Survey result: 00 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 e	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	l on harvestable tree size would you ex	pect?
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	l 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

### 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	2 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 man	agement?			
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 leve	l 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-ag	ed 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 wou	ıld you fertilize? Answer should r	ange between X and Y years of age.					
Softwood:	Mixedwood:	Hardwood:					
Survey result: 43 & 56 yrs old	Survey result: 39 & 56	5 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 C	Good, Medium and Poor what pro	portion 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 (ma	3/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 increase	ed growth indicated above last (ye	ears)?					
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 h	arvestable 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 r	naximum 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: Survey result: 0.8 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr

Mixedwood: Survey result: 0.8 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr Hardwood: Survey result: 0.8 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 ha	rvestable 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 m	aximum 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 wh	nat do you expect from <b>commercial</b>	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	n 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 ha	rvestable 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 ma	aximum 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	Que#2	Final MAI	Age	Que#1	Que#2	Final MAI	Age	Que#1 MAI	Que#2	Final MAI
	IVIAI	WIAI	MAI		IVIAI	MAI	MAI		IVIAI	MAI	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/	
	Your est m3	3/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: 10	03 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) w	vould 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/y	r) 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 gro	owth 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 har	vestable 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 ma	ximum 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 regarding:	what do you expect from <b>juvenile sp</b>	pacing/pre-commercial thinning (assume no utilization)

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				
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 h	arvestable 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:
Survey result: 1.0 m3/ha/yr
Your est. +/ m3/ha/yr

**Mixedwood:** Survey result: 1.0 m3/ha/yr Your est. +/-\_\_\_\_ m3/ha/yr Hardwood: Survey result: 1.0 m3/ha/yr Your est. +/-\_\_\_\_\_ m3/ha/yr

6cb. How long would this change in growth last?

Softwood:	Mixedwood:
Survey result: 13 years	Survey result: 12 years
Your est years	Your est years

Hardwood: Survey result: 11 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 base	ed 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	
below. Please review these estimates even if, in one or r 7a. What change in MAI do	figures and provide any revised figures that nore cases, they are identical to those of the you expect from greater improvement?	you deem more representative of the region. Please survey results.	e enter your
Softwood:	Mixedwood:	Hardwood:	
Survey result: 0.6 m3/ha/y	r 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	
7h What change in rotation	based on herwestehle tree size would you as	( <b>)</b>	
70. What change in fotation	based on harvestable tree size would you ex	xpect?	
Softwood:	Mixedwood:	kpect? Hardwood:	
Survey result: -8 years	Mixedwood: Survey result: -6 years	Hardwood: Survey result: -6 years	
Softwood: Survey result: -8 years Your est. +/ years	Mixedwood: Survey result: -6 years Your est. +/ years	Hardwood: Survey result: -6 years Your est. +/ years	
Survey result: -8 years Your est. +/ years 7c. What change in rotation	Mixedwood: Survey result: -6 years Your est. +/ years based on Maximum MAI would you expect	Hardwood: Survey result: -6 years Your est. +/ years	
Survey result: -8 years Your est. +/ years 7c. What change in rotation Softwood:	Mixedwood: Survey result: -6 years Your est. +/ years based on Maximum MAI would you expect Mixedwood:	Hardwood: Survey result: -6 years Your est. +/ years ?? Hardwood:	
Softwood:         Survey result: -8 years         Your est. +/ years         7c. What change in rotation         Softwood:         Survey result: -8 years	Mixedwood: Survey result: -6 years Your est. +/years based on Maximum MAI would you expect Mixedwood: Survey result: -6 years	Hardwood: Survey result: -6 years Your est. +/years :? Hardwood: Survey result: -6 years	

# 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.

	Soft	wood			Mixed	lwood			Hard	wood	
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?

ie. What is the growt	i per na yeur or	i areas mana	ged by uneven	ugea management	•		
Softwood		Mixee	dwood:	Hard	Hardwood:		
Survey result: NA n	13/ha/yr Su	rvey result: ]	NA m3/ha/yr	Survey result:	NA m3/ha/yr		
Your est m	3/ha/yr Yo	our est	m3/ha/yr	Your est	m3/ha/yr		
1d. What after-cut gro	wing stock leve	el is left on a	reas managed	by uneven-aged ma	anagement?		
Softwood		Mixee	dwood:	Hard	Hardwood:		
Survey result: NA m	13/ha Su	rvey result: ]	NA m3/ha	Survey result:	NA m3/ha		
Your est m	3/ha Yo	our est	m3/ha	Your est.	m3/ha		
1e. What is the average	e cutting cycle	used on area	s managed by	uneven-aged mana	gement?		
Softwood:		Mixedwo	od:	Hardwood:			
Survey result: 30 ye	ars Survey	result: NA	years Surv	vey result: NA year	s		
Your est ye	ars Your e	st y	ears You	r 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 we	ould you fertilize? Answer sh	ould range between X	and Y years of age.		
Softwood:	Mixed	wood:	Hardwood:		
Survey result: 5 & 30 yrs old	Survey result: 0	& 30 yrs old	Survey result: 0 & 30 yrs old		
Your est & yrs ol	d Your est	& yrs old	Your est & yrs old		
2b. At what rate of fertilizer (k	g/ha) would you apply?				
Softwood:	Mixedwood:	Hardwood	:		
Survey result:200 kg/ha	Survey result: NA kg/ha	Survey result: NA kg	g/ha		
Your est kg/ha	Your est kg/ha	Your est kg	ha		
2c. If sites are distinguished as Good:         Survey result: 55 %       Sur Your est %	Good, Medium and Poor wh Medium: vey result: 0 % Survey ur est % Your e	nat proportion of sites v <b>Poor:</b> y result: 0 % st %	would you fertilize?		
2d. What increase in growth (n	n3/ha/yr) would you expect?				
Softwood:	Mixedwood:	Har	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 increa	sed growth indicated above	ast (years)?			
Softwood:	Mixedwood:	Hardwood:			
Survey result: 13 years	Survey result: 15 years	Survey result: 10 year	S		
Your est years	Your est years	Your est year	s		

**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: Survey result: 0.5 m3/ha/yr Your est. +/ m3/ha/y	Mixedwood Survey result: 0.5 m3. /r Your est. +/ r	: /ha/yr Surve n3/ha/yr Your	Hardwood: y result: 0.5 m3/ha/yr est. +/ m3/ha/yr
3ab. How long would this cha	nge in growth last?		
Softwood:	Mixedwood:	Hardwood	:
Survey result: 15 years	Survey result: 15 years	Survey result: 10 ye	ars
Your est years	Your est years	Your est yes	ars
3ac. Change in rotation based	on harvestable tree size?		
Softwood:	Mixedwood:	Hard	wood:
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:	Hard	wood:
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 ch	ange 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	d on harvestable tree size?	
Softwood:	Mixedwood:	Hardwood:
Survey result: -10 years	Survey result: -10 years	Survey result: -10 years
Your est. +/ years	Your est. +/ year	s Your est. +/ years
3bd. Change in rotation based	d on maximum MAI?	
Softwood:	Mixedwood:	Hardwood:
Survey result: 00 years	Survey result: 00 years	Survey result: 00 years
Your est. +/ years	Your est. +/ year	s Your est. +/ years
3c. For existing immature sta	nds 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/ba/y	r Survey result: -1 0 m	3/ha/vr Survey result: -1 0 m3/ha/vr
Your est. +/ m3/ha/	yr Your est. +/	m3/ha/yr Your est. +/ m3/ha/yr
3ch How long would this ch	ange in growth last?	
Softwood	Miyodwood	Hardwood
Survey result: 20 years	Survey result: 20 years	Survey result: 15 years
Your est vears	Your est vears	Vour est vears
Years	Tour est years	Tour est years
3cc. Change in rotation based	l on harvestable tree size?	
Softwood:	Mixedwood:	Hardwood:
Survey result: -5 years	Survey result: -5 years	Survey result: -5 years
Your est. +/ years	Your est. +/ year	s Your est. +/ years
3cd. Change in rotation based	l on maximum MAI?	
Softwood:	Mixedwood:	Hardwood:
Survey result: 10 years	Survey result: 10 years	Survey result: 10 years
Your est. +/ years	Your est. +/ year	s 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 prop Softwood:	oortion of the area Survey result: 5 Your est	will be managed by % <b>Mixedwo</b> %	uneven-aged ma ood: Survey r Your est	nagement? esult: 0 % %	Hardwood:	Survey result 0 % Your est %	
4c. What grov Softwood:	vth per ha/year do Survey result: N. Your est	you expect on areas A m3/ha/yr Mixeo m3/ha/yr	that will be man wood: Surve Your	aged by uneven-a y result: NA m3/h est m3/ha/	ged managemen a/yr <b>Hardwo</b> yr	nt? ood: Survey result NA Your est n	A m3/ha/yr n3/ha/yr
4d. What after Softwood:	r-cut growing stoc Survey result: N Your est.	k level do you expec JA m3/ha <b>Mixed</b> m3/ha	t to be left on are wood: Surve Your	eas that will be ma y result: NA m3/h est m3/ha	anaged by uneve a <b>Hardwo</b> a	en-aged management? od: Survey result NA Your est.	≤ m3/ha _ m3/ha
4e. What wou Softwood:	ld be the average Survey result: 3 Your est.	cutting cycle used on 0 years Mixed _ years	areas that will b wood: Survey Your e	e managed by une result: NA years est years	even-aged mana Hardwoo	agement? d: Survey result NA Your esty	years years
<b>5.</b> From Quest review these f application (co if in one or mo	tionnaire #2 the re figures and provide omments from the ore cases they are	sults regarding <b>fertil</b> e any revised figures previous round sugg identical to those of	ization of regen- that you deem n sested that numb he survey result	erated stands have nore representative er of applications s.	e been aggregate e of the region. be clarified). P	ed and are given below. Base your figures on or lease enter your estimat	Please ne-time es even
5a. At what st Survey resul Your est	and age range wor <b>Softwood:</b> t: 5 & 30 yrs old <u>&amp;</u> yrs old	uld you fertilize? Ans Survey re Your est.	wer should rang Mixedwood: sult: 0 & 30 yrs & yr	e between X and old S rs old Y	Y years of age. Hardw Survey result: 0 Your est &	r <b>ood:</b> & 30 yrs old & yrs old	
5b. At what ra Soft Survey resul Your est	tte of fertilizer (kg twood: t: 200 kg/ha kg/ha	/ha) would you apply <b>Mixedwood</b> Survey result: NA kg Your est kg,	/? l: g/ha Survey 'ha Your es	<b>Hardwood:</b> result: NA kg/ha :t kg/ha			
5c. If sites are Goo Survey resul Your est	distinguished as ( d: t: 55 % Surv % You	Good, Medium and P <b>Medium:</b> /ey result: 0 % r est %	oor what propor <b>Poor:</b> Survey result: 0 Your est	tion of sites would % _ %	d you fertilize?		
5d. What incre So Survey resul Your est	ease in growth (m ftwood: t: 0.7 m3/ha/yr m3/ha/yr	3/ha/yr) would you e Mixedw Survey result: 0.3 Your est	xpect? <b>od:</b> m3/ha/yr m3/ha/yr	Hardwoo Survey result: 0.5 Your est	o <b>d:</b> m3/ha/yr m3/ha/yr		
5e. How long Softw Survey resul Your est	would the increas wood: t: 13 years S years Y	ed growth indicated a <b>Mixedwood:</b> urvey result: 15 year 'our est year	above last (years s Survey re s Your est.	)? Hardwood: esult: 10 years			
6 Comments	from Questionnai	re #1 regarding thinn	ing indicated thi	s topic had to be s	nlit into several	categories and that thin	ning

**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: Survey result: 0.5 m3/ha/yr Your est. +/ m3/ha/y	Mixedwood: Survey result: 0.5 m3/ha yr Your est. +/ m3/	Hardwood:/yrSurvey result: 0.5 m3/ha/yrYour est. +/ n	ha/yr 13/ha/yr
6ab. How long would this cha Softwood: Survey result: 15 years Your est years	nge in growth last? <b>Mixedwood:</b> Survey result: 15 years Su Your est years Yo	Hardwood: rvey result: 10 years our est years	
6ac. Change in rotation based Softwood: Survey result: -5 years Your est. +/ years	on harvestable tree size? <b>Mixedwood:</b> Survey result: -5 years Your est. +/ years	Hardwood: Survey result: -5 years Your est. +/ years	
<ul> <li>6ad. Change in rotation based Softwood:</li> <li>Survey result: -5 years Your est. +/ years</li> <li>6b. For regenerated immature</li> </ul>	on maximum MAI? <b>Mixedwood:</b> Survey result: -5 years Your est. +/ years stands what do you expect from	Hardwood: Survey result: -5 years Your est. +/ years juvenile spacing/pre-commercia	al thinning (assume no utilization)
regarding: 6ba. Change in growth? <b>Softwood:</b> Survey result: -0.5 m3/ha/yr Your est. +/ m3/ha/y	<b>Mixedwood:</b> Survey result: -0.5 m3/ha yr Your est. +/ m3/	Hardwood: a/yr Survey result: -0.5 m3 ha/yr Your est. +/ n	/ha/yr n3/ha/yr
6bb. How long would this cha <b>Softwood:</b> Survey result: 15 years Your est years	nge in growth last? <b>Mixedwood:</b> Survey result: 15 years Your est years Your	Hardwood: rvey result: 10 years pur est years	
6bc. Change in rotation based Softwood: Survey result: -10 years Your est. +/ years	on harvestable tree size? <b>Mixedwood:</b> Survey result: -10 years Your est. +/ years	Hardwood: Survey result: -5 years Your est. +/ years	
6bd. Change in rotation based Softwood: Survey result: 00 years Your est. +/ years	on maximum MAI? <b>Mixedwood:</b> Survey result: 00 years Your est. +/ years	Hardwood: Survey result: 00 years Your est. +/ years	
6c. For regenerated immature	stands what do you expect from	commercial thinning (include th	inning plus final harvest) regarding:
6ca. Change in growth? Softwood: Survey result: -1.0 m3/ha/yr Your est. +/ m3/ha/y	Mixedwood: Survey result: -1.0 m3/h yr Your est. +/ m3/	Hardwood: a/yr Survey result: -1.0 m3 ha/yr Your est. +/ n	/ha/yr 13/ha/yr
6cb. How long would this cha Softwood: Survey result: 20 years Your est years	nge in growth last? <b>Mixedwood:</b> Survey result: 20 years Your est years	Hardwood: rvey result: 15 years pur est years	
6cc. Change in rotation based Softwood: Survey result: -5 years Your est. +/ years	on harvestable tree size? <b>Mixedwood:</b> Survey result: +-5 years Your est. +/ years	Hardwood: Survey result: -5 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:								

Soltwood.	MIACUWOOU.	Haluwoou.			
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

## 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.

	Soft	twood		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

1b. What proportion of the area is manage	d by uneven-ag	ged management.				
<b>Softwood:</b> Ques #2 result: 4%	Mixedwood:	Ques #2 result:	14%	Hardwood:	Ques #2 result:	22%
Ques #3 result: 4%		Ques #3 result:	9%		Ques #3 result:	23%
1c. Growth per ha/year on areas managed	by uneven-age	d management.				
<b>Softwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result:	1.8 m <sup>3</sup> /ha/yr	Hardwood:	Oues #2 result:	1.9 m <sup>3</sup> /ha/yr
Ques #3 result: 1.8 m <sup>3</sup> /ha/yr		Ques #3 result:	1.8 m <sup>3</sup> /ha/yr		Ques #3 result:	1.8 m <sup>3</sup> /ha/yr
1d. After-cut growing stock level left on a	reas managed b	y uneven-aged n	nanagement.			
<b>Softwood:</b> Ques #2 result: 77 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result:	73 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	73 m <sup>3</sup> /ha
Ques #3 result: 79 m <sup>3</sup> /ha		Ques #3 result:	77 m <sup>3</sup> /ha		Ques #3 result:	77 m <sup>3</sup> /ha
1e. Average cutting cycle used on areas m	anaged by une	ven-aged manage	ement?			
<b>Softwood:</b> Ques #2 result: 20 years	Mixedwood:	Ques #2 result:	22 years	Hardwood:	Ques #2 result:	20 years
Ques #3 result: 18 years		Ques #3 result:	18 years		Ques #3 result:	18 years
2. From Questionnaires #2 and #3 the res Figures are based on one-time applicat	sults regarding tions	fertilization of e	existing stands hav	ve been aggre	gated and are give	ven below.
2a. Stand age range when fertilization cou	ld take place.					
Softwood: Ques #2 result: 38 & 50 yrs old	Mixedwood:	Ques #2 result:	43 & 60 yrs old	Hardwood:	Ques #2 result:	43 & 65 yrs old
Ques #3 result: 32 & 45 yrs old		Ques #3 result:	34 & 50 yrs old		Ques #3 result:	34 & 53 yrs old
2b. Rate of fertilizer (kg/ha) application.						
Softwood: Ques #2 result: 200 kg/ha	Mixedwood:	Ques #2 result:	200 kg/ha	Hardwood:	Ques #2 result:	200 kg/ha
Ques #3 result: 200 kg/ha		Ques #3 result:	200 kg/ha		Ques #3 result:	200 kg/ha

2c. Goo	For sites distinguished as Goo od: Ques #2 result: 35% Ques #3 result: 28%	d, Medium and Poor, t Medium: (	the proportion of sites that would Ques #2 result: 55% Ques #3 result: 60%	l be fertilized. Poor: Ques Ques	#2 result: 10% #3 result: 13%
2d.	Expected increase in growth (	m3/ha/yr).			
Soft	<b>twood:</b> Ques #2 result: $0.2 \text{ m}^3/1$	na/yr <b>Mixedwood</b>	: Ques #2 result: 0.2 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $0.2 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: $0.2 \text{ m}^3/\text{h}$	na/yr	Ques #3 result: 0.2 m <sup>3</sup> /ha/yr		Ques #3 result: $0.2 \text{ m}^3/\text{ha/yr}$
2e. Soft	Length of time the increased g twood: Ques #2 result: 5 years Ques #3 result: 5 years	growth would last (yea Mixedwood	rs). : Ques #2 result: 5 years Ques #3 result: 5 years	Hardwood:	Ques #2 result: 5 years Ques #3 result: 5 years
3.	Comments from Questionnair would occur only on immature apply only to immature stands	e #1 regarding thinning e stands. Several com s. The mean of respon-	g indicated this topic had to be sp ments on round 2 again emphasiz ses to round 2 and 3 are given be	olit into several o ze immature star low.	categories and that thinning ads only. The results below
3a.	For existing immature stands,	expectations from clea	aning/brushing (assuming no ut	ilization) regard	ing the following are:
3aa.	. Change in growth.				
Soft	twood: Ques #2 result: 0.4 m <sup>3</sup> /h	na/yr <b>Mixedwood</b>	: Ques #2 result: 0.4 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $0.4 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: $0.4 \text{ m}^3/$	ha/yr	Ques #3 result: 0.4 m <sup>3</sup> /ha/yr		Ques #3 result: $0.4 \text{ m}^3/\text{ha/yr}$
3ab. <b>Soft</b>	. Length of time this change in twood: Ques #2 result: 13 years Ques #3 result: 13 years	growth would last. Mixedwood s	: Ques #2 result: 13 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: 13 years Ques #3 result: 13 years
3ac. Soft	. Change in rotation based on h twood: Ques #2 result: -2 years Ques #3 result: -5 years	arvestable tree size. Mixedwood	: Ques #2 result: -2 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: -2 years Ques #3 result: -5 years
3ad. <b>Soft</b>	. Change in rotation based on n twood: Ques #2 result: -3 years Ques #3 result: -2 years	naximum MAI. <b>Mixedwood</b>	: 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 the following are:	expectations from <b>juv</b> e	enile spacing/pre-commercial t	hinning (assumi	ing no utilization) regarding
3ba.	. Change in growth.				
Soft	twood: Ques #2 result: 2.2 m <sup>3</sup> /l	ha/yr <b>Mixedwood</b>	: Ques #2 result: 2.1 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $2.1 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: $2.6 \text{ m}^3/$	ha/yr	Ques #3 result: 2.6 m <sup>3</sup> /ha/yr		Ques #3 result: $2.6 \text{ m}^3/\text{ha/yr}$
3bb. <b>Soft</b>	. Length of time this change in twood: Ques #2 result: 22 years Ques #3 result: 23 years	growth lasted. Mixedwood s	: Ques #2 result: 20 years Ques #3 result: 23 years	Hardwood:	Ques #2 result: 20 years Ques #3 result: 23 years
3bc. Soft	. Change in rotation based on h twood: Ques #2 result: -13 year Ques #3 result: 0 years	arvestable tree size. s <b>Mixedwood</b>	: Ques #2 result: -12 years Ques #3 result: 2 years	Hardwood:	Ques #2 result: -12 years Ques #3 result: 2 years
3bd. <b>Soft</b>	. Change in rotation based on m twood: Ques #2 result: 3 years Ques #3 result: 10 years	naximum MAI. <b>Mixedwood</b> s	: 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.					
<b>Softwood:</b> Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.6 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	0.8 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	asted.				
<b>Softwood:</b> Ques #2 result: 18 years	Mixedwood:	Ques #2 result: 18 years	Hardwood:	Ques #2 result:	18 years
Ques #3 result: 20 years		Ques #3 result: 20 years		Ques #3 result:	20 years
3cc. Change in rotation based on harvestabl	e tree size.				
<b>Softwood:</b> 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
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 3 years	Mixedwood:	Ques #2 result: 3 years	Hardwood:	Ques #2 result:	3 years
Ques #3 result: 10 years		Ques #3 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.

