It is suggested that the patterns of adaptation that emerge among farmers can best be understood as a product of the structural conditions of production. Moreover, the seemingly traditional responses are evidence of the limited ability of a particular form of production to provide the basis for the organizational changes necessary for survival.

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THE UNIVERSITY OF ALBERTA

THE SOCIAL CONDITIONS OF PRODUCTION AND THE DYNAMICS OF TRADITION: INDEPENDENT COMMODITY PRODUCTION IN CANADIAN AGRICULTURE

by

MAX J. HEDLEY (C)

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF ANTHROPOLOGY

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled THE SOCIAL CONDITIONS OF PRODUCTION AND THE DYNAMICS OF TRADITION: INDEPENDENT COMMODITY PRODUCTION IN CANADIAN AGRICULTURE submitted by MAX J. HEDLEY in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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ABSTRACT

The situation of small farmers in Canada is commonly understood to be a product of their committment to a traditional rural culture which renders their practices outmoded. They are seen as being resistant to change and the cause of their own backwardness. Embodied in and structuring this position is a normative model of society and change which is in widespread use in anthropology and social science generally. This model is considered here to provide an inadequate basis for understanding the development of the "small farm" problem or socio-cultural change generally.

The empirical focus of this study is a rural area in the vicinity of Edmonton, Alberta, in which one half of the farmers sell their labour power on a full-time basis. Agricultural practices in the area lend superficial support to the normative model in that a conservative approach to expansion and the adoption of practices dysfunctional to production are readily evident. However, these practices are not evidence of the persistence of tradition. Instead, they are indicative of the continuously generated responses of producers to problems created by the social conditions of production.

This raises the central theoretical problem of this thesis, namely, that of providing the means of analyzing the social conditions of agricultural production and relating

these conditions to the continuous regeneration of seemingly traditional farm practices. In doing this, the starting point is the concept of productive or class relations which, it is argued, provides a means of articulating the conditions of existence of particular productive units within the structure of society as a whole. Moreover, while it is recognized that individuals are the agents of change, it is suggested that direction is imposed on the transformation of the rural world through the dynamics of inter- and intra-class interaction. In this respect it is necessary to recognize that the dominant mode of production in Canadian society is capitalist. This is not the case in agriculture where production is primarily organized on the basis of the independent commodity form of production.

As a consequence of their class position, independent commodity producers are confronted with an imperative to continuously make changes in the organization of production which will increase the productivity and output of labour. Unless such changes are made, the reproduction of individual productive units, their transfer to a new generation of producers, and ultimately the survival of the class of independent commodity producers will be jeopardized. It is this imperative that exerts hegemony over the development of the rural world and is seen in the transformation of productive organization from the labour-intensive homestead into the modern capital-intensive family farm.

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CHAPTER ONE

INTRODUCTION

A. General Aim

The general concern of this thesis is an investigation of the social conditions of production confronting independent commodity producers in Canadian agriculture. These conditions are related to changes in the organization of production which have transformed agricultural production, and to the development of seemingly traditional patterns of farm practices. In addition, this analysis is related to the theoretical difficulties faced by anthropologists in addressing problems of socio-cultural change in complex society.

The empirical focus of this study is a small rural area in western Canada, thirty-five miles east of Edmonton, Alberta. Generally, the area is characterized by mixed farming, though particular productive units, once highly diversified, have undergone considerable specialization. Only fifty percent of the producers in the area are full-time farmers, while the rest supplement farm income by selling their labour power on a full-time basis. (Details concerning the area will be found in Chapter Five.) Of particular interest are the difficulties faced by these producers in maintaining their productive activity as farmers. More generally, these difficulties are recognized as having a bearing on the so-called small farm

problem and the related issue of rural poverty.

There has been a general tendency in anthropology to direct attention to small communities, and in doing this, to ignore the wider socio-economic setting (Redfield 1965: 6; Worsley 1970:2; Hedley 1971:56). This tendency has been carried into recent studies of complex society in a contemporary setting where the significance of the wider setting is more readily apparent (Kaplan and Manners 1972: 20; Valentine 1972:103). Moreover, this isolation tends to be complemented by a normative determinism which emphasizes the role of internalized culture in attempting to explain stability or change (see Murphy 1971; Wrong 1966; Blake and Davis 1964; Hedley 1971).

As will be shown in Chapter Two, attempts to explain the small farm problem frequently embody this perspective. Many studies tend to isolate small farmers from the mainstream of society and frequently consider them to be the cause of their own backwardness. They are portrayed as being static, backward relics of the past lacking in managerial ability and initiative. Also, they are seen as being resistant to change, refusing or incapable of assimilating modern farming techniques. As a result, changes in the conditions of production are held to render them redundant, and their backwardness is seen as a consequence of their own shortsightedness and conservatism. Producers in the area of study were observed to follow practices which appear to lend support to such an interpretation. In particular, they have adopted a conservative

pattern of low risk farming and, in many instances, pursue practices which undermine the viability of their productive units. However, by contrast, it is argued in this thesis that patterns of small farming and the supposedly traditional behaviour involved are an expression of the limitations established by social conditions of production, of the ability of a particular historic form of productive organization to provide the basis for continuous expansion necessary in a capitalist society. Put differently, regularities which appear as cultural patterns of behaviour, modes of adaptation, occur not as a consequence of cultural tradition but because options, alternatives, and problems confronting farmers and forcing a response are shaped by shared conditions of production, conditions which constrain freedom of action and shape the outcome of actions already taken. It is the aim in this thesis to elaborate on this position, outlining the social conditions of farm production and relating them to the patterns of behaviour that have emerged among small farmers in the community in question.