	Sof	twood			Mixe	dwood			Har	dwood	
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%Mixedwood: Ques #2 result: 7%Hand

1.	Ques #2 lesuit.	∠%0
	Oues #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.

<b>Softwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 1.8 m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/yr
Ques #3 result: 1.9 m <sup>3</sup> /ha/yr	Ques #3 result: 1.9 m <sup>3</sup> /ha/yr	Ques #3 result: 1.9 m <sup>3</sup> /ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by unev	en-aged mana	agement.	
Soft	wood: Ques #2 result: 77 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 73 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	73 m <sup>3</sup> /ha
	Ques #3 result: 78 m <sup>3</sup> /ha		Ques #3 result: 78 m <sup>3</sup> /ha		Ques #3 result:	78 m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas the wood: Ques #2 result: 20 years Ques #3 result: 18 years	at will be mana Mixedwood:	ged by uneven-aged management Ques #2 result: 22 years Ques #3 result: 18 years	Hardwood:	Ques #2 result: Ques #3 result:	20 years 18 years
5.	From Questionnaires #2 and #3 the res below. Figures are based on one-time	ults regarding tapplications.	fertilization of regenerated stands	have been ag	gregated and are	given
5a. <b>Soft</b>	Stand age range when fertilization wou wood: Ques #2 result: 33 & 45 yrs old Ques #3 result: 25 & 40 yrs old	ld take place. Mixedwood:	Ques #2 result: 38 & 50 yrs old Ques #3 result: 25 & 40 yrs old	Hardwood:	Ques #2 result: Ques #3 result:	38 & 55 yrs old 25 & 50 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	200 kg/ha 200 kg/ha
5c. Goo	For sites distinguished as Good, Mediu d: Ques #2 result: 35% Ques #3 result: 30%	im and Poor, th Medium: Qu Qu	at proportion of sites that would b tes #2 result: 55% tes #3 result: 70%	e fertilized. <b>Poor:</b> Ques Ques	#2 result: 10% #3 result: 0%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 0.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.2 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.2 \text{ m}^{3/\text{ha/yr}}$
	Ques #3 result: 0.1 m <sup>3</sup> /ha/yr		Ques #3 result: 0.1 m <sup>3</sup> /ha/yr		Ques #3 result:	0.1m <sup>3</sup> /ha/yr
5e. Soft	Length of time the increased growth in wood: Ques #2 result: 5 years Ques #3 result: 5 years	dicated above Mixedwood:	last (years). Ques #2 result: 5 years Ques #3 result: 5 years	Hardwood:	Ques #2 result: Ques #3 result:	5 years 5 years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comm ean of response	indicated this topic had to be split tents on round 2 again emphasize is to round 2 and 3 are given below	into several c immature star w.	categories and th ads only. The rea	at thinning sults below
6a.	For regenerated immature stands, expe	ctations from <b>c</b>	eleaning/brushing (assuming no u	tilization) reg	arding the follow	wing are:
6aa.	Change in growth.					
Soft	wood: Ques #2 result: 0.6 m <sup>3</sup> /ha/yr Ques #3 result: 0.4 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr Ques #3 result: 0.4 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	0.5 m <sup>3</sup> /ha/yr 0.4 m <sup>3</sup> /ha/yr
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 13 years Ques #3 result: 13 years	asted. Mixedwood:	Ques #2 result: 13 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: Ques #3 result:	13 years 13 years
6ac. <b>Soft</b>	Change in rotation based on harvestabl wood: Ques #2 result: -2 years Ques #3 result: 0 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: -2 years Ques #3 result: 0 years	Hardwood:	Ques #2 result: Ques #3 result:	-2 years 0 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: 4 years Ques #3 result: 0 years	MAI. <b>Mixedwood:</b>	Ques #2 result: 4 years Ques #3 result: 0 years	Hardwood:	Ques #2 result: Ques #3 result:	4 years 0 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: 2.2 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 2.2 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	2.3 m <sup>3</sup> /ha/yr
Ques #3 result: 2.1 m <sup>3</sup> /ha/yr		Ques #3 result: 2.4 m <sup>3</sup> /ha/yr		Ques #3 result:	2.6 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth 1 Softwood: Ques #2 result: 20 years Ques #3 result: 23 years	asted. Mixedwood:	Ques #2 result: 20 years Ques #3 result: 23 years	Hardwood:	Ques #2 result: Ques #3 result:	20 years 23 years
6bc. Change in rotation based on harvestable <b>Softwood:</b> Ques #2 result: 7 years Ques #3 result: -13 years	le tree size. Mixedwood:	Ques #2 result: 7 years Ques #3 result: -13 years	Hardwood:	Ques #2 result: Ques #3 result:	7 years -11 years
6bd. Change in rotation based on maximum Softwood: Ques #2 result: 13 years Ques #3 result: 10 years	MAI. <b>Mixedwood:</b>	Ques #2 result: 14 years Ques #3 result: 12 years	Hardwood:	Ques #2 result: Ques #3 result:	15 years 15 years
6c. For regenerated immature stands, expe following are:	ectations from <b>(</b>	commercial thinning (including	thinning plus f	inal harvest) reg	arding the
6ca. Change in growth. <b>Softwood:</b> Ques #2 result: 0.7 m <sup>3</sup> /ha/yr Ques #3 result: 0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.7 m <sup>3</sup> /ha/yr Ques #3 result: 0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	0.7 m <sup>3</sup> /ha/yr 0 m <sup>3</sup> /ha/yr
6cb. Length of time this change in growth 1 Softwood: Ques #2 result: 13 years Ques #3 result: 10 years	ast. <b>Mixedwood:</b>	Ques #2 result: 13 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	13 years 10 years
6cc. Change in rotation based on harvestable Softwood: Ques #2 result: -5 years Ques #3 result: -5 years	le tree size. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
6cd. Change in rotation based on maximum Softwood: Ques #2 result: 3 years Ques #3 result: 10 years	MAI. <b>Mixedwood:</b>	Ques #2 result: 4 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	3 years 10 years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regene	erated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.5 m <sup>3</sup> /ha/yr Ques #3 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.3 m <sup>3</sup> /ha/yr Ques #3 result: 0.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	0.3 m <sup>3</sup> /ha/yr 0.3 m <sup>3</sup> /ha/yr
7b. Change in rotation expected based on a <b>Softwood:</b> Ques #2 result: -2 years Ques #3 result: 0 years	harvestable tree Mixedwood:	e size. Ques #2 result: 0 years Ques #3 result: -2 years	Hardwood:	Ques #2 result: Ques #3 result:	0 years -2 years
<ul><li>7c. Change in rotation expected based on 3</li><li>Softwood: Ques #2 result: 3 years Ques #3 result: 0 years</li></ul>	Maximum MA Mixedwood:	I. Ques #2 result: 5 years Ques #3 result: NA years	Hardwood:	Ques #2 result: Ques #3 result:	5 years NA years

## **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.

	Sof	twood			Mixe	dwood			На	ırdwood	
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

1b. What proportion of the area is manage	d by uneven-aged management.	
Softwood: Ques #2 result: 2.0%	Mixedwood: Ques #2 result: 3.0%	Hardwood: Ques #2 result: 3.0%
Ques #3 result: 2.0%	Ques #3 result: 2.5%	Ques #3 result: 2.5%
1c. Growth per ha/year on areas managed	by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 1.7 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 1.8 m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/yr
Oues #3 result: $1.7 \text{ m}^3/\text{ha/vr}$	Oues #3 result: $1.8 \text{ m}^3/\text{ha/vr}$	Oues #3 result: $1.9 \text{ m}^3/\text{ha/vr}$
1d. After-cut growing stock level left on a	reas managed by uneven-aged management.	
<b>Softwood:</b> Oues #2 result: 75 m <sup>3</sup> /ha	<b>Mixedwood:</b> Oues #2 result: $100 \text{ m}^3/\text{ha}$	Hardwood: Oues #2 result: 125 m <sup>3</sup> /ha
Ones #3 result: 75 m $^3$ /ha	Oues #3 result: $100 \text{ m}^3/\text{ha}$	Oues #3 result: $125 \text{ m}^3/\text{ha}$
Ques #5 result. 75 m /ma		Ques #5 lesuit. 125 in /ila
1e. Average cutting cycle used on areas m	anaged by uneven-aged management?	
<b>Softwood:</b> Ques #2 result: 20 years	<b>Mixedwood:</b> Ques #2 result: 15years	<b>Hardwood:</b> Oues #2 result: 10 years
Ques #3 result: 20 years	Ques #3 result: 15 years	Ques #3 result: 10 years
- ·		
<b>2.</b> From Questionnaires #2 and #3 the res	sults regarding fertilization of existing stands ha	ve been aggregated and are given below.
Figures are based on one-time application	tions	
2a. Stand age range when fertilization cou	ld take place.	
Softwood: Ques #2 result: $50 \& 70$ yrs old	Mixedwood: Ques #2 result: 45 & 55 yrs old	Hardwood: Ques #2 result: NA & NA yrs old
Ques #5 result: 50 & 70 yrs old	Ques #5 result: 45 & 55 yrs old	Ques #5 lesuit: INA & INA yrs old
2h Data of fortilizer (log/ha) angligation		

20. Kate of fertilizer (kg/fia) application.		
Softwood: Ques #2 result: 200 kg/ha	Mixedwood: Ques #2 result: 150 kg/ha	Hardwood: Ques #2 result: NA kg/ha
Ques #3 result: 200 kg/ha	Ques #3 result: 150 kg/ha	Ques #3 result: NA kg/ha

2c.	For sites distinguished as Good, Mediu	im and Poor, th	he proportion of sites that would be	e fertilized.		
Goo	<b>d:</b> Ques #2 result: 50% Ques #3 result: 50%	<b>Medium:</b> Q Q	Dues #2 result: 30% Dues #3 result: 30%	Poor: Ques Ques	#2 result: 20% #3 result: 20%	
2d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 1.5m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA $m^{3}/ha/yr$
	Ques #3 result: 1.5 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	NA m <sup>3</sup> /ha/yr
2e. Soft	Length of time the increased growth w wood: Ques #2 result: 10 years Ques #3 result: 10 years	ould last (year <b>Mixedwood:</b>	s). Ques #2 result: 5 years Ques #3 result: 5 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
3.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comm ean of respons	indicated this topic had to be split nents on round 2 again emphasize es to round 2 and 3 are given below	into several c immature star w.	categories and the descent of the rest	at thinning sults below
3a.	For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utiliz	cation) regard	ing the following	are:
3aa.	Change in growth.					
Soft	wood: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.5 m <sup>3</sup> /ha/yr
	Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 1.3 m <sup>3</sup> /ha/yr		Ques #3 result:	1.5 m <sup>3</sup> /ha/yr
3ab. <b>Soft</b> y	Length of time this change in growth w wood: Ques #2 result: 15 years Ques #3 result: 15 years	vould last. <b>Mixedwood:</b>	Ques #2 result: 15 years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	5 years 5 years
3ac. Soft	Change in rotation based on harvestabl wood: Ques #2 result: -10 years Ques #3 result: -10 years	e tree size. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
3ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -5 years Ques #3 result: -5 years	MAI. Mixedwood:	Ques #2 result: -3 years Ques #3 result: -3 years	Hardwood:	Ques #2 result: Ques #3 result:	-3 years -5 years
3b.	For existing immature stands expectati the following are:	ons from <b>juve</b>	nile spacing/pre-commercial thir	<b>ming</b> (assumi	ng no utilization	) regarding
3ba.	Change in growth.					
Soft	wood: Ques #2 result: 1.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 2.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$2.5 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 1.8 m <sup>3</sup> /ha/yr		Ques #3 result: 2.3 m <sup>3</sup> /ha/yr		Ques #3 result:	2.5 m <sup>3</sup> /ha/yr
3bb. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 25 years Ques #3 result: 23 years	asted. Mixedwood:	Ques #2 result: 15 years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
3bc. Soft	Change in rotation based on harvestabl wood: Ques #2 result: -20 years Ques #3 result: -18 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: -15 years Ques #3 result: -15 years	Hardwood:	Ques #2 result: Ques #3 result:	-10 years -10 years
3bd. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -10 years Ques #3 result: -10 years	MAI. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca. Change in growth. <b>Softwood:</b> Ques #2 result: 0.8 m <sup>3</sup> /ha/yr Ques #3 result: 0.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr Ques #3 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	1.3 m <sup>3</sup> /ha/yr 1.3 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	isted.				
<b>Softwood:</b> 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
3cc. Change in rotation based on harvestable	e tree size.				
<b>Softwood:</b> Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: -3 years		Ques #3 result: -2 years		Ques #3 result:	NA years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: 3 years		Ques #3 result: 2 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.

	Sof	twood		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.

i i i i i i i i i i i i i i i i i i i	managea ej ane en agea managemente	
<b>Softwood:</b> Ques #2 result: 3.0%	Mixedwood: Ques #2 result: 3.0%	Hardwood: Ques #2 result: 3.0%
Ques #3 result: 3.0%	Ques #3 result: 5.0%	Ques #3 result: 5.0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 1.8 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: 2.0 m <sup>3</sup> /ha/yr
Ques #3 result: 1.8 m <sup>3</sup> /ha/yr	Ques #3 result: NA m <sup>3</sup> /ha/yr	Ques #3 result: NA m <sup>3</sup> /ha/yr

4d. After-cut growing stock level expected	d to be left on a	reas that will be managed by unev	en-aged mana	agement.	
<b>Softwood:</b> Ques #2 result: 85 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 110 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	135 m <sup>3</sup> /ha
Ques #3 result: 85 m <sup>3</sup> /ha		Ques #3 result: 110 m <sup>3</sup> /ha		Ques #3 result:	135 m <sup>3</sup> /ha
<ul><li>4e. Average cutting cycle used on areas th</li><li>Softwood: Ques #2 result: 20 years</li><li>Ques #3 result: 20 years</li></ul>	nat will be mana Mixedwood:	aged by uneven-aged management Ques #2 result: 15 years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
5. From Questionnaires #2 and #3 the result below. Figures are based on one-time	sults regarding applications.	fertilization of regenerated stands	have been ag	gregated and are	e given
<ul><li>5a. Stand age range when fertilization wo</li><li>Softwood: Ques #2 result: 30 &amp; 50 yrs old Ques #3 result: 30 &amp; 50 yrs old</li></ul>	uld take place. Mixedwood:	Ques #2 result: 35 & 45 yrs old Ques #3 result: 35 & 45 yrs old	Hardwood: (	Ques #2 result: NA Ques #3 result: NA	A & NA yrs old A & NA yrs old
<ul><li>5b. Rate of fertilizer (kg/ha).</li><li>Softwood: Ques #2 result: 150 kg/ha Ques #3 result: 150 kg/ha</li></ul>	Mixedwood:	Ques #2 result: 100 kg/ha Ques #3 result: 100 kg/ha	Hardwood:	Ques #2 result: Ques #3 result:	NA kg/ha NA kg/ha
<ul><li>5c. For sites distinguished as Good, Medi</li><li>Good: Ques #2 result: 60%</li><li>Ques #3 result: 60%</li></ul>	um and Poor, th Medium: Qu Qu	nat proportion of sites that would b ues #2 result: 30% ues #3 result: 30%	e fertilized. <b>Poor:</b> Ques Ques	#2 result: 10% #3 result: 10%	
5d. Expected increase in growth (m3/ha/y	r).				
<b>Softwood:</b> Ques #2 result: 1.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
Ques #3 result: 1.8 m <sup>3</sup> /ha/yr		Ques #3 result: 1.5 m <sup>3</sup> /ha/yr		Ques #3 result:	NA m <sup>3</sup> /ha/yr
<ul><li>5e. Length of time the increased growth in</li><li>Softwood: Ques #2 result: 10 years</li><li>Ques #3 result: 10 years</li></ul>	ndicated above Mixedwood:	last (years). Ques #2 result: 50 years Ques #3 result: 5 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
6. Comments from Questionnaire #1 reg would occur only on immature stands. apply only to immature stands. The m	arding thinning Several comm nean of response	indicated this topic had to be split nents on round 2 again emphasizes es to round 2 and 3 are given below	into several c immature star w.	categories and th nds only. The res	at thinning sults below
6a. For regenerated immature stands, expe	ectations from	<b>cleaning/brushing</b> (assuming no u	tilization) reg	garding the follow	wing are:
6aa. Change in growth.					
<b>Softwood:</b> Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$1.8 \text{ m}^{3/\text{ha/yr}}$
Ques #3 result: 1.3 m <sup>3</sup> /ha/yr		Ques #3 result: 1.5 m <sup>3</sup> /ha/yr		Ques #3 result:	1.8 m <sup>3</sup> /ha/yr
6ab. Length of time this change in growth 1 Softwood: Ques #2 result: 20 years Ques #3 result: 20 years	asted. Mixedwood:	Ques #2 result: 10 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6ac. Change in rotation based on harvestab Softwood: Ques #2 result: -15 years Ques #3 result: -15 years	le tree size. Mixedwood:	Ques #2 result: -10 years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	-10 years -10 years
6ad. Change in rotation based on maximum Softwood: Ques #2 result: -10 years Ques #3 result: -10 years	n MAI. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: 1.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 2.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	2.8 m <sup>3</sup> /ha/yr
Ques #3 result: 1.4 m <sup>3</sup> /ha/yr		Ques #3 result: 1.3 m <sup>3</sup> /ha/yr		Ques #3 result:	1.5 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth l	asted.				
<b>Softwood:</b> Ques #2 result: 25 years	Mixedwood:	Ques #2 result: 20 years	Hardwood:	Ques #2 result:	15 years
Ques #3 result: 30 years		Ques #3 result: 20 years		Ques #3 result:	15 years
6bc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: -18 years	Mixedwood:	Ques #2 result: -20 years	Hardwood:	Ques #2 result:	-15 years
Ques #3 result: -20 years		Ques #3 result: -20 years		Ques #3 result:	-15 years
6bd. Change in rotation based on maximum	n MAI.				
Softwood: Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -10 years	Hardwood:	Ques #2 result:	-10 years
Ques #3 result: -13 years		Ques #3 result: -10 years		Ques #3 result:	-10 years
6c. For regenerated immature stands, expe following are:	ectations from <b>(</b>	commercial thinning (including	thinning plus f	ïnal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$1.5 \text{ m}^3/\text{ha/yr}$
Ques #3 result: $1.0 \text{ m}^3/\text{ha/yr}$		Oues #3 result: 1.3 m <sup>3</sup> /ha/yr		Oues #3 result:	$1.5 \text{ m}^3/\text{ha/yr}$
6cb. Length of time this change in growth 1 Softwood: Ques #2 result: 20 years Ques #3 result: 20 years	ast. Mixedwood:	Ques #2 result: 10 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6cc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: -3 years		Ques #3 result: -2 years		Ques #3 result:	NA years
6cd. Change in rotation based on maximum	n MAI.				
Softwood: Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: 3 years		Ques #3 result: 2 years		Ques #3 result:	NA years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regene	erated stands ha	we been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.0 m <sup>3</sup> /ha/yr
Ques #3 result: 0.3 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	$1.0 \text{ m}^{3/\text{ha/yr}}$
				-	
7b. Change in rotation expected based on	harvestable tree	e size.	Uandruss	Ques #2 #201-14	5 100000
Soliwood: Ques #2 result: -5 years Ones #3 result: -10 years	wiixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-5 years
		Ques no resulto years			Jycars
7c. Change in rotation expected based on	Maximum MA	I.	<b></b> -		
Softwood: Ques #2 result: -3 years	Mixedwood:	Ques #2 result: -3 years	Hardwood:	Ques #2 result:	-3 years
Ques #3 result: -5 years		Ques #3 result: -3 years		Ques $#3$ result:	-5 years

## 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.

	Sof	twood		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	

1b. What proportion of the area is managed by uneven-aged management.											
<b>Softwood:</b> Ques #2 result: 5%	Mixedwood:	Ques #2 result:	5%	Hardwood:	Ques #2 result:	0%					
Ques #3 result: 4%		Ques #3 result:	2%		Ques #3 result:	0%					
1c. Growth per ha/year on areas managed by uneven-aged management.											
<b>Softwood:</b> Ques #2 result: 2.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result:	2.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$2.5 \text{ m}^3/\text{ha/yr}$					
Ques #3 result: $4.6 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	3.8 m <sup>3</sup> /ha/yr		Ques #3 result:	$1.3 \text{ m}^3/\text{ha/yr}$					
			2			5					
1d. After-cut growing stock level left on areas managed by uneven-aged management.											
<b>Softwood:</b> Ques #2 result: 250 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result:	200 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	150 m <sup>3</sup> /ha					
Oues #3 result: $338 \text{ m}^3/\text{ha}$		Oues #3 result:	267 m <sup>3</sup> /ha		Oues #3 result:	175 m <sup>3</sup> /ha					
1e. Average cutting cycle used on areas m	anaged by une	ven-aged manage	ement?								
<b>Softwood:</b> Ques #2 result: 20 years	Mixedwood:	Ques #2 result:	20 years	Hardwood:	Ques #2 result:	10 years					
Ques #3 result: 20 years		Ques #3 result:	18 years		Ques #3 result:	10 years					
	1, 1,	e	• • • • • •		. 1 1 .						
2. From Questionnaires #2 and #3 the res	sults regarding	tertilization of e	existing stands hav	ve been aggre	gated and are giv	en below.					
Figures are based on one-time applicat	10118										
2a. Stand age range when fertilization cou	ld take place.										
<b>Softwood:</b> Ques #2 result: 0 & 25 yrs old	Mixedwood:	Ques #2 result: 0	& 25 yrs old	Hardwood:	Ques #2 result: 0	& 25 yrs old					
Ques #3 result: 28 & 45 yrs old		Ques #3 result: 33	3 & 52 yrs old		Ques #3 result: 0	& 12 yrs old					

2b. Rate of fertilizer (kg/ha) application.		
Softwood: Ques #2 result: NA kg/ha	Mixedwood: Ques #2 result: NA kg/ha	Hardwood: Ques #2 result: NA kg/ha
Ques #3 result: 233 kg/ha	Ques #3 result: 225 kg/ha	Ques #3 result: 75 kg/ha

2c. For sites distinguished as Good, Mediu	um and Poor, th	ne proportion of sites that would be	fertilized.		
Good: Ques #2 result: 10%	Medium: Q	ues #2 result: 50%	Poor: Ques	#2 result: 10%	
Ques #3 result: 12%	Q	ues #3 result: 22%	Ques	#3 result: 11%	
2d. Expected increase in growth (m3/ha/yr	).				
<b>Softwood:</b> Ques #2 result: 1.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: $1.5 \text{ m}^3/\text{ha/yr}$	Hardwood:	Ques #2 result:	2.0 m <sup>3</sup> /ha/yr
Ques #3 result: 2.6 m <sup>3</sup> /ha/yr		Ques #3 result: 1.8 m <sup>3</sup> /ha/yr		Ques #3 result:	1 m <sup>3</sup> /ha/yr
2e. Length of time the increased growth w	ould last (year	8).			
<b>Softwood:</b> Ques #2 result: 15 years Ques #3 result: 29 years	Mixedwood:	Ques #2 result: 15 yearsIQues #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	15 years 7 years
<b>3.</b> Comments from Questionnaire #1 regative would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comm ean of response	indicated this topic had to be split in nents on round 2 again emphasize in es to round 2 and 3 are given below.	nto several c nmature stan	categories and the descent of the rest	at thinning sults below
3a. For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utiliza	tion) regardi	ing the following	g are:
3aa. Change in growth.					
<b>Softwood:</b> Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: $1.0 \text{ m}^3/\text{ha/yr}$	Hardwood:	Ques #2 result:	$0.5 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 1.3 m <sup>3</sup> /ha/yr		Ques #3 result: 1.3 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.5 \text{ m}^3/\text{ha/yr}$
		-		-	
3ab. Length of time this change in growth v	vould last.	Ques #2 result: 20 years	Jordwood	Ques #2 result:	10 yoors
Oues #3 result: 40 years	Wilkeuwoou.	Oues #2 result: 20 years	liai uwoou.	Ques #2 result: Oues #3 result:	22 years
					<b>J</b>
3ac. Change in rotation based on harvestabl	le tree size.	0 10 10 10		0 //2 1/	~
Softwood: Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -10 years	Hardwood:	Ques #2 result:	-5 years
Ques #5 result12 years		Ques #5 result15 years		Ques #5 lesuit.	-5 years
3ad. Change in rotation based on maximum	MAI.				
Softwood: Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	0 years
Ques #3 fesuit: 4 years		Ques #3 result: 7 years		Ques #5 result:	0 years
3b. For existing immature stands expectati the following are:	ons from <b>juve</b>	nile spacing/pre-commercial thinn	<b>ing</b> (assumi	ng no utilization	) regarding
3ba. Change in growth.					
<b>Softwood:</b> Ques #2 result: -0.2 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: $-0.5 \text{ m}^3/\text{ha/yr}$	Hardwood:	Ques #2 result:	-0.5 m <sup>3</sup> /ha/yr
Ques #3 result: -0.2 m <sup>3</sup> /ha/yr		Ques #3 result: -0.3 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.3 m <sup>3</sup> /ha/yr
3bb. Length of time this change in growth la <b>Softwood</b> . Ones #2 result: 10 years	asted. Mixedwood:	Ques #2 result: 10 years	Hardwood	Ques #2 result.	10 voors
Ques #2 result: 10 years	WIIXeuwoou.	Ques #2 result: 10 years		Ques #2 result: Oues #3 result:	6 years
					<b>)</b>
3bc. Change in rotation based on harvestabl	le tree size.		<b>.</b>	0 10 1	-
Soliwood: Ques #2 result: -11 years	wiixedwood:	Ques #2 result: -10 years	hardwood:	Ques #2 result:	-5 years
Ques 115 result12 years		Ques no result. 15 years		Zues "5 lesuit.	5 years
3bd. Change in rotation based on maximum	MAI.			<b>a</b> 445	0
Softwood: Ques #2 result: -5 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
Ques #5 result: 9 years		Ques #5 result: / years		Ques #5 result:	o years

3c. For existing immature stands expectations from commercial thinning (including thinning plus final harvest) regarding the following are:

3ca. Change in growth. <b>Softwood:</b> Ques #2 result: -0.3 m <sup>3</sup> /ha/yr Ques #3 result: -1.1 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -1.5 m <sup>3</sup> /ha/yr Ques #3 result: -1.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	-1.5 m <sup>3</sup> /ha/yr -1.8 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la Softwood: Ques #2 result: 20 years Ques #3 result: 40 years	sted. Mixedwood:	Ques #2 result: 20 years Ques #3 result: 37 years	Hardwood:	Ques #2 result: Ques #3 result:	20 years 35 years
3cc. Change in rotation based on harvestable Softwood: Ques #2 result: -8 years Ques #3 result: -2.0 years	e tree size. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -2.0 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -2.0 years
3cd. Change in rotation based on maximum Softwood: Ques #2 result: -5 years Ques #3 result: 11 years	MAI. <b>Mixedwood:</b>	Ques #2 result: 5 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: Ques #3 result:	5 years 2 years

## **REGENERATED STANDS**

- Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood. 4.
- From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated 4a. 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.

	Sof	twood			Mixed	dwood			Har	dwood	
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 b	e managed by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 5%	Mixedwood: Ques #2 result: 5%	Hardwood: Ques #2 result: 0%
Oues #3 result: 5%	Oues #3 result: 5%	Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 2.5 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 2.5 m <sup>3</sup> /ha/yr	Hardwood: Que
Ques #3 result: 5.4 m <sup>3</sup> /ha/yr	Ques #3 result: 4.3 m <sup>3</sup> /ha/yr	Que

es #2 result:  $2.5 \text{ m}^3/\text{ha/yr}$ s #3 result: 1.3 m<sup>3</sup>/ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by unev	en-aged mana	agement.	
Soft	wood: Ques #2 result: 200 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 200 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	150 m <sup>3</sup> /ha
	Ques #3 result: 300 m <sup>3</sup> /ha		Ques #3 result: 267 m <sup>3</sup> /ha		Ques #3 result:	175 m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas th wood: Ques #2 result: 20 years Ques #3 result: 20 years	at will be mana Mixedwood:	aged by uneven-aged management Ques #2 result: 20 years Ques #3 result: 20 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
5.	From Questionnaires #2 and #3 the res below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated stands	have been ag	gregated and are	e given
5a. <b>Soft</b>	Stand age range when fertilization wou wood: Ques #2 result: 15 & 63 yrs old Ques #3 result: 24 & 45 yrs old	Id take place. Mixedwood: ( (	Ques #2 result: 0 & 25 yrs old Ques #3 result: 28 & 48 yrs old	Hardwood:	Ques #2 result: 0 Ques #3 result: 0	& 25 yrs old & 16 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	NA kg/ha 75 kg/ha
5c. <b>Goo</b>	For sites distinguished as Good, Mediu d: Ques #2 result: 5% Ques #3 result: 6%	ım and Poor, th <b>Medium:</b> Qu Qu	nat proportion of sites that would b nes #2 result: 50% nes #3 result: 17%	e fertilized. <b>Poor:</b> Ques Ques	#2 result: 5% #3 result: 10%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 1.5 m <sup>3</sup> /ha/yr Ques #3 result: 2.6 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.5 m <sup>3</sup> /ha/yr Ques #3 result: 1.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	2.0 m <sup>3</sup> /ha/yr 1.8 m <sup>3</sup> /ha/yr
5e. <b>Soft</b>	Length of time the increased growth in wood: Ques #2 result: 13 years Ques #3 result: 28 years	dicated above Mixedwood:	last (years). Ques #2 result: 15 years Ques #3 result: 12 years	Hardwood:	Ques #2 result: Ques #3 result:	15 years 7 years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comm ean of response	indicated this topic had to be split nents on round 2 again emphasize es to round 2 and 3 are given below	into several d immature star w.	categories and th nds only. The rea	at thinning sults below
ба.	For regenerated immature stands, expe	ctations from <b>c</b>	cleaning/brushing (assuming no u	tilization) reg	garding the follow	wing are:
6aa.	Change in growth.					
Soft	wood: Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.5 m <sup>3</sup> /ha/yr
	Ques #3 result: 1.4 m <sup>3</sup> /ha/yr		Ques #3 result: 1.5 m <sup>3</sup> /ha/yr		Ques #3 result:	0.7 m <sup>3</sup> /ha/yr
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 11 years Ques #3 result: 39 years	asted. Mixedwood:	Ques #2 result: 30 years Ques #3 result: 39 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 23 years
6ac. <b>Soft</b>	Change in rotation based on harvestabl wood: Ques #2 result: -7 years Ques #3 result: -12 years	e tree size. Mixedwood:	Ques #2 result: -10 years Ques #3 result: -13 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -3 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -5 years Ques #3 result: 4 years	MAI. <b>Mixedwood:</b>	Ques #2 result: -5 years Ques #3 result: 8 years	Hardwood:	Ques #2 result: Ques #3 result:	0 years -2 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: -0.2 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-0.5 m <sup>3</sup> /ha/yr
Ques #3 result: $-0.4 \text{ m}^3/\text{ha/yr}$		Ques #3 result: -0.3 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.3 m <sup>3</sup> /ha/yr
· ·		-			-
6bb. Length of time this change in growth la	asted.			0 10 1	10
Softwood: Ques #2 result: 10 years	Mixedwood:	Ques #2 result: 10 years	Hardwood:	Ques #2 result:	10 years
Ques #3 result: 30 years		Ques #3 result: / years		Ques #3 result:	6 years
6bc. Change in rotation based on harvestabl	le tree size.				
<b>Softwood:</b> Ques #2 result: -11 years	Mixedwood:	Ques #2 result: -10 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -13 years		Ques #3 result: -13 years		Ques #3 result:	-5 years
	NAT				
6bd. Change in rotation based on maximum	MAI.	Quee #2 regult: 0 years	Handwood	Quas #2 rasult.	0 voora
Oues #3 result: 9 years	Mixeuwoou.	Ques #2 result: 8 years	maruwoou.	Ques $#2$ result:	1 years
Ques no result. > years		Ques no result. O years		Ques "5 lesuit.	i yeuis
6c. For regenerated immature stands, expe	ctations from	commercial thinning (including the	hinning plus f	inal harvest) reg	arding the
following are:					
fee Change in growth					
Software de Orien #2 result: $0.2 \text{ m}^3/\text{h}_2/\text{m}$	Minodencode	Orace #2 magnetty 0.2 m <sup>3</sup> /h a /m	II and maad.	0	0.2
Softwood: Ques #2 result: -0.5 m <sup>2</sup> /na/yr	Mixeawooa:	Ques #2 result: -0.3 m <sup>2</sup> /na/yr	Hardwood:	Ques #2 result:	$-0.2 \text{ m}^2/\text{na/yr}$
Ques #3 result: -1.1 m <sup>-3</sup> /ha/yr		Ques #3 result: $-1.3 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	-1.3 m <sup>3</sup> /ha/yr
6cb. Length of time this change in growth h	ast.				
<b>Softwood:</b> Ques #2 result: 20 years	Mixedwood:	Ques #2 result: 20 years	Hardwood:	Ques #2 result:	20 years
Ques #3 result: 43 years		Ques #3 result: 38 years		Ques #3 result:	35 years
6cc. Change in rotation based on harvestabl	le tree size.	0	TT J J -	0	E
Softwood: Ques #2 result: -10 years	Mixeawooa:	Ques #2 result: -14 years	Hardwood:	Ques $#2$ result:	-5 years
Ques #5 lesuit5 years		Ques #5 lesuit4 years		Ques #5 lesuit.	-5 years
6cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -9 years	Hardwood:	Ques #2 result:	5 years
Ques #3 result: 10 years		Ques #3 result: 11 years		Ques #3 result:	0 years
7 From Opportion noises #2 and #2 the se	aulta na condin a	constin immercement of accord	atad stands he	we have a series	tad and ana
<i>given below</i>	suits regarding	genetic improvement of regenera	ated stands na	we been aggrega	ted and are
Siven below.					
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.0 m <sup>3</sup> /ha/yr
Oues #3 result: $0.5 \text{ m}^3/\text{ha/yr}$		Oues #3 result: 1.1 m <sup>3</sup> /ha/yr		Oues #3 result:	$1.2 \text{ m}^3/\text{ha/yr}$
					5
7b. Change in rotation expected based on l	harvestable tree	e size.			
Softwood: Ques #2 result: -9 years	Mixedwood:	Ques #2 result: -10 years	Hardwood:	Ques #2 result:	-10 years
Ques #3 result: -6 years		Ques #3 result: -5 years		Ques #3 result:	-/ years
7c. Change in rotation expected based on 1	Maximum MA	L			
<b>Softwood:</b> Ques #2 result: -7 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-10 years
Ques #3 result: -4 years		Ques #3 result: -4 years		Ques #3 result:	-7 years

## **EXISTING STANDS**

- 1. Growth (MAI) of existing stands for softwood, mixedwood and hardwood.
- From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of existing stands are 1a. 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.

	Sof	twood			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	

1b. What proportion of the area is manage	d by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 5%	Mixedwood: Ques #2 result: 5%	Hardwood: Ques #2 result: 0%
Ques #3 result: 3%	Ques #3 result: 3%	Ques #3 result: 0%
1c. Growth per ha/year on areas managed	by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: $2.0 \text{ m}^3/\text{ha/yr}$	<b>Mixedwood:</b> Ques #2 result: $2.0 \text{ m}^3/\text{ha/yr}$	<b>Hardwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr
Ones #3 result: $2.5 \text{ m}^{3}/\text{ha/yr}$	Oues #3 result: $2.8 \text{ m}^3/\text{ha/vr}$	Ones #3 result: $0 \text{ m}^{3/\text{h}_{3}/\text{vr}}$
		Ques "5 lesuit. 6 in fild yi
1d. After-cut growing stock level left on a	reas managed by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 150 m <sup>3</sup> /ha	<b>Mixedwood:</b> Ques #2 result: 150 m <sup>3</sup> /ha	Hardwood: Ques #2 result: NA m <sup>3</sup> /ha
Ques #3 result: $118 \text{ m}^3/\text{ha}$	Oues #3 result: $107 \text{ m}^3/\text{ha}$	Ques #3 result: $0 \text{ m}^3/\text{ha}$
1e. Average cutting cycle used on areas m	anaged by uneven-aged management?	
<b>Softwood:</b> Ques #2 result: 30 years	<b>Mixedwood:</b> Ques #2 result: 30 years	Hardwood: Ques #2 result: NA years
Oues #3 result: 26 years	Ques #3 result: 27 years	Ques #3 result: 0 years
2. From Questionnaires #2 and #3 the res	sults regarding <b>fertilization</b> of existing stands ha	ave been aggregated and are given below.
Figures are based on one-time applicat	ions	
2a. Stand age range when fertilization cou	ld take place.	
Softwood: Ques #2 result: 0 & 25 yrs old	Mixedwood: Ques #2 result: 0 & 25 yrs old	Hardwood: Ques #2 result: 0 & 25 yrs old
Ques #3 result: 25 & 40 yrs old	Ques #3 result: 35 & 53 yrs old	Ques #3 result: 0 & 25 yrs old
2b. Rate of fertilizer (kg/ha) application.		
Softwood: Ques #2 result: NA kg/ha	Mixedwood: Ques #2 result: NA kg/ha	Hardwood: Ques #2 result: NA kg/ha
Ques #3 result: 135 kg/ha	Ques #3 result: 250 kg/ha	Ques #3 result: 0 kg/ha

2c. Goo	For sites distinguished as Good, Mediu d: Ques #2 result: 10% Ques #3 result: 3%	m and Poor, tl <b>Medium:</b> Q Q	ne proportion of sites that would be ues #2 result: 50% pues #3 result: 14%	e fertilized. <b>Poor:</b> Ques Ques	#2 result: 10% #3 result: 9%	
2d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.5 m <sup>3</sup> /ha/yr
	Ques #3 result: 1.7 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	1.3 m <sup>3</sup> /ha/yr
2e. Soft	Length of time the increased growth we wood: Ques #2 result: 15 years Ques #3 result: 35 years	ould last (year Mixedwood:	s). Ques #2 result: 15 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: Ques #3 result:	15 years 13 years
3.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comn ean of response	indicated this topic had to be split nents on round 2 again emphasize es to round 2 and 3 are given below	into several c immature star w.	categories and th ads only. The rea	at thinning sults below
3a.	For existing immature stands, expectati	ons from <b>clea</b>	ning/brushing (assuming no utiliz	zation) regard	ing the following	g are:
3aa.	Change in growth.					
Soft	wood: Oues #2 result: $0.5 \text{ m}^3/\text{ha/yr}$	Mixedwood:	Oues #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Oues #2 result:	$0.5 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.4 m <sup>3</sup> /ha/yr		Ques #3 result: 0.4 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.4 \text{ m}^3/\text{ha/yr}$
3ab. Soft	Length of time this change in growth w wood: Ques #2 result: 15 years Ques #3 result: 35 years	yould last. <b>Mixedwood:</b>	Ques #2 result: 15 years Ques #3 result: 48 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 30 years
Sac. Soft	wood: 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: Ques #3 result:	-5 years -5 years
3ad. Soft	Change in rotation based on maximum wood: Ques #2 result: -5 years Ques #3 result: 7 years	MAI. Mixedwood:	Ques #2 result: -5 years Ques #3 result: 12 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -3 years
3b.	For existing immature stands expectation the following are:	ons from <b>juve</b>	nile spacing/pre-commercial thir	<b>ming</b> (assumi	ng no utilization	) regarding
3ba.	Change in growth.					
Soft	wood: Ques #2 result: -0.5 m <sup>3</sup> /ha/yr Ques #3 result: -0.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: $-0.5 \text{ m}^3/\text{ha/yr}$ Ques #3 result: $-0.3 \text{ m}^3/\text{ha/yr}$	Hardwood:	Ques #2 result: Ques #3 result:	$-0.5 \text{ m}^3/\text{ha/yr}$ -0.3 m <sup>3</sup> /ha/yr
3bb. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 15 years Ques #3 result: 32 years	usted. Mixedwood:	Ques #2 result: 15 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 7 years
3bc. Soft	Change in rotation based on harvestable wood: Ques #2 result: -10 years Ques #3 result: -12 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: -10 years Ques #3 result: -15 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -7 years
3bd. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: 0 years Ques #3 result: 5 years	MAI. Mixedwood:	Ques #2 result: 0 years Ques #3 result: 3 years	Hardwood:	Ques #2 result: Ques #3 result:	0 years 0 years

3c. For existing immature stands expectations from **commercial thinning** (including thinning plus final harvest) regarding the following are:

3ca.	Change in growth.	
		0

<b>Softwood:</b> Ques #2 result: -1.5 m <sup>3</sup> /ha/yr Ques #3 result: -1.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -1.5 m <sup>3</sup> /ha/yr Ques #3 result: -1.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	-1.5 m <sup>3</sup> /ha/yr -1.3 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	asted.				
<b>Softwood:</b> Ques #2 result: 20 years	Mixedwood:	Ques #2 result: 20 years	Hardwood:	Ques #2 result:	15 years
Ques #3 result: 33 years		Ques #3 result: 40 years		Ques #3 result:	27 years
3cc. Change in rotation based on harvestabl	le tree size.				
<b>Softwood:</b> Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -4 years		Ques #3 result: -3 years		Ques #3 result:	-3 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 10 years	Mixedwood:	Ques #2 result: 10 years	Hardwood:	Ques #2 result:	10 years
Ques #3 result: 15 years		Ques #3 result: 17 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.

	Sof	twood			Mixedwood Hardwo				rdwood			
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

10. Troportion of the area that will e	e managea by aneven agea management.	
<b>Softwood:</b> Ques #2 result: 5%	Mixedwood: Ques #2 result: 5%	Hardwood: Ques #2 result: 0%
Ques #3 result: 6%	Ques #3 result: 7%	Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 2.0 m <sup>3</sup> /ha/yr
Ques #3 result: 2.5 m <sup>3</sup> /ha/yr

**Mixedwood:** Ques #2 result: 1.0 m<sup>3</sup>/ha/yr Ques #3 result: 2.5 m<sup>3</sup>/ha/yr Hardwood: Ques #2 result: NA m<sup>3</sup>/ha/yr Ques #3 result: 0 m<sup>3</sup>/ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by une	ven-aged mana	agement.	
Soft	wood: Ques #2 result: 150 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 150 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha
	Ques #3 result: 163 m <sup>3</sup> /ha		Ques #3 result: 167 m <sup>3</sup> /ha		Ques #3 result:	0 m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas the wood: Ques #2 result: 30 years Ques #3 result: 24 years	at will be mana Mixedwood:	aged by uneven-aged managemer Ques #2 result: 30 years Ques #3 result: 23 years	nt. Hardwood:	Ques #2 result: Ques #3 result:	NA years 0 years
5.	From Questionnaires #2 and #3 the rest below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated stand	ls have been ag	gregated and are	e given
5a. Softv	Stand age range when fertilization wou vood: Ques #2 result: 15 & 73 yrs old Ques #3 result: 25 & 40 yrs old	ld take place. Mixedwood: Q Q	ues #2 result: 0 & 25 yrs old ues #3 result: 35 & 53 yrs old	Hardwood: Que Que	es #2 result: 0 & 2 es #3 result: 0 & 2	25 yrs old 5 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	NA kg/ha 0 kg/ha
5c. <b>Goo</b>	For sites distinguished as Good, Mediu d: Ques #2 result: 10% Ques #3 result: 4%	im and Poor, th Medium: Qu Qu	nat proportion of sites that would nes #2 result: 35% nes #3 result: 15%	be fertilized. <b>Poor:</b> Ques Ques	#2 result: 10% #3 result: 12%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$1.5 \text{ m}^{3/\text{ha/yr}}$
	Ques #3 result: 1.7 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	1.3 m <sup>3</sup> /ha/yr
5e. <b>Soft</b>	Length of time the increased growth in wood: Ques #2 result: 15 years Ques #3 result: 20 years	dicated above Mixedwood:	last (years). Ques #2 result: 15 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: Ques #3 result:	15 years 13 years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comm ean of response	indicated this topic had to be spl nents on round 2 again emphasize es to round 2 and 3 are given belo	it into several o immature star ow.	categories and th ads only. The rea	at thinning sults below
ба.	For regenerated immature stands, expe	ctations from <b>c</b>	cleaning/brushing (assuming no	utilization) reg	garding the follow	wing are:
6aa	Change in growth					
Soft	wood: Oues #2 result: $0.5 \text{ m}^3/\text{ha/vr}$	Mixedwood:	Oues #2 result: $0.5 \text{ m}^3/\text{ha/vr}$	Hardwood:	Oues #2 result:	$0.5 \text{ m}^3/\text{ha/vr}$
	Ques #3 result: $0.6 \text{ m}^3/\text{ha/yr}$		Ques #3 result: $0.6 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$0.3 \text{ m}^3/\text{ha/yr}$
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 15 years Ques #3 result: 30 years	asted. Mixedwood:	Ques #2 result: 15 years Ques #3 result: 37 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 23 years
6ac. <b>Soft</b>	Change in rotation based on harvestabl wood: Ques #2 result: -5 years Ques #3 result: -9 years	e tree size. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -2 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -5 years Ques #3 result: 5 years	MAI. Mixedwood:	Ques #2 result: -5 years Ques #3 result: 7 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -2 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: -0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-0.5 m <sup>3</sup> /ha/yr
Ques #3 result: -0.3 m <sup>3</sup> /ha/yr		Ques #3 result: -0.3 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.3 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth l	asted.				
Softwood: Ques #2 result: 15 years	Mixedwood:	Ques #2 result: 15 years	Hardwood:	Ques #2 result:	10 years
Ques #3 result: 31 years		Ques #3 result: 8 years		Ques #3 result:	7 years
6bc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -10 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -9 years		Ques #3 result: -13 years		Ques #3 result:	-5 years
6bd. Change in rotation based on maximum	n MAI.				
<b>Softwood:</b> Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: 5 years		Ques #3 result: 7 years		Ques #3 result:	0 years
6c. For regenerated immature stands, expe following are:	ectations from (	commercial thinning (including t	hinning plus f	ïnal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Oues #2 result: -1 5 m <sup>3</sup> /ha/yr	Mixedwood:	Oues #2 result: $-1.5 \text{ m}^3/\text{ha/yr}$	Hardwood:	Ques #2 result	$-1.5 \text{ m}^3/\text{ha/yr}$
Oues #2 result: $1.4 \text{ m}^3/\text{h}_2/\text{vr}$	in incu in oour	Ques #2 result: $1.2 \text{ m}^3/\text{ha/yr}$	1101 0 0 0001	Ques #2 result:	$1.2 \text{ m}^3/\text{ha/yr}$
				Ques #5 Tesuit.	-1.2 III /IId/yI
6cb. Length of time this change in growth l	ast.				
<b>Softwood:</b> Ques #2 result: 20 years	Mixedwood:	Ques #2 result: 20 years	Hardwood:	Ques #2 result:	15 years
Ques #3 result: 33 years		Ques #3 result: 38 years		Ques #3 result:	27 years
6cc. Change in rotation based on harvestable	le tree size.				
<b>Softwood:</b> Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -4 years		Ques #3 result: -3 years		Ques #3 result:	-3 years
6cd. Change in rotation based on maximum	n MAI.				
<b>Softwood:</b> Ques #2 result: 10 years	Mixedwood:	Ques #2 result: 10 years	Hardwood:	Ques #2 result:	10 years
Ques #3 result: 16 years		Ques #3 result: 17 years		Ques #3 result:	7 years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regener	ated stands ha	we been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
Softwood: Oues #2 result: $0.4 \text{ m}^3/\text{ha/vr}$	Mixedwood:	Oues #2 result: $0.4 \text{ m}^3/\text{ha/vr}$	Hardwood	Ques #2 result.	$0.7 \text{ m}^{3/\text{ha/yr}}$
Oues #2 result: 0.3 $m^3/ha/yr$	Mixed wood.	Ques #2 result: 0.4 m /ha/yr	Haruwoou.	Ques #2 result:	$0.7 \text{ m}^3/\text{ha/yr}$
Ques #5 result. 0.5 III <sup>+</sup> /IIa/yi		Ques #5 lesult. 0.5 lll <sup>2</sup> /lld/yl		Ques #5 lesuit.	0.5 m²/ma/yi
7b. Change in rotation expected based on 1	harvestable tree	e size.			
Softwood: Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -10 years	Hardwood:	Ques #2 result:	-10 years
Ques #3 result: -/ years		Ques #3 result: -6 years		Ques #3 result:	-o years
7c. Change in rotation expected based on 2	Maximum MA	I.			
Softwood: Ques #2 result: -8 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-10 years
Ques #3 result: -5 years		Ques #3 result: -6 years		Ques #3 result:	-6 years

## 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						Mixe	dwood		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