B. Outline of Approach/Model

Patterns of action which are classified as traditional are abstracted from a wide range of individual behaviour. These patterns are classifications of actions and must not be confused with the actions themselves (Barth 1967:662). Consequently, in analyzing tradition the problem is to show how the actions represented by these patterns

are generated and moulded. In other words, it is necessary to avoid the mistake of identifying tradition with lack of change and, instead, to attempt to understand its dynamics (Balandier 1972:172; Barth 1972:663).

This raises the question of identifying the structures and processes that lead to the transformation of the rural world and to the creation and reproduction of tradition. In providing the theoretical means of pursuing this question, it is vital to recognize that farm production in Canada is an integral part of the political economy of capitalist society. The very existence of farmers is social in that the form production takes, its basic characteristics, is premised on its being part of society. Consequently, an understanding of the conditions of farm production cannot be achieved by focussing attention on the productive unit in isolation. Instead, it is necessary to develop a structural model which locates the producer in the productive system of society as a whole.

The starting point in developing a structural model will be the concept of productive or class relations. These are defined primarily by the position of men in, and their control over, the productive process (Godelier 1967:92; Poulantzas 1973:28). It designates the relationship of man to the means of production and to the product of labour. At the same time it designates relationships between men as owners and non-owners of the means of production, and between owners of the product of labour. It

is through analysis of the relationships between and within classes that the structural conditions and development of agricultural production will be understood.

The class position of the majority of Canadian farmers is that of independent commodity producers. In this relationship, the ownership, operation, and control of the means of production are in the hands of the actual producer. That is, in its pure form, there is no separation of labour from the ownership of the means of production and the product of labour. In this form of relationship there is no direct economic exploitation because paid labour is seldom or never employed, the bulk of labour being provided by the real owner or family members (Poulantzas 1973:37). Moreover, while the means of production remain the property of the actual producer they cannot be considered to be capital in the Marxian sense. They become capital only when ownership is separated from and is used as a means of exploitation and subjugation of labour (Marx 1972:792). The private ownership of the means of production by the producer is the foundation of what Marx refers to as petty industry, or what can more generally be called the traditional petite bourgeoisie (1972:792; Poulantzas 1973:3; Marx and Engels 1968:108).

The class position of agricultural producers as independent commodity producers or petite bourgeoisie has been recognized by a small number of social scientists in Canada, though this has not led to a comprehensive analysis

of the social conditions of agricultural production. The most extensive application of the concept has occurred in studies which have used the class basis of agricultural production to understand the emergence and development of political movements on the Prairies (McCrorie 1971; Macpherson 1962; Naylor 1972; Sinclair 1975). For example, the most extensive use of class analysis in this area has been made by C. P. Macpherson in his study of democracy in Alberta (1962). The similarity with the concept of independent commodity production used in this thesis is clearly seen in the following passage:

> The wage-earner gives up the direction of his labour; the farmer retains the direction of his, making his own decisions as to how to use his land and capital, his skill and energy (Macpherson 1962:223).

Employing this notion of independent commodity production in conjunction with the recognition of the colonial status of Western producers, Macpherson explains the rise of a "quasi-party" system of government in Alberta in which orthodox party system is rejected in favour of a system of plebitarian democracy (1962:237-50). A more current example is provided in an article by Naylor, in which the Co-operative Commonwealth Federation and the Social Credit parties of the Prairies are equated on the grounds that they exhibit exactly the same class attributes. These class attributes are seen as stemming from the common petite bourgeoisie modes of production which characterized

the Prairies (1972:26).

A recent study by Don Mitchell, which is concerned mainly with the oligopolistic practices of agribusiness firms and the role of government in agricultural production, refers to the traditional farmer as an "independent capitalist-producer" (1975:11). This concept is identical to that of independent commodity producer as it is defined in terms of ownership of land and equipment by the actual producer. Moreover, these producers are distinguished from the small number of large corporate or capitalist farms which employ wage labour (Mitchell 1975:26). Finally, another study which focusses attention on the oligopolistic practices of agribusiness characterizes farm producers as mercantile peasants (Warnock 1971). The characteristics of mercantile peasants are that ownership of the land rests with the actual producer; labour is not considered a cost of production; producers are likely to seek supplementary non-farm employment; and surplus is extracted through loans, taxes, mortgages, and price manipulation (1971:121). Ownership of land by the producer and the fact that labour is not considered a cost of production, that is, that there is no hired labour, fit the general definition of independent commodity production. This similarity is further supported by the distinction made between primary reliance on the employment of wage labour (Warnock 1971:121). Independent commodity production is a structural category that locates producers in the class structure of society as a whole. It

does not specify whether or not labour power is sold or the means by which surplus is expropriated. However, as will be shown in subsequent chapters, it provides a framework for understanding the movement of surplus and its effects on farm producers as well as the adoption of patterns of part-time farming.