1b. What proportion of the area is managed	l by uneven-aged management			
<b>Softwood:</b> Ques #2 result: 30%	Mixedwood: Ques #2 result:	30% Hardwood:	Ques #2 result:	0%
Ques #3 result: 20%	Ques #3 result:	20%	Ques #3 result:	NA%
1c. Growth per ha/year on areas managed l	by uneven-aged management.			
<b>Softwood:</b> Ques #2 result: 2.0 m <sup>3</sup> /ha/yr	Mixedwood: Ques #2 result:	1.8 m <sup>3</sup> /ha/yr <b>Hardwood:</b>	Ques #2 result:	NA m <sup>3</sup> /ha/yr
Oues #3 result: $2.0 \text{ m}^3/\text{ha/vr}$	Ques #3 result:	$2.0 \text{ m}^{3/\text{ha/vr}}$	Ques #3 result:	NA m <sup>3</sup> /ha/yr
	Ques no result	2.0 11 / 114 / 1	Ques no result.	i (i i iii ) iiu ji
1d. After-cut growing stock level left on ar	eas managed by uneven-aged	management.		
<b>Softwood:</b> Ques #2 result: 200 m <sup>3</sup> /ha	Mixedwood: Ques #2 result:	150 m <sup>3</sup> /ha <b>Hardwood:</b>	Ques #2 result:	NA m <sup>3</sup> /ha
Oues #3 result: 150 m <sup>3</sup> /ha	Ques #3 result:	150 m <sup>3</sup> /ha	Ques #3 result:	NA m <sup>3</sup> /ha
	<b>C</b>		<b>C</b>	
1e. Average cutting cycle used on areas ma	maged by uneven-aged manag	ement?		
<b>Softwood:</b> 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
2. From Questionnaires #2 and #3 the rest	ilts regarding <b>fertilization</b> of e	existing stands have been aggre	gated and are give	ven below.
Figures are based on one-time application	ons			
2a. Stand age range when fertilization coul	d take place.		- <b>-</b>	
Softwood: Ques #2 result: 0 & 30 yrs old	Mixedwood: Ques #2 result:	0 & 30 yrs old Hardwood	: Ques #2 result:	0 & 20 yrs old
Ques #5 result. 0 & 50 yrs old	Ques #5 result:	$0 \propto 50 \text{ yrs old}$	Ques #5 result: (	$J \approx 20$ yrs old
2b. Rate of fertilizer (kg/ha) application.				
Softwood: Ques #2 result: NA kg/ha	<b>Mixedwood:</b> 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

2c.	For sites distinguished as Good, Mediu	ım and Poor, tl	ne proportion of sites that would b	e fertilized.		
Goo	d: Ques #2 result: 30%	Medium: Q	ues #2 result: 10%	Poor: Ques	#2 result: 0%	
	Ques #3 result: 30%	Q	ues #3 result: 20%	Ques	#3 result: NA%	)
2d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.8 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	0.8 m <sup>3</sup> /ha/yr
2e	Length of time the increased growth w	ould last (vear	(2			
Soft	wood: 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
3.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comn ean of response	indicated this topic had to be splinents on round 2 again emphasize es to round 2 and 3 are given belo	t into several o immature star w.	categories and th ads only. The res	at thinning sults below
3a.	For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utili	zation) regard	ing the following	g are:
3aa.	Change in growth.					
Soft	wood: Ques #2 result: $0.7 \text{ m}^3/\text{ha/yr}$	Mixedwood:	Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Hardwood:	Oues #2 result:	$0.7 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	1.0 m <sup>3</sup> /ha/yr
2.1		111 /				
Sab.	Length of time this change in growth v wood: Ques #2 result: 15 years	Vould last.	Ques #2 result: 15 years	Hardwood.	Ques #2 result.	10 years
501	Oues #3 result: 15 years	Mixtuwoou.	Oues #3 result: 15 years	maruwoou.	Ques #2 result: Oues #3 result:	10 years
						5
3ac.	Change in rotation based on harvestabl	e tree size.			0 10 1	-
Soft	wood: Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-5 years
	Ques #5 lesuit5 years		Ques #5 lesuit5 years		Ques #3 lesuit.	-5 years
3ad.	Change in rotation based on maximum	MAI.				
Soft	wood: 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
3b.	For existing immature stands expectati the following are:	ons from <b>juve</b>	nile spacing/pre-commercial thi	<b>nning</b> (assumi	ng no utilization	) regarding
3ba.	Change in growth.					
Soft	wood: Ques #2 result: -0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -0.7 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-0.5 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	0.5 m <sup>3</sup> /ha/yr
3bb	Length of time this change in growth la	asted.				
Soft	wood: 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
3bc.	Change in rotation based on harvestabl	e tree size.				
Soft	wood: Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -10 years	Hardwood:	Ques #2 result:	-5 years
	Ques #3 result: -10 years		Ques #3 result: -10 years		Ques #3 result:	-5 years
3bd	Change in rotation based on maximum	MAI.				
Soft	wood: Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
	Ques #3 result: 0 years		Ques #3 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.					
<b>Softwood:</b> Ques #2 result: -1.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -1.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-1.5 m <sup>3</sup> /ha/yr
Ques #3 result: -1.5 m <sup>3</sup> /ha/yr		Ques #3 result: -1.5 m <sup>3</sup> /ha/yr		Ques #3 result:	-1.5 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	isted.				
Softwood: Ques #2 result: 20 years	Mixedwood:	Ques #2 result: 20 years	Hardwood:	Ques #2 result:	15 years
Ques #3 result: 20 years		Ques #3 result: 20 years		Ques #3 result:	15 years
3cc. Change in rotation based on harvestable	e tree size.				
<b>Softwood:</b> Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -3 years		Ques #3 result: -3 years		Ques #3 result:	-5 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> 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

## **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						Mixe	dwood		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.

<b>Softwood:</b> Ques #2 result: 30%	Mixedwood: Ques #2 result: 30%	Hardwood: Ques #2 result: 0%
Ques #3 result: 30%	Ques #3 result: 30%	Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 2.0 m <sup>3</sup> /ha/yr	
Ques #3 result: 2.0 m <sup>3</sup> /ha/yr	

**Mixedwood:** Ques #2 result: 1.8 m<sup>3</sup>/ha/yr Ques #3 result: 2.0 m<sup>3</sup>/ha/yr Hardwood: Ques #2 result: NA m<sup>3</sup>/ha/yr Ques #3 result: NA m<sup>3</sup>/ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by unev	en-aged mana	agement.	
Soft	wood: Ques #2 result: 200 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 150 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha
	Ques #3 result: 150 m <sup>3</sup> /ha		Ques #3 result: 150 m <sup>3</sup> /ha		Ques #3 result:	NA m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas the <b>wood:</b> Ques #2 result: 30 years Ques #3 result: 30 years	at will be mana Mixedwood:	aged by uneven-aged management Ques #2 result: 30 years Ques #3 result: 30 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
5.	From Questionnaires #2 and #3 the rest below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated stands	s have been ag	gregated and are	e given
5a. Soft	Stand age range when fertilization wou wood: Ques #2 result: 0 & 20 yrs old Ques #3 result: 0 & 20 yrs old	ld take place. Mixedwood:	Ques #2 result: 0 & 20 yrs old Ques #3 result: 0 & 20 yrs old	Hardwood: (	Ques #2 result: 0 & Ques #3 result: 0 &	& 15 yrs old 2 15 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	NA kg/ha NA kg/ha
5c. <b>Goo</b>	For sites distinguished as Good, Mediu d: Ques #2 result: 30% Ques #3 result: 30%	im and Poor, th Medium: Qu Qu	nat proportion of sites that would b ues #2 result: 10% ues #3 result: 10%	be fertilized. <b>Poor:</b> Ques Ques	#2 result: 0% #3 result: 0%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.8 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	1 m <sup>3</sup> /ha/yr
5e. Soft	Length of time the increased growth in wood: Ques #2 result: 15 years Ques #3 result: 15 years	dicated above Mixedwood:	last (years). Ques #2 result: 15 years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comm ean of response	indicated this topic had to be split nents on round 2 again emphasize es to round 2 and 3 are given below	t into several o immature star w.	categories and th nds only. The res	at thinning sults below
ба.	For regenerated immature stands, expe	ctations from <b>c</b>	cleaning/brushing (assuming no u	utilization) reg	garding the follow	wing are:
6aa.	Change in growth.					
Soft	wood: Ques #2 result: $0.7 \text{ m}^3/\text{ha/yr}$	Mixedwood:	Oues #2 result: 0.7 m <sup>3</sup> /ha/yr	Hardwood:	Oues #2 result:	$0.7 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	$1.0 \text{ m}^3/\text{ha/yr}$
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 15 years Ques #3 result: 15 years	asted. Mixedwood:	Ques #2 result: 15 years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6ac. <b>Soft</b>	Change in rotation based on harvestabl wood: Ques #2 result: -5 years Ques #3 result: -5 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -5 years Ques #3 result: -5 years	MAI. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: -0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -0.7 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-0.5 m <sup>3</sup> /ha/yr
Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.5 $\mathrm{m}^{3}/\mathrm{ha}/\mathrm{yr}$
6bb. Length of time this change in growth la Softwood: Ques #2 result: 15 years Ques #3 result: 15 years	asted. Mixedwood:	Ques #2 result: 15 years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6bc. Change in rotation based on harvestabl Softwood: Ques #2 result: -10 years Ques #3 result: -10 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: -10 years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
6bd. Change in rotation based on maximum Softwood: Ques #2 result: 0 years Ques #3 result: 0 years	MAI. Mixedwood:	Ques #2 result: 0 years Ques #3 result: 0 years	Hardwood:	Ques #2 result: Ques #3 result:	0 years 0 years
6c. For regenerated immature stands, experience following are:	ctations from <b>(</b>	commercial thinning (including t	hinning plus f	ïnal harvest) reg	arding the
6ca. Change in growth. <b>Softwood:</b> Ques #2 result: -1.5 m <sup>3</sup> /ha/yr Ques #3 result: -1.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -1.5 m <sup>3</sup> /ha/yr Ques #3 result: -1.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	-1.5 m <sup>3</sup> /ha/yr -1.5 m <sup>3</sup> /ha/yr
6cb. Length of time this change in growth la Softwood: Ques #2 result: 20 years Ques #3 result: 20 years	ast. Mixedwood:	Ques #2 result: 20 years Ques #3 result: 20 years	Hardwood:	Ques #2 result: Ques #3 result:	15 years 15 years
6cc. Change in rotation based on harvestabl Softwood: Ques #2 result: -5 years Ques #3 result: -5 years	e tree size. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
6cd. Change in rotation based on maximum Softwood: Ques #2 result: 10 years Ques #3 result: 10 years	MAI. Mixedwood:	Ques #2 result: 10 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
<b>7.</b> From Questionnaires #2, and #3 the res given below.	sults regarding	genetic improvement of regener	ated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.8 m <sup>3</sup> /ha/yr
Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	$1.0 \text{ m}^{3/\text{ha/yr}}$
7b. Change in rotation expected based on h Softwood: Ques #2 result: -5 years Ques #3 result: -5 years	narvestable tree Mixedwood:	e size. Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-10 years -10 years
7c. Change in rotation expected based on M	Maximum MA	I.			

·····8······		
<b>Softwood:</b> Ques #2 result: -5 years	<b>Mixedwood:</b> Ques #2 result: -5 years	<b>Hardwood:</b> Ques #2 result: -10 years
Ques #3 result: -5 years	Ques #3 result: -5 years	Ques #3 result: -10 years

## 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

1b. What proportion of the area is managed by uneven-aged management.										
<b>Softwood:</b> Ques #2 result: NA%	Mixedwood:	Ques #2 result:	NA%	Hardwood:	Ques #2 result:	NA%				
Ques #3 result: 10%		Ques #3 result:	0%		Ques #3 result:	0%				
1c. Growth per ha/year on areas managed by uneven-aged management.										
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/y	r Mixedwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr				
Oues #3 result: $1.8 \text{ m}^3/\text{ha/ya}$		Ques #3 result.	NA m <sup>3</sup> /ha/vr		Ques #3 result:	$NA m^{3/ha/vr}$				
		Ques no result.	1471 III /IId/yi		Ques "5 result.	i vi i ii /iiu/yi				
1d. After-cut growing stock level left on areas managed by uneven-aged management.										
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha	Mixedwood:	Ques #2 result:	NA m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha				
Oues #3 result: $150 \text{ m}^3/\text{ha}$		Ques #3 result	NA m <sup>3</sup> /ha		Ques #3 result:	NA m <sup>3</sup> /ha				
		Ques "5 result.	1 17 1 III / IIu		Ques "5 result.	i vi i iii /iiu				
1e Average cutting cycle used on areas managed by uneven-aged management?										
Softwood: Oues #2 result: NA vears Mixedwood: Oues #2 result: NA vears Hardwood: Oues #2 result: NA vears										
Ques #3 result: 30 years		Oues #3 result: 1	NA years		Oues #3 result:	NA years				
			5			5				
2. From Questionnaires #2 and #3 the results regarding <b>fertilization</b> of existing stands have been aggregated and are given below.										
Figures are based on one-time appl	ications		•							
2a. Stand age range when fertilization	could take place.									
Softwood: Ques #2 result: NA & NA yrs old	Mixedwood:	Ques #2 result: NA	A & NA yrs old	Hardwood: (	Ques #2 result: NA	A & NA yrs old				
Ques #3 result: 0 & 30 yrs old		Ques #3 result: 0 &	& 30 yrs old	Ç	Ques #3 result: $0 \delta$	20 yrs old				
<b>Ch</b> Date of fortilizon (log/ho) and listing	-									
20. Kate of fertilizer (kg/na) application.										
Oues #2 result: NA kg/lla	witzeuwood:	Ques $\#2$ result: 1	NA kg/lia		Ques $\#2$ result:	NA kg/lia				
Ques #5 result. INA kg/lla		Ques #5 lesult: I	NA Kg/lia		Ques #5 lesuit:	INA Kg/IIa				
2c.	For sites distinguished as Good, Mediu	um and Poor, t	he proportion of sites that would b	e fertilized.	#2 magnity NIA 0/					
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GOO	Ques #2 result: 10%	G	Ques #2 result: 10%	Ques	#2 result: 1\A%					
2d.	Expected increase in growth (m3/ha/yr	).								
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	: Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr				
	Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	NA m <sup>3</sup> /ha/yr				
2e. Soft	Length of time the increased growth w wood: Ques #2 result: NA years Ques #3 result: 15 years	ould last (year <b>Mixedwood:</b>	rs). 2 Ques #2 result: NA years 2 Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years				
3.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comr ean of respons	g indicated this topic had to be splinents on round 2 again emphasize sets to round 2 and 3 are given belo	t into several o immature star w.	categories and th ads only. The rea	at thinning sults below				
3a.	For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utili	zation) regard	ing the following	g are:				
3aa.	Change in growth.									
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr				
	Ques #3 result: $-0.5 \text{ m}^3/\text{ha/yr}$		Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.5 m <sup>3</sup> /ha/yr				
3ab. <b>Soft</b>	Length of time this change in growth v wood: Ques #2 result: NA years Ques #3 result: 15 years	vould last. <b>Mixedwood</b> :	: Ques #2 result: NA years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years 10 years				
3ac. Soft	Change in rotation based on harvestabl wood: Oues #2 result: NA years	e tree size. Mixedwood:	: Oues #2 result: NA years	Hardwood:	Oues #2 result:	NA vears				
	Ques #3 result: -5 years		Ques #3 result: -5 years		Ques #3 result:	-5 years				
3ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: NA years Ques #3 result: -10 years	MAI. Mixedwood:	: Ques #2 result: NA years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -10 years				
3b.	For existing immature stands expectati the following are:	ons from <b>juve</b>	nile spacing/pre-commercial thi	nning (assumi	ng no utilization	) regarding				
3ba.	Change in growth.									
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	: Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr				
	Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.5 m <sup>3</sup> /ha/yr				
3bb.	Length of time this change in growth la	asted.								
Soft	wood: 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: Ques #3 result:	NA years 10 years				
3bc.	Change in rotation based on harvestabl	e tree size.								
Soft	wood: 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: Ques #3 result:	NA years -5 years				
3bd.	. Change in rotation based on maximum	MAI.								
Soft	wood: 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: Ques #3 result:	NA years 0 years				

3ca.	Change in	growth.
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<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr Ques #3 result: -1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr Ques #3 result: -1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	NA m <sup>3</sup> /ha/yr -1.0 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la Softwood: Ques #2 result: NA years Ques #3 result: 20 years	asted. Mixedwood:	Ques #2 result: NA years Ques #3 result: 20 years	Hardwood:	Ques #2 result: Ques #3 result:	15 years 20 years
3cc. Change in rotation based on harvestabl Softwood: Ques #2 result: NA years Ques #3 result: -5 years	e tree size. Mixedwood:	Ques #2 result: NA years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -5 years
3cd. Change in rotation based on maximum Softwood: Ques #2 result: NA years Ques #3 result: 10 years	MAI. <b>Mixedwood:</b>	Ques #2 result: NA years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years 5 years

### **REGENERATED STANDS**

- Growth (MAI) of regenerated stands for softwood, mixedwood and hardwood. 4.
- From Questionnaires #1, #2 and #3, aggregate (mean) responses from survey participants about growth of regenerated 4a. 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%	Mixedwood:	Ques #2	result:	NA%	Hardwood:	Ques #2 result: N	NA%
	Ques #3 result: 20%		Ques #3	result:	20%		Ques #3 result: N	JA%

m<sup>3</sup>/ha/yr

Growth per ha/year expected on areas that will be managed by uneven-aged management. 4c.

<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr
Ques #3 result: 2.3 m <sup>3</sup> /ha/yr	Ques #3 result: 2.3 m <sup>3</sup> /ha/yr	Ques #3 result: NA m <sup>3</sup> /ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by unev	en-aged mana	agement.	
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha
	Ques #3 result: 150 m <sup>3</sup> /ha		Ques #3 result: 150 m <sup>3</sup> /ha		Ques #3 result:	NA m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas th wood: Ques #2 result: NA years Ques #3 result: 25 years	at will be mana Mixedwood:	aged by uneven-aged management Ques #2 result: NA years Ques #3 result: 25 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
5.	From Questionnaires #2 and #3 the res below. Figures are based on one-time	ults regarding tapplications.	fertilization of regenerated stands	have been ag	ggregated and are	given
5a. Softv	Stand age range when fertilization wou wood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old	ıld take place. Mixedwood	: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old	Hardwood	Ques #2 result: 1 Ques #3 result: 0	NA & NA yrs old ) & 20 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	NA kg/ha NA kg/ha
5c. Goo	For sites distinguished as Good, Mediu d: Ques #2 result: NA% Ques #3 result: 10%	um and Poor, th <b>Medium:</b> Qu Qu	nat proportion of sites that would b nes #2 result: NA% nes #3 result: 10%	e fertilized. <b>Poor:</b> Ques Ques	#2 result: NA% #3 result: NA%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
	Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	NA m <sup>3</sup> /ha/yr
5e. Soft	Length of time the increased growth in wood: Ques #2 result: NA years Ques #3 result: 15 years	dicated above a <b>Mixedwood:</b>	last (years). Ques #2 result: NA years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comm ean of response	indicated this topic had to be split nents on round 2 again emphasize es to round 2 and 3 are given below	t into several o immature star w.	categories and that and s only. The res	at thinning sults below
6a.	For regenerated immature stands, expe	ctations from <b>c</b>	eleaning/brushing (assuming no u	tilization) reg	garding the follow	ving are:
баа.	Change in growth.					
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	0.5 m <sup>3</sup> /ha/yr
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: NA years Ques #3 result: 15 years	asted. Mixedwood:	Ques #2 result: NA years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years 10 years
6ac. Soft	Change in rotation based on harvestabl wood: Ques #2 result: NA years Ques #3 result: -5 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: NA years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -5 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: NA years Ques #3 result: -10 years	MAI. <b>Mixedwood:</b>	Ques #2 result: NA years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -10 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.5 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth h	asted.				
Softwood: Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: 20 years		Ques #3 result: 20 years		Ques #3 result:	10 years
6bc. Change in rotation based on harvestable	le tree size.				
<b>Softwood:</b> 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
6bd. 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: 0 years		Ques #3 result: 0 years		Ques #3 result:	0 years
6c. For regenerated immature stands, expe following are:	ectations from <b>(</b>	commercial thinning (including t	thinning plus f	ïnal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Oues #2 result: NA m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result: NA $m^3/ha/vr$	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/vr
Oues #3 result: $-1.0 \text{ m}^3/\text{ha/vr}$		Ques #3 result: $-1.0 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$-1.0 \text{ m}^{3/\text{ha/yr}}$
		Ques #5 lesult. 1.0 hi /ha/yi		Ques "5 lesuit.	1.0 III / IIu/ yi
6cb. Length of time this change in growth l	ast.				
Softwood: Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: 20 years		Ques #3 result: 20 years		Ques #3 result:	20 years
6cc. Change in rotation based on harvestable	le tree size.				
Softwood: Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: -5 years		Ques #3 result: -5 years		Ques #3 result:	-5 years
6cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> 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
7. From Questionnaires #2, and #3 the re given below.	sults regarding	genetic improvement of regener	rated stands ha	we been aggrega	ted and are
7a Change in MAI appacted from greater	improvement				
Ya. Change in MAI expected from greater	Mino dance de	Oran #2 marsh NA m 3/h a / m	Handmaad	0	NA
Softwood: Ques #2 result: NA m <sup>3</sup> /na/yr	Mixeawood:	Ques #2 result: NA m <sup>2</sup> /na/yr	Hardwood:	Ques #2 result:	NA m <sup>2</sup> /na/yr
Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: $0.5 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$1.0 \text{ m}^{3/\text{ha/yr}}$
7b. Change in rotation expected based on l	harvestable tree	e size.			
<b>Softwood:</b> 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:	-15 years
7c. Change in rotation expected based on 1	Maximum MA	I.			
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:	-20 years

# 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.

	Sof	twood			Mixe	dwood		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

1b. What proportion of the area is manage	l by uneven-aged manageme	nt.							
<b>Softwood:</b> Ques #2 result: NA%	Mixedwood: Ques #2 result	t: NA% Hardwood:	: Ques #2 result:	NA%					
Ques #3 result: 10%	Ques #3 resul	t: 10%	Ques #3 result:	0%					
1c. Growth per ha/year on areas managed	ov uneven-aged management								
Softwood: Ques #2 result: NA m <sup>3</sup> /ha/vr	Mixedwood: Quas #2 rasul	t: NA m <sup>3</sup> /ha/yr Hardwood	Ouos #2 rosult:	NA m <sup>3</sup> /ha/yr					
Softwood. Ques #2 result. INA III-/III/yr	Wilkedwood. Ques #2 Tesu		Ques $\#2$ lesuit.	$1 \times 11^{-7} / 11 a / y1$					
Ques #3 result: $2.5 \text{ m}^3/\text{ha/yr}$	Ques #3 resul	t: $2.2 \text{ m}^{3}/\text{ha/yr}$	Ques #3 result:	NA m <sup>3</sup> /ha/yr					
1d. After-cut growing stock level left on areas managed by uneven-aged management.									
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha	Mixedwood: Ques #2 result	t: NA m <sup>3</sup> /ha Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha					
Oues #3 result: $150 \text{ m}^3/\text{ha}$	Ques #3 resul	t: $150 \text{ m}^{3}/\text{ha}$	Ques #3 result:	NA m <sup>3</sup> /ha					
Ques no result. 150 m /m	Ques no resul		Ques no result.	i (i i iii ) iiu					
1e. Average cutting cycle used on areas m	anaged by uneven-aged mana	igement?							
<b>Softwood:</b> Ques #2 result: NA years	Mixedwood: Ques #2 result	t: NA years Hardwood:	Ques #2 result:	NA years					
Ques #3 result: 30 years	Ques #3 resul	t: 30 years	Ques #3 result:	NA years					
2. From Questionnaires #2 and #3 the res	ults regarding <b>fertilization</b> o	f existing stands have been aggre	egated and are gi	ven below.					
Figures are based on one-time applicat	ons								
2a Stand age range when fertilization cou	d take place								
Softwood: Oues #2 result: NA & NA vrs old	Mixedwood: Oues #2 resul	t: NA & NA vrs old Hardwood	<b>I:</b> Oues #2 result:	NA & NA vrs old					
Ques #3 result: 0 & 30 yrs old	Ques #3 resul	a: 0 & 30 yrs old	Ques #3 result:	0 & 29 yrs old					
2b. Rate of fertilizer (kg/ha) application.			0 10	NTA 1 /1					
Softwood: Ques #2 result: NA kg/ha	Mixedwood: Ques #2 resul	t: NA kg/ha Hardwood:	Ques #2 result:	NA kg/ha					
Ques #3 result: NA kg/ha	Ques #3 resul	t: NA kg/ha	Ques #3 result:	NA kg/ha					

2c.	For sites distinguished as Good, Mediu	um and Poor, th	he proportion of sites that would b	e fertilized.		
Goo	d: Ques #2 result: NA% Ques #3 result: 10%	<b>Medium:</b> Q Q	ues #2 result: NA% Jues #3 result: 10%	Poor: Ques Ques	#2 result: NA% #3 result: 0%	
2d.	Expected increase in growth (m3/ha/yr	.).				
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
	Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	NA m <sup>3</sup> /ha/yr
2e. Soft	Length of time the increased growth w wood: Ques #2 result: NA years Ques #3 result: 10 years	ould last (year <b>Mixedwood:</b>	s). Ques #2 result: NA years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
3.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	arding thinning Several comm ean of respons	indicated this topic had to be splinents on round 2 again emphasize es to round 2 and 3 are given belo	t into several o immature star w.	categories and th nds only. The re-	at thinning sults below
3a.	For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utili	zation) regard	ing the following	g are:
3aa.	Change in growth.					
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.5 \text{ m}^3/\text{ha/yr}$
3ab. <b>Soft</b>	Length of time this change in growth w wood: Ques #2 result: NA years Ques #3 result: 15 years	vould last. <b>Mixedwood:</b>	Ques #2 result: NA years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years 10 years
3ac. <b>Soft</b>	Change in rotation based on harvestabl wood: Ques #2 result: NA years Ques #3 result: -10 years	le tree size. Mixedwood:	Ques #2 result: NA years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -5 years
3ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: NA years Ques #3 result: -10 years	MAI. <b>Mixedwood:</b>	Ques #2 result: NA years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -5 years
3b.	For existing immature stands expectation the following are:	ons from <b>juve</b>	nile spacing/pre-commercial thi	<b>nning</b> (assumi	ing no utilization	) regarding
3ba.	Change in growth.					
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
	Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.8 m <sup>3</sup> /ha/yr
3bb. <b>Soft</b>	Length of time this change in growth h wood: Ques #2 result: NA years Ques #3 result: 15 years	asted. Mixedwood:	Ques #2 result: NA years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years 10 years
3bc. Soft	Change in rotation based on harvestabl wood: Ques #2 result: NA years Oues #3 result: -10 years	le tree size. <b>Mixedwood:</b>	Ques #2 result: NA years Oues #3 result: -10 years	Hardwood:	Ques #2 result: Oues #3 result:	NA years -10 years
3bd. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: NA years Ques #3 result: 0 years	MAI. <b>Mixedwood:</b>	Ques #2 result: NA years Ques #3 result: 0 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years 0 years

3ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
Ques #3 result: -1.5 m <sup>3</sup> /ha/yr		Ques #3 result: -1.5 m <sup>3</sup> /ha/yr		Ques #3 result:	-1.0 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	sted.				
<b>Softwood:</b> Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	15 years
Ques #3 result: 15 years		Ques #3 result: 15 years		Ques #3 result:	10 years
3cc. Change in rotation based on harvestable	e tree size.				
<b>Softwood:</b> Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: -5 years		Ques #3 result: -5 years		Ques #3 result:	-5 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> 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

### **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.

	Sof	twood			Mixe	dwood			Ha	ırdwood	
Age	Que#1	Que#2	Que#3	Age	Que#1	Que#2	Que#3	Age	Que#1	Que#2	Que#3
	MAI	MAI	MAI		MAI	MAI	MAI		MAI	MAI	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 man	naged by uneven-aged management.
Softwood: Ques #2 result: NA%	Mixedwood: Ques #2 result: NA%
Ques #3 result: 20%	Ques #3 result: 10%

Hardwood: Ques #2 result: NA% Ques #3 result: NA%

4c	Growth per ha	/vear expected	l on areas tha	t will be manage	1 by uneven-aged	l management
+c.	Olowin per na	year expected	i on areas ma	u will be manage	a by uneven-agec	i management.

<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr
Ques #3 result: 2.5 m <sup>3</sup> /ha/yr	Ques #3 result: 2.5 m <sup>3</sup> /ha/yr	Ques #3 result: NA m <sup>3</sup> /ha/yr

4d.	After-cut growing stock level expected	l to be left on a	reas that will be managed by unev	en-aged man	agement.	
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha
	Ques #3 result: 150 m <sup>3</sup> /ha		Ques #3 result: 150 m <sup>3</sup> /ha		Ques #3 result:	NA m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas th wood: Ques #2 result: NA years Ques #3 result: 30 years	at will be mana Mixedwood:	aged by uneven-aged management Ques #2 result: NA years Ques #3 result: 30 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
5.	From Questionnaires #2 and #3 the res below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated stands	have been ag	ggregated and are	given
5a. <b>Soft</b>	Stand age range when fertilization wou wood: Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old	ild take place. Mixedwood: ( (	Ques #2 result: NA & NA yrs old Ques #3 result: 0 & 30 yrs old	Hardwood:	Ques #2 result: N Ques #3 result: 0 d	A & NA yrs old & 10 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	NA kg/ha NA kg/ha
5c. <b>Goo</b>	For sites distinguished as Good, Mediu d: Ques #2 result: NA% Ques #3 result: 20%	um and Poor, th <b>Medium:</b> Qu Qu	nat proportion of sites that would b nes #2 result: NA% nes #3 result: 10%	e fertilized. <b>Poor:</b> Ques Ques	#2 result: NA% #3 result: NA%	
5d.	Expected increase in growth (m3/ha/yr	.).				
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr Ques #3 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr Ques #3 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	NA m <sup>3</sup> /ha/yr NA m <sup>3</sup> /ha/yr
5e. Soft	Length of time the increased growth in wood: Ques #2 result: NA years Ques #3 result: 15 years	dicated above <b>Mixedwood:</b>	last (years). Ques #2 result: NA years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	arding thinning Several comm ean of response	indicated this topic had to be split nents on round 2 again emphasize es to round 2 and 3 are given below	t into several o immature star w.	categories and the nds only. The res	at thinning sults below
6a.	For regenerated immature stands, expe	ectations from	cleaning/brushing (assuming no u	tilization) reg	garding the follow	ving are:
6aa.	Change in growth.					
Soft	wood: Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	0.5 m <sup>3</sup> /ha/yr
6ab. <b>Soft</b>	Length of time this change in growth lawood: Ques #2 result: NA years Ques #3 result: 15 years	asted. Mixedwood:	Ques #2 result: NA years Ques #3 result: 15 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years 10 years
6ac. Soft	Change in rotation based on harvestable wood: Ques #2 result: NA years Ques #3 result: -10 years	le tree size. Mixedwood:	Ques #2 result: NA years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -5 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: NA years Ques #3 result: -10 years	MAI. <b>Mixedwood:</b>	Ques #2 result: NA years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	NA years -5 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.8 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth la	asted.				
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
6bc. Change in rotation based on harvestabl	le 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:	-10 years
6bd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: 0 years		Ques #3 result: 0 years		Ques #3 result:	0 years
6c. For regenerated immature stands, expe following are:	ctations from <b>(</b>	commercial thinning (including t	hinning plus f	inal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Oues #2 result: NA m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result: NA m <sup>3</sup> /ha/vr	Hardwood:	Oues #2 result:	NA m <sup>3</sup> /ha/vr
Oues #3 result: $-1.5 \text{ m}^3/\text{ha/vr}$		Oues #3 result: $-1.5 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$-1.0 \text{ m}^{3/\text{ha/vr}}$
				Ques no result.	1.0 III / IIu/ JI
6cb. Length of time this change in growth la	ast.				
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
6cc. Change in rotation based on harvestabl	e tree size.				
Softwood: Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: -5 years		Ques #3 result: -5 years		Ques #3 result:	-5 years
6cd. 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
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regener	ated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Oues #2 result: NA m <sup>3</sup> /ha/vr	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha/vr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/vr
Oues #3 result: $0.3 \text{ m}^3/\text{ha/yr}$		Ques #3 result: $0.3 \text{ m}^3/\text{ha/yr}$		Ques #2 result:	$0.5 \text{ m}^3/\text{ha/yr}$
				Ques #5 result.	0.5 m /ma/yr
7b. Change in rotation expected based on h	harvestable tree	e size.			
Softwood: Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: -5 years		Ques #3 result: -5 years		Ques #3 result:	-5 years
7c. Change in rotation expected based on I	Maximum MA	I.			
Softwood: Ques #2 result: NA years	Mixedwood:	Ques #2 result: NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: -5 years		Ques #3 result: -5 years		Ques #3 result:	-10 years

## 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.

	Sof	twood		Mixedwood						Ha	ardwood	
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	1.7	100	1.9	1.9	1.9		86*	2.1	2.2	2.3
107	1.0		1.0	*	1.7	1.7	1.9		00	2.1	2.2	2.5
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

1b. What proportion of the area is manage	d by uneven-aged management.									
Softwood: Ques #2 result: 0%	Mixedwood: Ques #2 result: 1%	Hardwood: Ques #2 result: 0%								
Ques #3 result: 1%	Oues #3 result: 4%	Oues #3 result: 0%								
1c. Growth per ha/year on areas managed	by uneven-aged management.									
<b>Softwood:</b> Ques #2 result: 1.7 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: 2.2 m <sup>3</sup> /ha/yr								
Oues #3 result: $1.5 \text{ m}^3/\text{ha/yr}$	Oues #3 result: $1.7 \text{ m}^3/\text{ha/vr}$	Oues #3 result: $1.7 \text{ m}^3/\text{ha/vr}$								
1d. After-cut growing stock level left on areas managed by uneven-aged management.										
<b>Softwood:</b> Ques #2 result: 90 m <sup>3</sup> /ha	<b>Mixedwood:</b> Ques #2 result: 102 m <sup>3</sup> /ha	<b>Hardwood:</b> Ques #2 result: NA m <sup>3</sup> /ha								
Ques #3 result: 68 m <sup>3</sup> /ha	Oues #3 result: $90 \text{ m}^3/\text{ha}$	Oues #3 result: $27 \text{ m}^3/\text{ha}$								
1e. Average cutting cycle used on areas managed by uneven-aged management?										
<b>Softwood:</b> Ques #2 result: 35 years	<b>Mixedwood:</b> Ques #2 result: 31 years	Hardwood: Ques #2 result: 20 years								
Ques #3 result: 35 years	Ques #3 result: 43 years	Ques #3 result: 17 years								
		-								
2. From Questionnaires #2 and #3 the res	ults regarding fertilization of existing stands	have been aggregated and are given below.								
Figures are based on one-time applicat	ions									
2a. Stand age range when fertilization cou	ld take place.									
Softwood: Ques #2 result: 25 & 76 yrs old	Mixedwood: Ques #2 result: 35 & 78 yrs old	Hardwood: Ques #2 result: 17 & 51 yrs old								
Ques #3 result: 37 & 72 yrs old	Ques #3 result: 41 & 75 yrs old	Ques #3 result: 25 & 57 yrs old								
2b Rate of fertilizer (kg/ha) application										
<b>Softwood:</b> Oues #2 result: 65 kg/ha	<b>Mixedwood:</b> Oues #2 result: 50 kg/ha	<b>Hardwood:</b> Oues #2 result: 20 kg/ha								
Oues #3 result: $74 \text{ kg/ha}$	Ques #3 result: 56 kg/ha	Oues $#3$ result: 36 kg/ha								
	<u> </u>									

2c. For sites distinguished as Good, Media Good: Ques #2 result: 10%	um and Poor, th Medium: Q	ne proportion of sites that would ues #2 result: 3%	be fertilized. <b>Poor:</b> Ques	#2 result: 8%
Ques #3 result: 9%	Ç	ues #3 result: 6%	Ques	#3 result: 8%
2d. Expected increase in growth (m3/ha/y	r).			
<b>Softwood:</b> Ques #2 result: 1.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 3.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 3.2 m <sup>3</sup> /ha/yr
Ques #3 result: 1.3 m <sup>3</sup> /ha/yr		Ques #3 result: 1.9 m <sup>3</sup> /ha/yr		Ques #3 result: $2.0 \text{ m}^3/\text{ha/yr}$
		-		
2e. Length of time the increased growth w	ould last (year	s).	Houdencode	O
Softwood: Ques #2 result: 9 years Oues #3 result: 8 years	Mixeawooa:	Ques #2 result: 8 years Ques #3 result: 8 years	Hardwood:	Ques #2 result: 12 years Ques #3 result: 8 years
Ques no result o years				Ques no result. O years
<b>3.</b> Comments from Questionnaire #1 regar would occur only on immature stands. apply only to immature stands. The mature stands is the mature stands of the standard	arding thinning Several comm nean of respons	indicated this topic had to be spl nents on round 2 again emphasize es to round 2 and 3 are given belo	it into several o e immature star ow.	categories and that thinning ads only. The results below
3a. For existing immature stands, expectat	tions from <b>clea</b>	ning/brushing (assuming no util	ization) regard	ing the following are:
3aa. Change in growth.				
<b>Softwood:</b> Oues #2 result: $0.5 \text{ m}^3/\text{ha/vr}$	Mixedwood:	Oues #2 result: 0.6 m <sup>3</sup> /ha/vr	Hardwood:	Oues #2 result: $0.6 \text{ m}^3/\text{ha/vr}$
Oues #3 result: $0.4 \text{ m}^3/\text{ha/vr}$		Oues #3 result: $1.0 \text{ m}^3/\text{ha/vr}$		Oues #3 result: $0.7 \text{ m}^3/\text{ha/vr}$
3ab. Length of time this change in growth v	would last.	0	TT J J -	0
Softwood: Ques #2 result: 7 years	Mixedwood:	Ques #2 result: 7 years Oues #3 result: 9 years	Hardwood:	Ques #2 result: 8 years
Ques «5 result. > years		Ques "5 result. 7 years		Ques no result. O years
3ac. Change in rotation based on harvestab	le tree size.			
<b>Softwood:</b> Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -8 years	Hardwood:	Ques #2 result: -8 years
Ques #3 result: -9 years		Ques #3 result: -8 years		Ques #3 result: -8 years
3ad. Change in rotation based on maximum	n MAI.			
<b>Softwood:</b> Ques #2 result: -6 years	Mixedwood:	Ques #2 result: -6 years	Hardwood:	Ques #2 result: -5 years
Ques #3 result: -6 years		Ques #3 result: -3 years		Ques #3 result: -3 years
3b. For existing immature stands expectate the following are:	ions from <b>juve</b>	nile spacing/pre-commercial th	<b>inning</b> (assumi	ing no utilization) regarding
3ba. Change in growth.				
<b>Softwood:</b> Ques #2 result: 0.1 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.2 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 0.2 m <sup>3</sup> /ha/yr
Ques #3 result: 0.2 m <sup>3</sup> /ha/yr		Ques #3 result: 0.2 m <sup>3</sup> /ha/yr		Ques #3 result: $0.2 \text{ m}^3/\text{ha/yr}$
		-		
3bb. Length of time this change in growth I	asted.		Handward	Oues #2 regults 0 years
Oues #3 result: 9 years	wiixeuwoou:	Ques #2 result: 8 years Oues #3 result: 9 years	naruwoou:	Ques #2 result: 9 years Oues #3 result: 8 years
				Ques no result o jours
3bc. Change in rotation based on harvestab	le tree size.			
<b>Softwood:</b> Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -8 years	Hardwood:	Ques #2 result: -6 years
Ques #3 result: -8 years		Ques #5 result: -5 years		Ques #5 result: -4 years
3bd. Change in rotation based on maximum	n MAI.			
<b>Softwood:</b> Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 2 years	Hardwood:	Ques #2 result: 2 years
Ques #3 result: -1 years		Ques #3 result: 0 years		Ques #3 result: 0 years

3ca. Change in growth. <b>Softwood:</b> Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.1 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.1 m <sup>3</sup> /ha/yr
Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	1.0 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	asted.				
Softwood: Ques #2 result: 12 years	Mixedwood:	Ques #2 result: 11 years	Hardwood:	Ques #2 result:	11 years
Ques #3 result: 12 years		Ques #3 result: 11 years		Ques #3 result:	10 years
3cc. Change in rotation based on harvestabl	e tree size.				
<b>Softwood:</b> Ques #2 result: -7 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-2 years
Ques #3 result: -10 years		Ques #3 result: -8 years		Ques #3 result:	-5 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 2 years	Mixedwood:	Ques #2 result: 2 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: 1 years		Ques #3 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.

	Sof	twood			Mixe	dwood			Har	dwood	
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

+0. Troportion of the area that w	vin be managed by the ven aged management.			
<b>Softwood:</b> Ques #2 result: 2%	Mixedwood: Ques #2 result: 6%	Hardwood:	Ques #2 result:	13%
Ques #3 result: 2%	Ques #3 result: 12%		Ques #3 result:	2%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/yr	Mixedy
Ques #3 result: 1.6 m <sup>3</sup> /ha/yr	

wood: Ques #2 result: 2.0 m<sup>3</sup>/ha/yr Ques #3 result: 1.8 m<sup>3</sup>/ha/yr Hardwood: Ques #2 result: 2.0 m<sup>3</sup>/ha/yr Ques #3 result: 1.7 m<sup>3</sup>/ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by un	neven-aged mana	igement.
Soft	wood: Ques #2 result: 12 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 103 m <sup>3</sup> /ha	Hardwood:	Ques #2 result: NA m <sup>3</sup> /ha
	Ques #3 result: 40 m <sup>3</sup> /ha		Ques #3 result: 86 m <sup>3</sup> /ha		Ques #3 result: 36 m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas the wood: Ques #2 result: 32 years Ques #3 result: 34 years	at will be mana Mixedwood:	aged by uneven-aged managem Ques #2 result: 29 years Ques #3 result: 29 years	ent. Hardwood:	Ques #2 result: 20 years Ques #3 result: 20 years
5.	From Questionnaires #2 and #3 the rest below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated star	nds have been ag	gregated and are given
5a. <b>Soft</b> v	Stand age range when fertilization wou wood: Ques #2 result: 40 & 88 yrs old Ques #3 result: 41 & 76 yrs old	ld take place. Mixedwood: ( (	Ques #2 result: 43 & 97 yrs old Ques #3 result: 42 & 78 yrs old	Hardwood: Ques	#2 result: 20 & 63 yrs old #3 result: 28 & 59 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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. <b>Goo</b>	For sites distinguished as Good, Mediu d: Ques #2 result: 20% Ques #3 result: 11%	m and Poor, th Medium: Qu Qu	nat proportion of sites that woul ues #2 result: 5% ues #3 result: 5%	d be fertilized. <b>Poor:</b> Ques Ques	#2 result: 13% #3 result: 9%
5d.	Expected increase in growth (m3/ha/yr	).			
Soft	wood: Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 0.9 m <sup>3</sup> /ha/yr
	Ques #3 result: 1.0 m <sup>3</sup> /ha/yr		Ques #3 result: 1.2 m <sup>3</sup> /ha/yr		Ques #3 result: $1.0 \text{ m}^3/\text{ha/yr}$
5e. <b>Soft</b>	Length of time the increased growth in wood: Ques #2 result: 12 years Ques #3 result: 9 years	dicated above Mixedwood:	last (years). 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 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comm ean of response	indicated this topic had to be s nents on round 2 again emphasi es to round 2 and 3 are given be	plit into several o ze immature star elow.	categories and that thinning ds only. The results below
6a.	For regenerated immature stands, expe	ctations from <b>c</b>	cleaning/brushing (assuming n	o utilization) reg	arding the following are:
6aa.	Change in growth.				
Soft	wood: Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 0.7 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.4 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 8 years Ques #3 result: 8 years	asted. Mixedwood:	Ques #2 result: 8 years Ques #3 result: 8 years	Hardwood:	Ques #2 result: 9 years Ques #3 result: 7 years
6ac. Soft	Change in rotation based on harvestabl wood: Ques #2 result: -8 years Ques #3 result: -7 years	e tree size. Mixedwood:	Ques #2 result: -7 years Ques #3 result: -7 years	Hardwood:	Ques #2 result: -7 years Ques #3 result: -6 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -7 years Ques #3 result: -5 years	MAI. <b>Mixedwood:</b>	Ques #2 result: -7 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: -5 years Ques #3 result: -5 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: 0.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.4 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.4 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 0.2 m <sup>3</sup> /ha/yr		Ques #3 result: 0.3 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.3 \text{ m}^3/\text{ha/yr}$
6bb. Length of time this change in growth l	asted.				
<b>Softwood:</b> Ques #2 result: 9 years	Mixedwood:	Ques #2 result: 9 years	Hardwood:	Ques #2 result:	11 years
Ques #3 result: 10 years		Ques #3 result: 9 years		Ques #3 result:	8 years
6bc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: -8 years	Mixedwood:	Ques #2 result: -7 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -8 years		Ques #3 result: -8 years		Ques #3 result:	-7 years
6bd. Change in rotation based on maximum	n MAI.				
Softwood: Ques #2 result: 2 years	Mixedwood:	Ques #2 result: 2 years	Hardwood:	Ques #2 result:	2 years
Ques #3 result: -1 years		Ques #3 result: -1 years		Ques #3 result:	-1 years
6c. For regenerated immature stands, expe following are:	ectations from <b>(</b>	commercial thinning (including	thinning plus f	inal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Oues #2 result: 1.1 m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result: $1.1 \text{ m}^3/\text{ha/vr}$	Hardwood:	Ques #2 result:	$1.1 \text{ m}^{3/\text{ha/vr}}$
Oues #3 result: $1.0 \text{ m}^{3/\text{ha/yr}}$		Oues #3 result: $1.0 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$1.0 \text{ m}^{3/\text{ha/yr}}$
				Ques no result.	1.0 m /ma/yr
6cb. Length of time this change in growth l	ast.				
Softwood: Ques #2 result: 12 years	Mixedwood:	Ques #2 result: 11 years	Hardwood:	Ques #2 result:	12 years
Ques #3 result: 12 years		Ques #3 result: 11 years		Ques #3 result:	11 years
6cc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: -7 years	Mixedwood:	Ques #2 result: -4 years	Hardwood:	Ques #2 result:	-2 years
Ques #3 result: -8 years		Ques #3 result: -7 years		Ques #3 result:	-5 years
6cd. Change in rotation based on maximum	n MAI.				
Softwood: Ques #2 result: 2 years	Mixedwood:	Ques #2 result: 2 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: 0 years		Ques #3 result: -1 years		Ques #3 result:	-1 years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regene	erated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Oues #2 result: 0.9 m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result: $1.0 \text{ m}^3/\text{ha/vr}$	Hardwood:	Oues #2 result:	$1.1 \text{ m}^{3/\text{ha/vr}}$
Oues #3 result: $0.8 \text{ m}^3/\text{ha/yr}$		Ques #3 result: $0.9 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$1.2 \text{ m}^{3/\text{ha/yr}}$
				Ques no result.	1.2 m /ma/yr
7b. Change in rotation expected based on	harvestable tree	e size.		0 110 1	10
Softwood: Ques #2 result: -12 years	Mixedwood:	Ques #2 result: -12 years	Hardwood:	Ques #2 result:	-10 years
Ques #3 result: -11 years		Ques #3 result: -11 years		Ques #3 result:	-13 years
7c. Change in rotation expected based on	Maximum MA	I.			
<b>Softwood:</b> Ques #2 result: -2 years	Mixedwood:	Ques #2 result: -1 years	Hardwood:	Ques #2 result:	-3 years
Ques #3 result: -2 years		Ques #3 result: -2 years		Ques #3 result:	-3 years

## 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.

	Sof	twood			Mixe	dwood		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

1b. What proportion of the area is manage	d by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 6%	Mixedwood: Ques #2 result: 13%	Hardwood: Ques #2 result: 19%
Ques #3 result: NA%	Ques #3 result: 9%	Ques #3 result: 10%
1c. Growth per ha/year on areas managed	by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 1.8 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 2.2 m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: 2.3 m <sup>3</sup> /ha/yr
Ques #3 result: $1.6 \text{ m}^3/\text{ha/yr}$	Oues #3 result: $2.0 \text{ m}^3/\text{ha/yr}$	Ques #3 result: $2.4 \text{ m}^3/\text{ha/yr}$
1d. After-cut growing stock level left on a	reas managed by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 54 m <sup>3</sup> /ha	<b>Mixedwood:</b> Ques #2 result: $50 \text{ m}^3/\text{ha}$	Hardwood: Ques #2 result: 57 m <sup>3</sup> /ha
Oues #3 result: $43 \text{ m}^3/\text{ha}$	Oues #3 result: $52 \text{ m}^3/\text{ha}$	Oues #3 result: $57 \text{ m}^3/\text{ha}$
1e. Average cutting cycle used on areas m	anaged by uneven-aged management?	
<b>Softwood:</b> Ques #2 result: 24 years	Mixedwood: Ques #2 result: 24 years	Hardwood: Ques #2 result: 21 years
Ques #3 result: 32 years	Ques #3 result: 29 years	Ques #3 result: 22 years
<b>2.</b> From Questionnaires #2 and #3 the res	ults regarding <b>fertilization</b> of existing stands h	have been aggregated and are given below.
Figures are based on one-time applicat	ions	
2. Stand ago range when fortilization agu	ld taka placa	
Softwood: Oues #2 result: 13 & 41 yrs old	IU IAKE PIACE. Mixedwood: Oues #2 result: 14 & 41 yrs old I	Hardwood: Ques #2 result: 12 & 36 yrs old
Oues #3 result: 14 & 35 vrs old	Oues #3 result: 8 & 33 yrs old	Ques #2 result: $12 \& 30 \text{ yrs old}$ Ques #3 result: $7 \& 30 \text{ yrs old}$
2b Rate of fertilizer (kg/ha) application		

2b. Rate of fertilizer (kg/na) application.		
Softwood: Ques #2 result: 175 kg/ha	Mixedwood: Ques #2 result: 175 kg/ha	Hardwood: Ques #2 result: 175 kg/ha
Ques #3 result: 183 kg/ha	Ques #3 result: 175 kg/ha	Ques #3 result: 175 kg/ha

2c.	For sites distinguished as Good, Mediu	m and Poor, t	he proportion of sites that would be	e fertilized.	
G00	d: Ques #2 result: 31% Ques #3 result: 14%	Medium: (	Ques #2 result: 25%	Poor: Ques	#2 result: 11%
	Ques #3 lesuit. 14%	(	<i>ues #3</i> result. 20%	Ques	#3 lesult. 070
2d.	Expected increase in growth (m3/ha/yr	).			_
Soft	wood: Ques #2 result: 0.9 m <sup>3</sup> /ha/yr	Mixedwood	: Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $0.8 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$
2e. Soft	Length of time the increased growth we wood: Ques #2 result: 10 years Ques #3 result: 9 years	ould last (year Mixedwood	rs). 2 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 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several commean of response	g indicated this topic had to be split nents on round 2 again emphasize ses to round 2 and 3 are given below	t into several o immature star w.	categories and that thinning ads only. The results below
3a.	For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utiliz	zation) regard	ing the following are:
3aa.	Change in growth.				
Soft	wood: Oues #2 result: $0.7 \text{ m}^3/\text{ha/vr}$	Mixedwood	: Oues #2 result: $0.4 \text{ m}^3/\text{ha/vr}$	Hardwood:	Oues #2 result: $0.8 \text{ m}^3/\text{ha/vr}$
	Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$
2.1		. 111			
Sab. Soft	wood: 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. Soft	Change in rotation based on harvestabl wood: Ques #2 result: -3 years Ques #3 result: -2 years	e tree size. <b>Mixedwood</b>	Ques #2 result: 2 years	Hardwood:	Ques #2 result: 8 years Ques #3 result: 1 years
	Ques #5 lesuit2 years		Ques #5 lesuit. 1 years		Ques #5 lesuit. 1 years
3ad. Soft	Change in rotation based on maximum wood: Ques #2 result: 0 years Ques #3 result: -1 years	MAI. 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 expectation the following are:	ons from <b>juve</b>	enile spacing/pre-commercial thi	nning (assumi	ng no utilization) regarding
3ba.	Change in growth.				
Soft	wood: Ques #2 result: 0.9 m <sup>3</sup> /ha/yr	Mixedwood	: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 1.1 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$
3bb. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 11 years Ques #3 result: 12 years	asted. Mixedwood	: Ques #2 result: 11 years Ques #3 result: 9 years	Hardwood:	Ques #2 result: 14 years Ques #3 result: 12 years
3bc. Soft	Change in rotation based on harvestabl wood: Ques #2 result: -3 years Ques #3 result: -7 years	e tree size. <b>Mixedwood</b> :	Ques #2 result: 1 years Ques #3 result: -1 years	Hardwood:	Ques #2 result: 1 years Ques #3 result: -1 years
3bd. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -1 years Ques #3 result: -2 years	MAI. Mixedwood	: Ques #2 result: 1 years Ques #3 result: -3 years	Hardwood:	Ques #2 result: 1 years Ques #3 result: -3 years

3ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.2 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.2 m <sup>3</sup> /ha/yı
Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result:	0.7 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	asted.				
<b>Softwood:</b> Ques #2 result: 11 years	Mixedwood:	Ques #2 result: 13 years	Hardwood:	Ques #2 result:	12 years
Ques #3 result: 10 years		Ques #3 result: 8 years		Ques #3 result:	9 years
3cc. Change in rotation based on harvestabl	e tree size.				
<b>Softwood:</b> Ques #2 result: 2 years	Mixedwood:	Ques #2 result: 3 years	Hardwood:	Ques #2 result:	3 years
Ques #3 result: -1 years		Ques #3 result: -3 years		Ques #3 result:	-3 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 3 years	Mixedwood:	Ques #2 result: 2 years	Hardwood:	Ques #2 result:	2 years
Ques #3 result: -2 years		Ques #3 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.

	Sof	twood			Mixe	dwood		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

+0. Troportion of the area that will be	managed by the ven-aged management.	
<b>Softwood:</b> Ques #2 result: 9%	Mixedwood: Ques #2 result: 18%	Hardwood: Ques #2 result: 21%
Ques #3 result: 5%	Ques #3 result: 9%	Ques #3 result: 10%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 1.9 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 2.1 m <sup>3</sup> /ha/yr	Hardwood: Ques #2 result: 2.2 m <sup>3</sup> /ha/yr
Ques #3 result: 1.8 m <sup>3</sup> /ha/yr	Ques #3 result: 2.3 m <sup>3</sup> /ha/yr	Ques #3 result: $2.5 \text{ m}^3/\text{ha/yr}$

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by u	neven-aged mana	agement.
Soft	wood: Ques #2 result: 47 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 47 m <sup>3</sup> /ha	Hardwood:	Ques #2 result: $46 \text{ m}^3/\text{ha}$
	Ques #3 result: 55 m <sup>3</sup> /ha		Ques #3 result: 55 m <sup>3</sup> /ha		Ques #3 result: 55 m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas th wood: Ques #2 result: 24 years Ques #3 result: 22 years	at will be mana Mixedwood:	aged by uneven-aged managem Ques #2 result: 21 years Ques #3 result: 20 years	nent. Hardwood:	Ques #2 result: 21 years Ques #3 result: 20 years
5.	From Questionnaires #2 and #3 the res below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated sta	nds have been ag	gregated and are given
5a. <b>Soft</b> y	Stand age range when fertilization wou vood: Ques #2 result: 13 & 44 yrs old Ques #3 result: 5 & 30 yrs old	Id take place. Iixedwood: Qu Qu	es #2 result: 14 & 45 yrs old es #3 result: 8 & 30 yrs old	Hardwood: Ques Ques	#2 result: 12 & 38 yrs old #3 result: 5 & 30 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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. Goo	For sites distinguished as Good, Mediu d: Ques #2 result: 28% Ques #3 result: 13%	im and Poor, th <b>Medium:</b> Qu Qu	nat proportion of sites that wou nes #2 result: 24% nes #3 result: 20%	ld be fertilized. <b>Poor:</b> Ques Ques	#2 result: 16% #3 result: 0%
5d.	Expected increase in growth (m3/ha/yr	).			
Soft	wood: Ques #2 result: $0.5 \text{ m}^3/\text{ha/yr}$	Mixedwood:	Ques #2 result: $0.6 \text{ m}^3/\text{ha/yr}$	Hardwood:	Ques #2 result: $0.5 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr
5e. <b>Soft</b>	Length of time the increased growth in wood: Ques #2 result: 10 years Ques #3 result: 10 years	dicated above Mixedwood:	last (years). 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 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comm ean of response	indicated this topic had to be s nents on round 2 again emphasi es to round 2 and 3 are given be	plit into several o ize immature star elow.	categories and that thinning ads only. The results below
6a.	For regenerated immature stands, expe	ctations from <b>c</b>	cleaning/brushing (assuming r	no utilization) reg	garding the following are:
6аа.	Change in growth.				
Soft	wood: Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $0.8 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.3 m <sup>3</sup> /ha/yr		Ques #3 result: $0.3 \text{ m}^3/\text{ha/yr}$
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 10 years Ques #3 result: 8 years	asted. Mixedwood:	Ques #2 result: 7 years Ques #3 result: 7 years	Hardwood:	Ques #2 result: 10 years Ques #3 result: 10 years
бас. Soft	Change in rotation based on harvestabl wood: Ques #2 result: 1 years Ques #3 result: -4 years	e tree size. Mixedwood:	Ques #2 result: 2 years Ques #3 result: -1 years	Hardwood:	Ques #2 result: 8 years Ques #3 result: -4 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: 1 years Ques #3 result: -2 years	MAI. Mixedwood:	Ques #2 result: 2 years Ques #3 result: -1 years	Hardwood:	Ques #2 result: 8 years Ques #3 result: -4 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.8 m <sup>3</sup> /ha/yr
Ques #3 result: 0.2 m <sup>3</sup> /ha/yr		Ques #3 result: 0.2 m <sup>3</sup> /ha/yr		Ques #3 result:	0.2 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth la	asted.				
Softwood: Ques #2 result: 14 years	Mixedwood:	Ques #2 result: 13 years	Hardwood:	Ques #2 result:	14 years
Ques #3 result: 10 years		Ques #3 result: 7 years		Ques #3 result:	9 years
6bc. Change in rotation based on harvestabl	le tree size.				
<b>Softwood:</b> Ques #2 result: -2 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: -4 years		Ques #3 result: -2 years		Ques #3 result:	-3 years
6bd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 1 years	Mixedwood:	Ques #2 result: 1 years	Hardwood:	Ques #2 result:	1 years
Ques #3 result: -3 years		Ques #3 result: -1 years		Ques #3 result:	-3 years
6c. For regenerated immature stands, expe following are:	ectations from <b>(</b>	commercial thinning (including t	hinning plus f	inal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Oues #2 result: 0.7 m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result: $0.8 \text{ m}^3/\text{ha/vr}$	Hardwood:	Oues #2 result:	$0.8 \text{ m}^3/\text{ha/vr}$
Oues #3 result: $0.7 \text{ m}^3/\text{ha/vr}$		Ques #3 result: $0.7 \text{ m}^3/\text{ha/vr}$		Ques #3 result:	NA m <sup>3</sup> /ha/yr
				<b>C</b>	, , j -
6cb. Length of time this change in growth la	ast.			0 //0 1	10
Softwood: Ques #2 result: 13 years	Mixedwood:	Ques #2 result: 14 years	Hardwood:	Ques #2 result:	13 years
Ques #5 result: 10 years		Ques #5 result: 11 years		Ques #5 result:	11 years
6cc. Change in rotation based on harvestabl	le tree size.				
<b>Softwood:</b> Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 1 years	Hardwood:	Ques #2 result:	3 years
Ques #3 result: -2 years		Ques #3 result: -2 years		Ques #3 result:	-2 years
6cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 1 years	Mixedwood:	Ques #2 result: -1 years	Hardwood:	Ques #2 result:	1 years
Ques #3 result: -2 years		Ques #3 result: -2 years		Ques #3 result:	-2 years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regeneration	ated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Hardwood:	Oues #2 result:	$0.8 \text{ m}^3/\text{ha/yr}$
Oues #3 result: $0.4 \text{ m}^3/\text{ha/vr}$		Oues #3 result: $0.5 \text{ m}^3/\text{ha/vr}$		Ques #3 result:	$0.5 \text{ m}^3/\text{ha/yr}$
					one ill film gr
7b. Change in rotation expected based on l	harvestable tree	e size.		0 110	4
Softwood: Ques #2 result: 6 years	Mixedwood:	Ques #2 result: 5 years	Hardwood:	Ques $#2$ result:	4 years
Ques #5 result: 1 years		Ques #5 result: -1 years		Ques #5 result:	-1 years
7c. Change in rotation expected based on I	Maximum MA	I.			
<b>Softwood:</b> Ques #2 result: 5 years	Mixedwood:	Ques #2 result: 4 years	Hardwood:	Ques #2 result:	3 years
Ques #3 result: 1 years		Ques #3 result: -1 years		Ques #3 result:	-1 years

# 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.

	Sof	twood		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

1b. What proportion of the area is manage	d by uneven-aged management.	
Softwood: Ques #2 result: 15%	Mixedwood: Ques #2 result: 32%	Hardwood: Ques #2 result: 47%
Ques #3 result: 15%	Ques #3 result: 25%	Ques #3 result: 50%
1c. Growth per ha/year on areas managed	by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 2.4 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 2.7 m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: 2.1 m <sup>3</sup> /ha/yr
Oues #3 result: $2.0 \text{ m}^3/\text{ha/yr}$	Oues #3 result: $2.2 \text{ m}^3/\text{ha/yr}$	Oues #3 result: $2.5 \text{ m}^3/\text{ha/vr}$
1d. After-cut growing stock level left on a	reas managed by uneven-aged management.	
<b>Softwood:</b> Ques #2 result: 58 m <sup>3</sup> /ha	<b>Mixedwood:</b> Ques #2 result: 62 m <sup>3</sup> /ha	Hardwood: Ques #2 result: 65 m <sup>3</sup> /ha
Oues #3 result: $50 \text{ m}^3/\text{ha}$	Oues #3 result: $50 \text{ m}^3/\text{ha}$	Oues #3 result: $63 \text{ m}^3/\text{ha}$
1e. Average cutting cycle used on areas m	anaged by uneven-aged management?	
<b>Softwood:</b> Ques #2 result: 20 years	Mixedwood: Ques #2 result: 22 years	Hardwood: Ques #2 result: 22 years
Ques #3 result: 17 years	Ques #3 result: 19 years	Ques #3 result: 22 years
	1	1
2. From Questionnaires #2 and #3 the res	ions	have been aggregated and are given below.
Figures are based on one-time applicat	IOIIS	
2a Stand age range when fertilization cou	ld take place	
Softwood: Oues #2 result: 13 & 38 vrs old	<b>Mixedwood:</b> Oues #2 result: 13 & 39 vrs old	Hardwood: Oues #2 result: 13 & 39 vrs old
Ques #3 result: 11 & 33 yrs old	Ques #3 result: 11 & 31 yrs old	Ques #3 result: 6 & 33 yrs old
2b. Rate of fertilizer (kg/ha) application.		
<b>Softwood:</b> Ques #2 result: 200 kg/ha	<b>Mixedwood:</b> Ques #2 result: 200 kg/ha	Hardwood: Ques #2 result: 225 kg/ha
Ques #3 result: 200 kg/ha	Ques #3 result: 208 kg/ha	Ques #3 result: 235 kg/ha

2c. Goo	For sites distinguished as Good, Mediu d: Ques #2 result: 25% Oues #3 result: 17%	im and Poor, th Medium: Q	he proportion of sites that would b bues #2 result: 18% Dues #3 result: 9%	e fertilized. <b>Poor:</b> Ques Oues	#2 result: 8% #3 result: 8%
				<b>Z</b> ues	
2d.	Expected increase in growth (m3/ha/yr	).	2		2
Soft	wood: Ques #2 result: 0.9 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.2 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $0.7 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.9 m <sup>3</sup> /ha/yr		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$
2e. Soft	Length of time the increased growth we wood: Ques #2 result: 6 years Ques #3 result: 5 years	ould last (year <b>Mixedwood:</b>	s). 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 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comm ean of respons	indicated this topic had to be split nents on round 2 again emphasize es to round 2 and 3 are given belo	t into several c immature star w.	categories and that thinning ds only. The results below
3a.	For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utiliz	zation) regard	ing the following are:
3aa.	Change in growth.				
Soft	wood: Oues #2 result: $0.9 \text{ m}^3/\text{ha/vr}$	Mixedwood:	Oues #2 result: $0.7 \text{ m}^3/\text{ha/vr}$	Hardwood:	Oues #2 result: $0.6 \text{ m}^3/\text{ha/vr}$
	Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$
3ab. <b>Soft</b>	Length of time this change in growth w wood: Ques #2 result: 12 years Ques #3 result: 11 years	ould last. Mixedwood:	Ques #2 result: 7 years Ques #3 result: 6 years	Hardwood:	Ques #2 result: 7 years Ques #3 result: 5 years
3ac. Soft	Change in rotation based on harvestabl wood: Ques #2 result: -1 years Ques #3 result: -3 years	e tree size. Mixedwood:	Ques #2 result: 7 years Ques #3 result: -1 years	Hardwood:	Ques #2 result: 7 years Ques #3 result: -1 years
3ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: 6 years Ques #3 result: -1 years	MAI. 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 expectation the following are:	ons from <b>juve</b>	nile spacing/pre-commercial thin	<b>nning</b> (assumi	ng no utilization) regarding
3ba.	Change in growth.				
Soft	wood: Ques #2 result: 1.1 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 1.1 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.9 m <sup>3</sup> /ha/yr		Ques #3 result: 0.9 m <sup>3</sup> /ha/yr		Ques #3 result: $0.9 \text{ m}^3/\text{ha/yr}$
3bb. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 13 years Ques #3 result: 10 years	asted. Mixedwood:	Ques #2 result: 8 years Ques #3 result: 8 years	Hardwood:	Ques #2 result: 8 years Ques #3 result: 7 years
3bc. Soft	Change in rotation based on harvestabl wood: Ques #2 result: 0 years Ques #3 result: -5 years	e tree size. Mixedwood:	Ques #2 result: 5 years Ques #3 result: -4 years	Hardwood:	Ques #2 result: 5 years Ques #3 result: -4 years
3bd. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: 4 years Ques #3 result: 0 years	MAI. <b>Mixedwood:</b>	Ques #2 result: 6 years Ques #3 result: -1 years	Hardwood:	Ques #2 result: 6 years Ques #3 result: 0 years

3ca. Change in growth. Softwood: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr Ques #3 result: 0.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.9 m <sup>3</sup> /ha/yr Ques #3 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	1.0 m <sup>3</sup> /ha/yı 0.7 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	isted.				
<b>Softwood:</b> Ques #2 result: 9 years	Mixedwood:	Ques #2 result: 8 years	Hardwood:	Ques #2 result:	8 years
Ques #3 result: 9 years		Ques #3 result: 10 years		Ques #3 result:	11 years
3cc. Change in rotation based on harvestable	e tree size.				
<b>Softwood:</b> Ques #2 result: 5 years	Mixedwood:	Ques #2 result: 5 years	Hardwood:	Ques #2 result:	5 years
Ques #3 result: -2 years		Ques #3 result: -2 years		Ques #3 result:	-3 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 5 years	Mixedwood:	Ques #2 result: 5 years	Hardwood:	Ques #2 result:	5 years
Ques #3 result: 1 years		Ques #3 result: 1 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.

	Sof	twood		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

10. Troportion of the treat that will be	indiaged by the ten aged management.	
<b>Softwood:</b> Ques #2 result: 25%	<b>Mixedwood:</b> Ques #2 result: 43%	Hardwood: Ques #2 result: 45%
Ques #3 result: 23%	Ques #3 result: 33%	Ques #3 result: 51%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 2.1 m <sup>3</sup> /ha/yr	Μ
Ques #3 result: 2.5 m <sup>3</sup> /ha/yr	

**lixedwood:** Ques #2 result: 2.5 m<sup>3</sup>/ha/yr Ques #3 result: 2.6 m<sup>3</sup>/ha/yr Hardwood: Ques #2 result: 2.2 m<sup>3</sup>/ha/yr Ques #3 result: 2.5 m<sup>3</sup>/ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by une	even-aged mana	agement.	
Soft	wood: Ques #2 result: 93 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 93 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	110 m <sup>3</sup> /ha
	Ques #3 result: 66 m <sup>3</sup> /ha		Ques #3 result: 84 m <sup>3</sup> /ha		Ques #3 result:	82 m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas the wood: Ques #2 result: 23 years Ques #3 result: 22 years	at will be mana Mixedwood:	aged by uneven-aged manageme Ques #2 result: 22 years Ques #3 result: 22 years	nt. Hardwood:	Ques #2 result: Ques #3 result:	22 years 19 years
5.	From Questionnaires #2 and #3 the rest below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated stand	ds have been ag	gregated and are	e given
5a. <b>Softv</b>	Stand age range when fertilization wou vood: Ques #2 result: 11 & 35 yrs old Ques #3 result: 15 & 24 yrs old	Id take place. Mixedwood: ( (	Ques #2 result: 11 & 36 yrs old Ques #3 result: 15 & 24 yrs old	Hardwood: Qu Que	es #2 result: 11 & es #3 result: 15 &	36 yrs old 32 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	225 kg/ha 175 kg/ha
5c. <b>Goo</b>	For sites distinguished as Good, Mediu d: Ques #2 result: 52% Ques #3 result: 19%	im and Poor, th Medium: Qu Qu	hat proportion of sites that would les #2 result: 33% les #3 result: 21%	be fertilized. <b>Poor:</b> Ques Ques	#2 result: 5% #3 result: 12%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 1.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.4 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.9 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result:	1.4 m <sup>3</sup> /ha/yr
5e. <b>Soft</b>	Length of time the increased growth in wood: Ques #2 result: 6 years Ques #3 result: 6 years	dicated above Mixedwood:	last (years). Ques #2 result: 7 years Ques #3 result: 7 years	Hardwood:	Ques #2 result: Ques #3 result:	7 years 6 years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comm ean of response	indicated this topic had to be sp nents on round 2 again emphasizes to round 2 and 3 are given bel	lit into several o e immature star ow.	categories and th ads only. The res	at thinning sults below
6a.	For regenerated immature stands, expe	ctations from <b>c</b>	cleaning/brushing (assuming no	utilization) reg	garding the follow	wing are:
6aa.	Change in growth.					
Soft	wood: Ques #2 result: $0.7 \text{ m}^3/\text{ha/yr}$	Mixedwood:	Oues #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Oues #2 result:	$0.7 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.8 \text{ m}^3/\text{ha/yr}$
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 9 years Ques #3 result: 8 years	asted. Mixedwood:	Ques #2 result: 8 years Ques #3 result: 7 years	Hardwood:	Ques #2 result: Ques #3 result:	9 years 8 years
бас. Soft	Change in rotation based on harvestabl wood: Ques #2 result: 9 years Ques #3 result: -3 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: 7 years Ques #3 result: -2 years	Hardwood:	Ques #2 result: Ques #3 result:	7 years -3 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: 9 years Ques #3 result: -3 years	MAI. <b>Mixedwood:</b>	Ques #2 result: 7 years Ques #3 result: -1 years	Hardwood:	Ques #2 result: Ques #3 result:	7 years -2 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.8 m <sup>3</sup> /ha/yr
Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	0.5 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth la	asted.				
<b>Softwood:</b> Ques #2 result: 13 years	Mixedwood:	Ques #2 result: 11 years	Hardwood:	Ques #2 result:	11 years
Ques #3 result: 12 years		Ques #3 result: 9 years		Ques #3 result:	10 years
6bc. Change in rotation based on harvestabl	e tree size.				
<b>Softwood:</b> Ques #2 result: 7 years	Mixedwood:	Ques #2 result: 7 years	Hardwood:	Ques #2 result:	5 years
Ques #3 result: -3 years		Ques #3 result: -3 years		Ques #3 result:	-3 years
6bd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 7 years	Mixedwood:	Ques #2 result: 7 years	Hardwood:	Ques #2 result:	6 years
Ques #3 result: 0 years		Ques #3 result: 1 years		Ques #3 result:	0 years
6c. For regenerated immature stands, expe following are:	ctations from <b>c</b>	commercial thinning (including t	hinning plus f	inal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.6 m <sup>3</sup> /ha/yr
Ques #3 result: 0.4 m <sup>3</sup> /ha/yr		Ques #3 result: 0.4 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.4 \text{ m}^3/\text{ha/yr}$
6ch Length of time this change in growth h	ast				
<b>Softwood:</b> Oues #2 result: 11 years	Mixedwood:	Oues #2 result: 9 years	Hardwood:	Oues #2 result:	9 vears
Ques #3 result: 9 years		Ques #3 result: 8 years		Ques #3 result:	8 years
6cc. Change in rotation based on harvestabl	e tree size.				
<b>Softwood:</b> Ques #2 result: 7 years	Mixedwood:	Ques #2 result: 6 years	Hardwood:	Ques #2 result:	6 years
Ques #3 result: -3 years		Ques #3 result: -1 years		Ques #3 result:	-2 years
6cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 8 years	Mixedwood:	Ques #2 result: 7 years	Hardwood:	Ques #2 result:	7 years
Ques #3 result: 1 years		Ques #3 result: 1 years		Ques #3 result:	1 years
7. From Questionnaires #2, and #3 the resigiven below.	sults regarding	genetic improvement of regeneration	ated stands ha	we been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.9 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.1 m <sup>3</sup> /ha/yr
Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.7 \text{ m}^3/\text{ha/yr}$
7h Change in rotation expected based on h	harvestable tree	size			
<b>Softwood:</b> Ques #2 result: 6 years	Mixedwood:	Oues #2 result: 6 vears	Hardwood:	Oues #2 result:	7 years
Ques #3 result: -3 years		Ques #3 result: -3 years		Ques #3 result:	-3 years
7c. Change in rotation expected based on N	Maximum MA	I.			
<b>Softwood:</b> Ques #2 result: 6 years	Mixedwood:	Ques #2 result: 6 years	Hardwood:	Ques #2 result:	8 years
Ques #3 result: -3 years		Ques #3 result: -3 years		Ques #3 result:	-3 years

## 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.

	Sof	twood		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	

1b. What proportion of the area is manage	d by uneven-aged management.									
<b>Softwood:</b> Ques #2 result: 6%	Mixedwood: Ques #2 result: 10%	Hardwood: Ques #2 result: 5%								
Ques #3 result: 5%	Ques #3 result: 7%	Ques #3 result: 0%								
1c. Growth per ha/year on areas managed by uneven-aged management.										
<b>Softwood:</b> Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	<b>Hardwood:</b> Ques #2 result: 1.7 m <sup>3</sup> /ha/yr								
Oues #3 result: $1.0 \text{ m}^3/\text{ha/yr}$	Oues #3 result: $1.3 \text{ m}^3/\text{ha/yr}$	Oues #3 result: $1.5 \text{ m}^3/\text{ha/vr}$								
1d. After-cut growing stock level left on an	reas managed by uneven-aged management.									
<b>Softwood:</b> Ques #2 result: 40 m <sup>3</sup> /ha	<b>Mixedwood:</b> Ques #2 result: 85 m <sup>3</sup> /ha	<b>Hardwood:</b> Ques #2 result: 113 m <sup>3</sup> /ha								
Oues #3 result: $40 \text{ m}^3/\text{ha}$	Oues #3 result: 95 m <sup>3</sup> /ha	Oues #3 result: $120 \text{ m}^3/\text{ha}$								
Ques #5 result. To hir /ha		Ques #5 fesult. 120 fil /ila								
1e. Average cutting cycle used on areas m	anaged by uneven-aged management?									
<b>Softwood:</b> Ques #2 result: 30 years	<b>Mixedwood:</b> Ques #2 result: 25 years	Hardwood: Ques #2 result: 22 years								
Ques #3 result: 30 years	Ques #3 result: 28 years	Ques #3 result: 30 years								
	-									
<b>2.</b> From Questionnaires #2 and #3 the res	ults regarding fertilization of existing stands	s have been aggregated and are given below.								
Figures are based on one-time applicat	ions									
2a. Stand age range when fertilization cou	d take place.									
Softwood: Ques #2 result: 51 & 62 yrs old	Mixedwood: Ques #2 result: 44 & 56 yrs old	Hardwood: Ques #2 result: 38 & 49 yrs old								
Ques #5 lesuit. $50 \propto 70$ yrs old	Ques #5 result. 50 & 65 yrs old	Ques $\#$ 3 result. 30 & 32 yrs old								

2c. Goo	For si od: Qu Qu	ites distinguished as Good, Mediu les #2 result: 38% les #3 result: 42%	m and Poor, t Medium: (	he proportion of sites that would be Ques #2 result: 26% Ques #3 result: 25%	e fertilized. Poor: Ques Ques	#2 result: 0% #3 result: 0%
2d.	Expe	cted increase in growth (m3/ha/yr	).			
Soft	twood:	Ques #2 result: 0.9 m <sup>3</sup> /ha/yr	Mixedwood	: Ques #2 result: 0.9 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 1.2 m <sup>3</sup> /ha/yr
		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$
2e. Soft	Leng twood:	th of time the increased growth we Ques #2 result: 10 years Ques #3 result: 10 years	ould last (year Mixedwood	rs). 2 Ques #2 result: 10 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: 10 years Ques #3 result: 10 years
3.	Comi would apply	ments from Questionnaire #1 rega d occur only on immature stands. only to immature stands. The me	rding thinning Several comr ean of respons	g indicated this topic had to be split ments on round 2 again emphasize ses to round 2 and 3 are given below	into several c immature star w.	categories and that thinning ads only. The results below
3a.	For e	xisting immature stands, expectati	ions from <b>clea</b>	ning/brushing (assuming no utiliz	zation) regard	ing the following are:
3aa.	Chan	ge in growth.				
Soft	twood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $0.1 \text{ m}^3/\text{ha/yr}$
		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: $0.6 \text{ m}^3/\text{ha/yr}$
3ab Soft	. Leng twood:	th of time this change in growth w Ques #2 result: 26 years Ques #3 result: 18 years	ould last. Mixedwood	: Ques #2 result: 27 years Ques #3 result: 18 years	Hardwood:	Ques #2 result: 16 years Ques #3 result: 14 years
3ac. Soft	Chan twood:	ge in rotation based on harvestabl Ques #2 result: -5 years Ques #3 result: -8 years	e tree size. Mixedwood	Ques #2 result: -5 years Ques #3 result: -8 years	Hardwood:	Ques #2 result: -2 years Ques #3 result: -7 years
3ad <b>Sof</b> t	. Chan twood:	ge in rotation based on maximum Ques #2 result: 0 years Ques #3 result: 0 years	MAI. Mixedwood	: Ques #2 result: 0 years Ques #3 result: 0 years	Hardwood:	Ques #2 result: 0 years Ques #3 result: 0 years
3b.	For e the fo	xisting immature stands expectation	ons from <b>juve</b>	nile spacing/pre-commercial thin	nning (assumi	ing no utilization) regarding
3ba	. Chan	ge in growth.				
Soft	twood:	Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood	: Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr
		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: $0.6 \text{ m}^3/\text{ha/yr}$
3bb <b>Sof</b> t	. Leng twood:	th of time this change in growth la Ques #2 result: 29 years Ques #3 result: 23 years	asted. Mixedwood	: Ques #2 result: 28 years Ques #3 result: 23 years	Hardwood:	Ques #2 result: 20 years Ques #3 result: 18 years
3bc. Soft	. Chan twood:	ge in rotation based on harvestabl Ques #2 result: -8 years Ques #3 result: -10 years	e tree size. <b>Mixedwood</b> a	: Ques #2 result: -8 years Ques #3 result: -10 years	Hardwood:	Ques #2 result: -8 years Ques #3 result: -8 years
3bd <b>Sof</b> t	. Chan twood:	ge in rotation based on maximum Ques #2 result: -4 years Ques #3 result: -3 years	MAI. Mixedwood	: Ques #2 result: -4 years Ques #3 result: -3 years	Hardwood:	Ques #2 result: -4 years Ques #3 result: -3 years

3ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.3 m <sup>3</sup> /ha/yi
Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result:	0.8 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	sted.				
<b>Softwood:</b> Ques #2 result: 14 years	Mixedwood:	Ques #2 result: 14 years	Hardwood:	Ques #2 result:	13 years
Ques #3 result: 14 years		Ques #3 result: 13 years		Ques #3 result:	13 years
3cc. Change in rotation based on harvestable	e tree size.				
<b>Softwood:</b> Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -7 years		Ques #3 result: -7 years		Ques #3 result:	-6 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: 2 years		Ques #3 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.

	Sof	twood		Mixedwood						Ha	rdwood	
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.

······································		
<b>Softwood:</b> Ques #2 result: 8%	Mixedwood: Ques #2 result: 12%	Hardwood: Ques #2 result: 5%
Ques #3 result: 10%	Ques #3 result: 17%	Ques #3 result: 0%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 1.1 m <sup>3</sup> /ha/yr	<b>Mixedwood:</b> Ques #2 result: 1.4 m <sup>3</sup> /ha/yr
Ques #3 result: 1.1 m <sup>3</sup> /ha/yr	Ques #3 result: 1.4 m <sup>3</sup> /ha/yr

Hardwood: Ques #2 result: 1.7 m<sup>3</sup>/ha/yr Ques #3 result: NA m<sup>3</sup>/ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by une	ven-aged mana	agement.	
Soft	wood: Ques #2 result: 40 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 60 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	65 m <sup>3</sup> /ha
	Ques #3 result: 40 m <sup>3</sup> /ha		Ques #3 result: 60 m <sup>3</sup> /ha		Ques #3 result:	NA m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas th wood: Ques #2 result: 15 years Ques #3 result: 15 years	at will be mana Mixedwood:	aged by uneven-aged managemen Ques #2 result: 13 years Ques #3 result: 10 years	nt. Hardwood:	Ques #2 result: Ques #3 result:	18 years NA years
5.	From Questionnaires #2 and #3 the res below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated stand	ls have been ag	gregated and are	e given
5a. Softv	Stand age range when fertilization wou vood: Ques #2 result: 42 & 55 yrs old Ques #3 result: 50 & 62 yrs old	Id take place. Mixedwood: (	Ques #2 result: 36 & 50 yrs old Ques #3 result: 40 & 52 yrs old	Hardwood: Que	es #2 result: 35 & es #3 result: 35 &	46 yrs old 47 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: Ques #2 result: 283 kg/ha Ques #3 result: 254 kg/ha	Mixedwood:	Ques #2 result: 300 kg/ha Ques #3 result: 267 kg/ha	Hardwood:	Ques #2 result: Ques #3 result:	275 kg/ha 242 kg/ha
5c. Goo	For sites distinguished as Good, Mediu d: Ques #2 result: 29% Ques #3 result: 42%	וm and Poor, th <b>Medium:</b> Qu Qu	hat proportion of sites that would les #2 result: 29% les #3 result: 25%	be fertilized. <b>Poor:</b> Ques Ques	#2 result: 0% #3 result: 0%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 0.9 m <sup>3</sup> /ha/yr Ques #3 result: 0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.9 m <sup>3</sup> /ha/yr Ques #3 result: 0.4 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	1.2 m <sup>3</sup> /ha/yr 0.7m <sup>3</sup> /ha/yr
5e. <b>Soft</b>	Length of time the increased growth in wood: Ques #2 result: 10 years Ques #3 result: 10 years	dicated above Mixedwood:	last (years). Ques #2 result: 10 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comm ean of response	indicated this topic had to be spl nents on round 2 again emphasize es to round 2 and 3 are given belo	it into several o e immature star ow.	categories and th ads only. The res	at thinning sults below
ба.	For regenerated immature stands, expe	ctations from c	cleaning/brushing (assuming no	utilization) reg	arding the follow	wing are:
баа.	Change in growth.					
Soft	wood: Ques #2 result: 1.1 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.2 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result:	0.7 m <sup>3</sup> /ha/yr
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 26 years Ques #3 result: 18 years	asted. Mixedwood:	Ques #2 result: 23 years Ques #3 result: 18 years	Hardwood:	Ques #2 result: Ques #3 result:	13 years 14 years
6ac. <b>Soft</b>	Change in rotation based on harvestabl wood: Ques #2 result: -3 years Ques #3 result: -6 years	e tree size. Mixedwood:	Ques #2 result: -3 years Ques #3 result: -6 years	Hardwood:	Ques #2 result: Ques #3 result:	0 years -4 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: 0 years Ques #3 result: 0 years	MAI. <b>Mixedwood:</b>	Ques #2 result: 0 years Ques #3 result: 0 years	Hardwood:	Ques #2 result: Ques #3 result:	1 years 0 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.8 m <sup>3</sup> /ha/yr
Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result:	0.7 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth l	asted.				
Softwood: Ques #2 result: 29 years	Mixedwood:	Ques #2 result: 25 years	Hardwood:	Ques #2 result:	20 years
Ques #3 result: 23 years		Ques #3 result: 22 years		Ques #3 result:	18 years
6bc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: -2 years	Mixedwood:	Ques #2 result: -2 years	Hardwood:	Ques #2 result:	-3 years
Ques #3 result: -9 years		Ques #3 result: -9 years		Ques #3 result:	-8 years
6bd. Change in rotation based on maximum	n MAI.				
Softwood: Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: 0 years		Ques #3 result: 0 years		Ques #3 result:	0 years
6c. For regenerated immature stands, experience following are:	ectations from <b>(</b>	commercial thinning (including	thinning plus f	inal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$1.4 \text{ m}^3/\text{ha/yr}$
Oues #3 result: $0.7 \text{ m}^3/\text{ha/yr}$		Oues #3 result: $0.8 \text{ m}^3/\text{ha/vr}$		Ques #3 result:	$0.8 \text{ m}^3/\text{ha/vr}$
				<b>C</b>	
6cb. Length of time this change in growth l	ast.				
Softwood: Ques #2 result: 14 years	Mixedwood:	Ques #2 result: 14 years	Hardwood:	Ques #2 result:	13 years
Ques #3 result: 16 years		Ques #3 result: 15 years		Ques #3 result:	14 years
6cc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: -5 years	Mixedwood:	Ques #2 result: -5 years	Hardwood:	Ques #2 result:	-5 years
Ques #3 result: -7 years		Ques #3 result: -7 years		Ques #3 result:	-6 years
6cd. Change in rotation based on maximum	n MAI.				
<b>Softwood:</b> Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: 2 years		Ques #3 result: 2 years		Ques #3 result:	2 years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regene	rated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Oues #2 result: 0.6 m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result: $0.7 \text{ m}^3/\text{ha/vr}$	Hardwood:	Oues #2 result:	$0.7 \text{ m}^3/\text{ha/vr}$
Oues #3 result: $0.6 \text{ m}^3/\text{ha/yr}$		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$0.8 \text{ m}^3/\text{ha/yr}$
				Ques "5 lesuit.	0.0 m /ma/yr
7b. Change in rotation expected based on	harvestable tree	e size.	<b></b>	0 115 -	0
Softwood: Ques #2 result: -8 years	Mixedwood:	Ques #2 result: -8 years	Hardwood:	Ques #2 result:	-8 years
Ques #3 result: -8 years		Ques #3 result: -8 years		Ques #3 result:	-8 years
7c. Change in rotation expected based on	Maximum MA	I.			
<b>Softwood:</b> Ques #2 result: -6 years	Mixedwood:	Ques #2 result: -6 years	Hardwood:	Ques #2 result:	-6 years
Ques #3 result: -8 years		Ques #3 result: -8 years		Ques #3 result:	-8 years

# 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

1b. What proportion of the area is manage	d by uneven-aged	l management.				
<b>Softwood:</b> Ques #2 result: 11%	Mixedwood: Q	ues #2 result:	28%	Hardwood:	Ques #2 result:	44%
Ques #3 result: 17%	Qu	ues #3 result:	48%		Ques #3 result:	60%
1c. Growth per ha/year on areas managed	by uneven-aged m	nanagement.				
<b>Softwood:</b> Ques #2 result: 1.6 m <sup>3</sup> /ha/yr	Mixedwood: Q	ues #2 result:	2.1 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$2.1 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 1.6 m <sup>3</sup> /ha/yr	Qu	ues #3 result:	2.0 m <sup>3</sup> /ha/yr		Ques #3 result:	2.1 m <sup>3</sup> /ha/yr
1d. After-cut growing stock level left on a	reas managed by u	uneven-aged n	nanagement.			
<b>Softwood:</b> Ques #2 result: 105 m <sup>3</sup> /ha	Mixedwood: Qu	ues #2 result:	105 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	109 m <sup>3</sup> /ha
Ques #3 result: 88 m <sup>3</sup> /ha	Qu	ues #3 result:	98 m <sup>3</sup> /ha		Ques #3 result:	105 m <sup>3</sup> /ha
1e. Average cutting cycle used on areas m	nanaged by uneven	n-aged manage	ement?			
<b>Softwood:</b> Ques #2 result: 21 years	Mixedwood: Qu	ues #2 result:	19 years	Hardwood:	Ques #2 result:	19 years
Ques #3 result: 23 years	Qı	ues #3 result:	20 years		Ques #3 result:	20 years
2. From Questionnaires #2 and #3 the res Figures are based on one-time applica	sults regarding <b>fer</b> t	<b>tilization</b> of e	xisting stands hav	ve been aggreg	gated and are giv	en below.
2a. Stand age range when fertilization cou	Ild take place.					
Softwood: Ques #2 result: 37 & 49 yrs old	Mixedwood: Que	es #2 result: 33 8	& 50 yrs old Ha	ardwood: Que	es #2 result: 45 &	58 yrs old
Ques #3 result: 43 & 55 yrs old	Que	es #3 result: 40 &	¢ 53 yrs old	Que	es #3 result: $50 \&$	67 yrs old
2b. Rate of fertilizer (kg/ha) application.						
Softwood. Ques #2 regult: 228 kg/ha	Mixedwood, O		$262 \ln \alpha/\ln \alpha$	Uandwood	Ouron #2 maguilty	$222 \ln \alpha/\ln \alpha$

2c. Goo	For sites distinguished as Good, Mediu od: Ques #2 result: 35% Ques #3 result: 38%	m and Poor, t Medium: Q Q	he proportion of sites that would b Ques #2 result: 25% Ques #3 result: 25%	e fertilized. <b>Poor:</b> Ques Ques	#2 result: 6% #3 result: 3%
2d.	Expected increase in growth (m3/ha/yr)	).			
Sof	<b>twood:</b> Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Mixedwood:	: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.7 m <sup>3</sup> /ha/yr
2e. Sof	Length of time the increased growth we twood: Ques #2 result: 9 years Ques #3 result: 10 years	ould last (year <b>Mixedwood</b> :	rs). 2 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 rega would occur only on immature stands. apply only to immature stands. The me	rding thinning Several comr ean of respons	g indicated this topic had to be spli nents on round 2 again emphasize ses to round 2 and 3 are given belo	t into several c immature star w.	categories and that thinning ids only. The results below
3a.	For existing immature stands, expectati	ons from <b>clea</b>	ning/brushing (assuming no utili	zation) regard	ing the following are:
3aa	. Change in growth.				
Sof	<b>twood:</b> Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	: Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: $0.6 \text{ m}^3/\text{ha/y}$
	Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: $0.7 \text{ m}^3/\text{ha/yr}$
3ab <b>Sof</b>	. Length of time this change in growth w twood: Ques #2 result: 16 years Ques #3 result: 13 years	ould last. <b>Mixedwood:</b>	: Ques #2 result: 18 years Ques #3 result: 14 years	Hardwood:	Ques #2 result: 21 years Ques #3 result: 13 years
3ac Sof	. Change in rotation based on harvestable twood: Ques #2 result: -8 years Ques #3 result: -7 years	e tree size. Mixedwood:	: Ques #2 result: -6 years Ques #3 result: -7 years	Hardwood:	Ques #2 result: -7 years Ques #3 result: -7 years
3ad Sof	. Change in rotation based on maximum twood: Ques #2 result: -1 years Ques #3 result: -1 years	MAI. <b>Mixedwood:</b>	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 expectation the following are:	ons from <b>juve</b>	nile spacing/pre-commercial this	<b>nning</b> (assumi	ng no utilization) regarding
3ba	. Change in growth.				
Sof	<b>twood:</b> Ques #2 result: 0.9 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: 0.8 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr
3bb <b>Sof</b>	<ul> <li>Length of time this change in growth la</li> <li>twood: Ques #2 result: 16 years</li> <li>Ques #3 result: 13 years</li> </ul>	sted. Mixedwood:	: Ques #2 result: 17 years Ques #3 result: 15 years	Hardwood:	Ques #2 result: 20 years Ques #3 result: 15 years
3bc Sof	. Change in rotation based on harvestable twood: Ques #2 result: -9 years Ques #3 result: -8 years	e tree size. Mixedwood:	: Ques #2 result: -7 years Ques #3 result: -7 years	Hardwood:	Ques #2 result: -7 years Ques #3 result: -7 years
3bd Sof	<ul> <li>Change in rotation based on maximum</li> <li>twood: Ques #2 result: -3 years</li> <li>Ques #3 result: -2 years</li> </ul>	MAI. Mixedwood:	: Ques #2 result: -3 years Ques #3 result: -2 years	Hardwood:	Ques #2 result: -3 years Ques #3 result: -2 years

3ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	1.0 m <sup>3</sup> /ha/yr
Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	0.8 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth la	asted.				
<b>Softwood:</b> Ques #2 result: 15 years	Mixedwood:	Ques #2 result: 13 years	Hardwood:	Ques #2 result:	13 years
Ques #3 result: 15 years		Ques #3 result: 14 years		Ques #3 result:	14 years
3cc. Change in rotation based on harvestabl	e tree size.				
<b>Softwood:</b> Ques #2 result: -8 years	Mixedwood:	Ques #2 result: -7 years	Hardwood:	Ques #2 result:	-7 years
Ques #3 result: -6 years		Ques #3 result: -6 years		Ques #3 result:	-5 years
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 4 years	Mixedwood:	Ques #2 result: 2 years	Hardwood:	Ques #2 result:	2 years
Ques #3 result: 3 years		Ques #3 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.

	Sof	twood			Mixe	edwood			На	rdwood	
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.

reserves and the second s	· · · · · · · · · · · · · · · · · · ·	
Softwood: Ques #2 result: 12	% Mixedwood: Ques #2 result: 32%	Hardwood: Ques #2 result: 57%
Ques #3 result: 17	% Ques #3 result: 45%	Ques #3 result: 57%

4c. Growth per ha/year expected on areas that will be managed by uneven-aged management.

<b>Softwood:</b> Ques #2 result: 1.7 m <sup>3</sup> /ha/yr	<sup>3</sup> /ha/yr
Ques #3 result: 1.1 m <sup>3</sup> /ha/yr	n <sup>3</sup> /ha/yr

**Mixedwood:** Ques #2 result: 2.1 m<sup>3</sup>/ha/yr Ques #3 result: 2.0 m<sup>3</sup>/ha/yr Hardwood: Ques #2 result: 2.2 m<sup>3</sup>/ha/yr Ques #3 result: 1.2 m<sup>3</sup>/ha/yr

4d.	After-cut growing stock level expected	to be left on a	reas that will be managed by une	even-aged mana	agement.	
Soft	wood: Ques #2 result: 103 m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: 103 m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	107 m <sup>3</sup> /ha
	Ques #3 result: 88 m <sup>3</sup> /ha		Ques #3 result: 98 m <sup>3</sup> /ha		Ques #3 result:	105 m <sup>3</sup> /ha
4e. Soft	Average cutting cycle used on areas th wood: Ques #2 result: 20 years Ques #3 result: 23 years	at will be mana Mixedwood:	aged by uneven-aged managemen Ques #2 result: 18 years Ques #3 result: 20 years	nt. Hardwood:	Ques #2 result: Ques #3 result:	18 years 20 years
5.	From Questionnaires #2 and #3 the res below. Figures are based on one-time	ults regarding applications.	fertilization of regenerated stand	ls have been ag	gregated and are	e given
5a. Softv	Stand age range when fertilization wou wood: Ques #2 result: 27 & 42 yrs old Ques #3 result: 37 & 48 yrs old	Id take place. Mixedwood: (	Ques #2 result: 31 & 47 yrs old Ques #3 result: 42 & 53 yrs old	Hardwood: Que	es #2 result: 36 & es #3 result: 58 &	52 yrs old 65 yrs old
5b. <b>Soft</b>	Rate of fertilizer (kg/ha). wood: 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: Ques #3 result:	288 kg/ha 279 kg/ha
5c. Goo	For sites distinguished as Good, Mediu d: Ques #2 result: 33% Ques #3 result: 38%	im and Poor, th <b>Medium:</b> Qu Qu	nat proportion of sites that would nes #2 result: 27% nes #3 result: 25%	be fertilized. <b>Poor:</b> Ques Ques	#2 result: 6% #3 result: 3%	
5d.	Expected increase in growth (m3/ha/yr	).				
Soft	wood: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr Ques #3 result: 0.6 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.1 m <sup>3</sup> /ha/yr Ques #3 result: 0.7 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	0.7 m <sup>3</sup> /ha/yr 0.6m <sup>3</sup> /ha/yr
5e. <b>Soft</b>	Length of time the increased growth in wood: Ques #2 result: 11 years Ques #3 result: 10 years	dicated above Mixedwood:	last (years). Ques #2 result: 11 years Ques #3 result: 10 years	Hardwood:	Ques #2 result: Ques #3 result:	11 years 10 years
6.	Comments from Questionnaire #1 rega would occur only on immature stands. apply only to immature stands. The m	rding thinning Several comm ean of response	indicated this topic had to be spl nents on round 2 again emphasize es to round 2 and 3 are given belo	lit into several o e immature star ow.	categories and th ads only. The res	at thinning sults below
6a.	For regenerated immature stands, expe	ctations from	<b>cleaning/brushing</b> (assuming no	utilization) reg	arding the follow	wing are:
6aa.	Change in growth.					
Soft	wood: Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.1 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.8 m <sup>3</sup> /ha/yr
	Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	0.7 m <sup>3</sup> /ha/yr
6ab. <b>Soft</b>	Length of time this change in growth la wood: Ques #2 result: 15 years Ques #3 result: 13 years	asted. Mixedwood:	Ques #2 result: 18 years Ques #3 result: 14 years	Hardwood:	Ques #2 result: Ques #3 result:	21 years 13 years
бас. <b>Soft</b>	Change in rotation based on harvestabl wood: Ques #2 result: -8 years Ques #3 result: -7 years	e tree size. <b>Mixedwood:</b>	Ques #2 result: -7 years Ques #3 result: -7 years	Hardwood:	Ques #2 result: Ques #3 result:	-8 years -7 years
6ad. <b>Soft</b>	Change in rotation based on maximum wood: Ques #2 result: -2 years Ques #3 result: -1 years	MAI. Mixedwood:	Ques #2 result: -2 years Ques #3 result: -1 years	Hardwood:	Ques #2 result: Ques #3 result:	-3 years -1 years

6ba. Change in growth?					
<b>Softwood:</b> Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	0.5 m <sup>3</sup> /ha/yr
Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	0.8 m <sup>3</sup> /ha/yr
6bb. Length of time this change in growth l	asted.				
Softwood: Ques #2 result: 15 years	Mixedwood:	Ques #2 result: 17 years	Hardwood:	Ques #2 result:	20 years
Ques #3 result: 13 years		Ques #3 result: 15 years		Ques #3 result:	15 years
6bc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> Ques #2 result: -10 years	Mixedwood:	Ques #2 result: -8 years	Hardwood:	Ques #2 result:	-9 years
Ques #3 result: -8 years		Ques #3 result: -7 years		Ques #3 result:	-7 years
6bd. Change in rotation based on maximum	n MAI.				
<b>Softwood:</b> Ques #2 result: -3 years	Mixedwood:	Ques #2 result: -3 years	Hardwood:	Ques #2 result:	-3 years
Ques #3 result: -2 years		Ques #3 result: -2 years		Ques #3 result:	-2 years
6c. For regenerated immature stands, expe following are:	ectations from <b>(</b>	commercial thinning (including	thinning plus f	inal harvest) reg	arding the
6ca. Change in growth.					
<b>Softwood:</b> Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$1.0 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result:	0.8 m <sup>3</sup> /ha/yr
Each Longth of time this change in growth l	ost				
Softwood: Oues #2 result: 13 years	Mixedwood.	Ques #2 result: 12 years	Hardwood	Ques #2 result.	11 years
Ques #3 result: 15 years	mixed wood.	Ques #3 result: 14 years	<b>1101 0</b> 0000.	Ques #2 result: Ques #3 result:	14 years
fee. Change in rotation based on harvestab	le tree size				
<b>Softwood:</b> Ques #2 result: -8 years	Mixedwood:	Ques #2 result: -7 years	Hardwood:	Ques #2 result:	-7 years
Ques #3 result: -8 years		Ques #3 result: -8 years		Ques #3 result:	-7 years
6cd. Change in rotation based on maximum	n MAI.				
<b>Softwood:</b> Ques #2 result: 0 years	Mixedwood:	Ques #2 result: 0 years	Hardwood:	Ques #2 result:	0 years
Ques #3 result: 2 years		Ques #3 result: 2 years		Ques #3 result:	2 years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regene	erated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.8 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.6 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.4 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 0.8 m <sup>3</sup> /ha/yr		Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.7 \text{ m}^3/\text{ha/yr}$
7b. Change in rotation expected based on	harvestable tree	e size.			
Softwood: Ques #2 result: -8 years	Mixedwood:	Ques #2 result: -7 years	Hardwood:	Ques #2 result:	-6 years
Ques #3 result: -8 years		Ques #3 result: -8 years		Ques #3 result:	-8 years
7c. Change in rotation expected based on	Maximum MA	I.			
<b>Softwood:</b> Ques #2 result: -8 years	Mixedwood:	Ques #2 result: -7 years	Hardwood:	Ques #2 result:	-6 years
Ques #3 result: -9 years		Ques #3 result: -8 years		Ques #3 result:	-8 years

# 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.

	Softv	wood			Mixed	lwood		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

1b. What proportion of the area is manage	d by uneven-aged	l management.				
Softwood: Ques #2 result: 5%	Mixedwood: Q	Oues #2 result:	0%	Hardwood:	Ques #2 result:	0%
Ques #3 result: 5%	Qu	ues #3 result:	NA%		Ques #3 result:	NA%
-	-	-			-	
1c. Growth per ha/year on areas managed	by uneven-aged m	nanagement.				
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha/yr	Mixedwood: Q	ues #2 result:	NA m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha/yr
Ques #3 result: 1.5 m <sup>3</sup> /ha/yr	Qu	ues #3 result:	NA m <sup>3</sup> /ha/yr		Ques #3 result:	NA m <sup>3</sup> /ha/yr
1d. After-cut growing stock level left on a	reas managed by u	uneven-aged n	nanagement.			
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha	Mixedwood: Q	ues #2 result:	NA m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha
Oues #3 result: $100 \text{ m}^3/\text{ha}$	Oi	ues #3 result:	NA m <sup>3</sup> /ha		Oues #3 result:	NA m <sup>3</sup> /ha
	C.				<b>C</b>	
1e. Average cutting cycle used on areas m	anaged by uneven	n-aged manage	ement?			
<b>Softwood:</b> Ques #2 result: 30 years	Mixedwood: Q	ues #2 result:	NA years	Hardwood:	Ques #2 result:	NA years
Ques #3 result: 30 years	Qu	ues #3 result:	NA years		Ques #3 result:	NA years
<b>2</b> From Questionnaires #2 and #3 the res	ulte regarding <b>fer</b>	<b>tilization</b> of e	victing stands hav	e heen aggre	gated and are giv	ven below
Figures are based on one-time applicat	ions		stands hav		gated and are gr	ven below.
2a. Stand age range when fertilization cou	ld take place.					
<b>Softwood:</b> Ques #2 result: 5 & 30 yrs old	Mixedwood: Q	Ques #2 result: (	) & 30 yrs old	Hardwood:	Ques #2 result: 0	& 30 yrs old
Ques #3 result: 5 & 30 yrs old	Q	Ques #3 result: (	) & 30 yrs old		Ques #3 result: 0	& 30 yrs old
2b Rate of fertilizer (kg/ha) application						
<b>Softwood:</b> Oues #2 result: 200 kg/ha	Mixedwood: Or	Oues #2 result:	NA kg/ha	Hardwood:	Oues #2 result:	NA kg/ha
Ques #3 result: NA kg/ha	Oi	ues #3 result:	NA kg/ha		Oues #3 result:	NA kg/ha

2c.	For sites distinguished as Good, Mediu	um and Poor, tl	ne proportion of sites that would b	e fertilized.		
Goo	od: Ques #2 result: 55%	Medium: Q	ues #2 result: 0%	Poor: Ques	#2 result: 0%	
	Ques #3 result: 25%	Q	ues #3 result: 0%	Ques	#3 result: 0%	
2d.	Expected increase in growth (m3/ha/yr	·).				
Sof	wood: Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.5 \text{ m}^3/\text{ha/yr}$
	Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.3 m <sup>3</sup> /ha/yr		Ques #3 result:	0.5 m <sup>3</sup> /ha/yr
•		111 . /	<b>、</b>			
2e.	Length of time the increased growth w	ould last (year	s). Ouos #2 result: 15 years	Uandwood	$O_{\rm max}$ #2 $r_{\rm max}$ 1t.	10 voora
501	Ques #2 result: 15 years	Mixeuwoou:	Ques #2 result: 13 years	naruwoou:	Ques #2 result:	10 years
	Ques no result re years		Ques no result ro years		Ques no result.	10 years
3.	Comments from Questionnaire #1 rega	rding thinning	indicated this topic had to be spli	t into several o	categories and th	at thinning
	would occur only on immature stands.	Several comn	nents on round 2 again emphasize	immature star	ids only. The res	sults below
	apply only to immature stands. The m	ean of respons	es to round 2 and 3 are given belo	W.		
3a.	For existing immature stands, expectat	ions from <b>clea</b>	ning/brushing (assuming no utili	zation) regard	ing the following	g are:
3aa.	Change in growth.					
Sof	twood: Oues #2 result: 0.5 m <sup>3</sup> /ha/vr	Mixedwood:	Oues #2 result: $0.5 \text{ m}^3/\text{ha/vr}$	Hardwood:	Oues #2 result:	$0.5 \text{ m}^3/\text{ha/vr}$
	Oues #3 result: $0.5 \text{ m}^3/\text{ha/yr}$		Ques #3 result: $0.5 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	$0.5 \text{ m}^3/\text{ha/yr}$
					Ques no result.	olo ili vilu yi
3ab	Length of time this change in growth v	vould last.				
Sof	twood: 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: 13 years		Ques #3 result:	10 years
3ac.	Change in rotation based on harvestabl	e tree size.				
Sof	wood: 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
3ad	Change in rotation based on maximum	MAI				
Sof	wood: Ques #2 result: -5 years	Mixedwood	Ques #2 result: -5 years	Hardwood	Ques #2 result.	-5 vears
501	Ques #3 result: -5 years	11 <b>11104</b> (100 <b>4</b> )	Ques #3 result: -5 years	1141 4 11 00 41	Ques #2 result:	-5 years
					-	•
3b.	For existing immature stands expectati	ons from <b>juve</b>	nile spacing/pre-commercial thi	<b>nning</b> (assumi	ng no utilization	) regarding
	the following are:					
3ba	Change in growth.					
Sof	twood: Ques #2 result: -0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-0.5 m <sup>3</sup> /ha/yr
	Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result: $-0.5 \text{ m}^3/\text{ha/yr}$		Ques #3 result:	-0.5 m <sup>3</sup> /ha/yr
	- · ·		-		-	
3bb	. Length of time this change in growth la	asted.				1.0
Sof	wood: 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: 13 years		Ques #3 result:	10 years
3bc	Change in rotation based on harvestabl	le tree size.				
Sof	wood: 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
3hd	Change in rotation based on maximum	ΜΔΙ				
Sof	wood: Oues #2 result: 0 years	Mixedwood:	Oues #2 result: 0 years	Hardwood:	Oues #2 result	0 years
	Oues #3 result: 0 years		Oues #3 result: 0 years		Oues #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.					
<b>Softwood:</b> Ques #2 result: -1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-1.0 m <sup>3</sup> /ha/yr
Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result: -1.0 m <sup>3</sup> /ha/yr		Ques #3 result:	-1.0 m <sup>3</sup> /ha/yr
3cb. Length of time this change in growth l	asted.				
<b>Softwood:</b> Ques #2 result: 20 years	Mixedwood:	Ques #2 result: 20 years	Hardwood:	Ques #2 result:	15 years
Ques #3 result: 20 years		Ques #3 result: 17 years		Ques #3 result:	15 years
3cc. Change in rotation based on harvestab	le tree size.				
<b>Softwood:</b> 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
3cd. Change in rotation based on maximum	MAI.				
<b>Softwood:</b> Ques #2 result: 10 years	Mixedwood:	Ques #2 result: 10 years	Hardwood:	Ques #2 result:	10 years
Ques #3 result: 0 years		Ques #3 result: 0 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.

	Sof	twood		Mixedwood			Hardwood					
Age	Que#1	Que#2	Que#3	Age	Que#1	Que#2	Que#3		Age	Que#1	Que#2	Que#3
	MAI	MAI	MAI		MAI	MAI	MAI			MAI	MAI	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.	Propo	rtion of the area	that wil	l be managed by uneven-aged management.
Soft	wood:	Ques #2 result:	5%	<b>Mixedwood:</b> Ques #2 result: 0%
		Oues #3 result:	5%	Oues #3 result: 0%

Hardwood: Ques #2 result: 0% Ques #3 result: 0%

10	Growth por ba/	voor ovportor	d on aroog that wi	ll ba managad b	w unovon agod	monogomont
4C.	Olowin per na/	year expected	i on aleas that wi	n de manageu d	y uneven-ageu	management.

Softwood: Ques #2 result: NA m<sup>3</sup>/ha/yr Mixedwood: Ques #2 result: 1.5 m<sup>3</sup>/ha/yr Ques #3 result: 1.5 m<sup>3</sup>/ha/yr

**Mixedwood:** Ques #2 result: NA m<sup>3</sup>/ha/yr Ques #3 result: NA m<sup>3</sup>/ha/yr

Hardwood: Ques #2 result: NA m<sup>3</sup>/ha/yr Ques #3 result: NA m<sup>3</sup>/ha/yr

4d. After-cut growing stock level expe	cted to be left on a	reas that will be managed by une	even-aged mana	agement.	
<b>Softwood:</b> Ques #2 result: NA m <sup>3</sup> /ha	Mixedwood:	Ques #2 result: NA m <sup>3</sup> /ha	Hardwood:	Ques #2 result:	NA m <sup>3</sup> /ha
Ques #3 result: 150 m <sup>3</sup> /ha		Ques #3 result: NA m <sup>3</sup> /ha		Ques #3 result:	NA m <sup>3</sup> /ha
<ul><li>4e. Average cutting cycle used on area</li><li>Softwood: Ques #2 result: 30 years</li><li>Ques #3 result: 30 years</li></ul>	s that will be man Mixedwood:	aged by uneven-aged manageme Ques #2 result: NA years Ques #3 result: NA years	nt. Hardwood:	Ques #2 result: Ques #3 result:	NA years NA years
5. From Questionnaires #2 and #3 the below. Figures are based on one-ti	e results regarding me applications.	fertilization of regenerated stan	ds have been ag	gregated and are	e given
<ul><li>5a. Stand age range when fertilization</li><li>Softwood: Ques #2 result: 5 &amp; 30 yrs old Ques #3 result: 5 &amp; 30 yrs old</li></ul>	would take place. Mixedwood:	Ques #2 result: 0 & 30 yrs old Ques #3 result: 0 & 30 yrs old	Hardwood: ( Q	Ques #2 result: 0 & Ques #3 result: 0 &	2 30 yrs old 2 30 yrs old
<ul><li>5b. Rate of fertilizer (kg/ha).</li><li>Softwood: Ques #2 result: 200 kg/ha Ques #3 result: NA kg/ha</li></ul>	Mixedwood:	Ques #2 result: NA kg/ha Ques #3 result: NA kg/ha	Hardwood:	Ques #2 result: Ques #3 result:	NA kg/ha NA kg/ha
<ul><li>5c. For sites distinguished as Good, M</li><li>Good: Ques #2 result: 55%</li><li>Ques #3 result: 30%</li></ul>	edium and Poor, th Medium: Qu Qi	hat proportion of sites that would ues #2 result: 0% ues #3 result: 0%	l be fertilized. <b>Poor:</b> Ques Ques	#2 result: 0% #3 result: 0%	
5d. Expected increase in growth (m3/h	a/yr).				
<b>Softwood:</b> Ques #2 result: 0.7 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.5 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 0.7 m <sup>3</sup> /ha/yr		Ques #3 result: 0.6 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.5 \text{ m}^3/\text{ha/yr}$
5e. Length of time the increased growt Softwood: Ques #2 result: 13 years Ques #3 result: 15 years	h indicated above Mixedwood:	last (years). Ques #2 result: 15 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6. Comments from Questionnaire #1 would occur only on immature star apply only to immature stands. The	regarding thinning nds. Several comn e mean of respons	indicated this topic had to be sp nents on round 2 again emphasiz es to round 2 and 3 are given bel	lit into several o e immature star low.	categories and th ads only. The re-	at thinning sults below
6a. For regenerated immature stands, e	expectations from	cleaning/brushing (assuming no	o utilization) reg	garding the follow	wing are:
6aa. Change in growth					
<b>Softwood:</b> Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.5 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result: 0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.5 \text{ m}^3/\text{ha/yr}$
6ab. Length of time this change in grow Softwood: Ques #2 result: 15 years Ques #3 result: 15 years	th lasted. <b>Mixedwood:</b>	Ques #2 result: 15 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6ac. Change in rotation based on harves <b>Softwood:</b> Ques #2 result: -5 years Ques #3 result: -5 years	table tree size. Mixedwood:	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
6ad. Change in rotation based on maxin Softwood: Ques #2 result: -5 years Ques #3 result: -5 years	um MAI. <b>Mixedwood:</b>	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -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?					
<b>Softwood:</b> Ques #2 result: -0.5 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -0.5 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	-0.5 m <sup>3</sup> /ha/yr
Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result: -0.5 m <sup>3</sup> /ha/yr		Ques #3 result:	-0.5 $m^3/ha/yr$
6bb. Length of time this change in growth 1 Softwood: Ques #2 result: 15 years Ques #3 result: 15 years	asted. Mixedwood:	Ques #2 result: 15 years Ques #3 result: 13 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 10 years
6bc. Change in rotation based on harvestab Softwood: Ques #2 result: -10 years Ques #3 result: -10 years	le tree size. <b>Mixedwood:</b>	Ques #2 result: -10 years Ques #3 result: -10 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -10 years
6bd. Change in rotation based on maximum Softwood: Ques #2 result: 0 years Ques #3 result: 0 years	n MAI. <b>Mixedwood:</b>	Ques #2 result: 0 years Ques #3 result: 0 years	Hardwood:	Ques #2 result: Ques #3 result:	0 years 0 years
6c. For regenerated immature stands, expension following are:	ectations from (	commercial thinning (including	thinning plus f	inal harvest) reg	arding the
6ca. Change in growth. Softwood: Ques #2 result: -1.0 m <sup>3</sup> /ha/yr Ques #3 result: -1.0 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: -1.0 m <sup>3</sup> /ha/yr Ques #3 result: -1.0 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result: Ques #3 result:	-1.0 m <sup>3</sup> /ha/yr -1.0 m <sup>3</sup> /ha/yr
6cb. Length of time this change in growth 1 Softwood: Ques #2 result: 20 years Ques #3 result: 20 years	ast. <b>Mixedwood:</b>	Ques #2 result: 20 years Ques #3 result: 17 years	Hardwood:	Ques #2 result: Ques #3 result:	20 years 15 years
6cc. Change in rotation based on harvestab Softwood: Ques #2 result: -5 years Ques #3 result: -5 years	le tree size. <b>Mixedwood:</b>	Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
6cd. Change in rotation based on maximum Softwood: Ques #2 result: 10 years Ques #3 result: 0 years	n MAI. <b>Mixedwood:</b>	Ques #2 result: 10 years Ques #3 result: 0 years	Hardwood:	Ques #2 result: Ques #3 result:	10 years 0 years
7. From Questionnaires #2, and #3 the regiven below.	sults regarding	genetic improvement of regener	rated stands ha	ve been aggrega	ted and are
7a. Change in MAI expected from greater	improvement.				
<b>Softwood:</b> Ques #2 result: 0.3 m <sup>3</sup> /ha/yr	Mixedwood:	Ques #2 result: 0.3 m <sup>3</sup> /ha/yr	Hardwood:	Ques #2 result:	$0.5 \text{ m}^3/\text{ha/yr}$
Ques #3 result: 0.3 m <sup>3</sup> /ha/yr		Ques #3 result: 0.3 m <sup>3</sup> /ha/yr		Ques #3 result:	$0.3 \text{ m}^3/\text{ha/yr}$
7b. Change in rotation expected based on <b>Softwood:</b> Ques #2 result: -5 years Ques #3 result: -5 years	harvestable tree Mixedwood:	e size. Ques #2 result: -5 years Ques #3 result: -5 years	Hardwood:	Ques #2 result: Ques #3 result:	-5 years -5 years
7c. Change in rotation expected based on	Maximum MA	I.			

<b>Softwood:</b> Ques #2 result: -5 years	<b>Mixedwood:</b> Ques #2 result: -5 years	Hardwood: Ques #2 result: -10 years
Ques #3 result: -5 years	Ques #3 result: -5 years	Ques #3 result: -10 years