In the case of agricultural production on the Prairies, as will be shown in Chapter Three, the establishment of a society of independent commodity producers was the basis of colonization. It will also be seen that the vast majority of producers continue to operate within the framework of this relationship despite the changes that have occurred. Furthermore, it is suggested that the independent commodity form of production is the primary form of productive relationship in Canadian agriculture as a whole (Johnson 1972:142; Ryerson 1950:62-3). It may be added that acceptance of this position does not entail a denial of the obvious stratification or the presence of divergent interests within the class of independent commodity producers.

Though the relationship has been continuous over time, this should not be taken to indicate lack of change. On the contrary, analysis in terms of productive relations provides a framework for understanding the developments that have occurred. To understand this it is necessary to distinguish between (1) changes in the relations of production and (2) changes in the organization of production. Changes in the relations of production entail a decline in

the class of independent commodity producers and their replacement by capitalist, cooperative or other forms of productive relationship. Changes in the organization of production occur within the framework of the independent commodity form of productive relationship. It is changes of this type that are reflected in the transformation of agricultural production which have led to the development of the modern capital-intensive family farm from the labour intensive homestead. Changes in the relations and organization of production are related as the particular form of productive relationship can be seen to facilitate or inhibit change, and to depend on changes occurring which are necessary for the survival of the relationship.

Individuals are obviously the agents of change, for it is their actions that have brought about the massive changes that have occurred in agricultural production. However, the pattern of change that has emerged, the movement toward capital-intensive productive units, cannot be explained on an individual basis. The position taken here is that direction is imposed on the processes of change through the dynamics of inter- and intra-class interaction.

Of particular relevance, in this respect, is that while independent commodity production is the primary form of productive relationship in agriculture, this is not the case for society as a whole: The dominant form of productive relationship in Canadian society is capitalist. It is through relations of exchange with this capitalist class,

whether commercial or industrial (Clement 1975:34), that individual farm producers dispose of their output and obtain producer goods that enter into the productive process. Consequently, the outcome of exchange is vital because it provides the basis for the continuous reproduction of the independent commodity form of productive relationship.

As a consequence of their structural position in society, agricultural producers are faced with an imperative to continuously make changes in the organization of production if they are to maintain their livelihood. Moreover, the only changes which will facilitate the continuous reproduction of the independent commodity relationship are those which increase productivity and output. It is this imperative that exerts hegemony over the transformation of the rural world.

The presence of this structural imperative does not mechanically determine the course of individual action. In the final analysis this depends on the aspirations, resources, and alternatives available to particular producers. However, producers do have to respond to this imperative even if the response is simply a passive acceptance of a continuous decline in income. It is suggested that this response and others which do not involve increases in the productivity and output of labour will lead to the eventual loss of ownership of the means of production and/or to an inability to transfer a viable productive unit to a new generation of producers.

It is suggested, then, that the structural conditions of production provide a basis for explaining the emergence of capital-intensive farming. In addition to this it is argued that the apparently traditional practices of small farmers are in fact continuously generated by the evolving conditions of production. These practices, as will be seen in Chapter Six, reflect a continuous pragmatic response to the conditions of their existence as independent commodity producers. In other words, both the development and underdevelopment of productive units can be seen as the product of the structural conditions of production in capitalist society.

C. Plan

The organization of this thesis follows a logical progression based on the development of the structural model. In Chapter Two the justification for the development of a structural model is established through a critical analysis of conceptualizations of the small farm problem. Particularly, critical attention is focussed on the tendency to isolate the group in question from society as a whole and on the normative determinism that enters into explanations of change. This discussion is placed within the context of anthropological theory.

In the following two chapters, Chapters Three and Four, the basic structural situation of agricultural production is developed. Specifically, in Chapter Three, the

significance of the independent commodity form of productive relationship in Prairie agriculture is established. It is shown that this form of production was established as the basis of Western colonization and that it has remained the dominant form of productive relationship in Prairie agriculture.

The relationship of the class of independent commodity producers with the monopoly capitalists of agribusiness is discussed in Chapter Four. Primarily, this is done through an analysis of the implement industry whose monopolistic practices are considered to epitomise the activities of agribusiness generally. From this it is established that the survival of the class of independent commodity producers under contemporary conditions of production is dependent upon there being continuous changes in the organization of production to compensate for cost-price pressures.

Chapter Five begins with a general description of the area of study with particular reference to the changes in the character of production that have occurred. This is followed by a discussion of the inter-generational transfer of resources and the changes that have occurred in the organization of production. Here it will be established that changes in the technology of production, which raise the output and productivity of labour, are a necessary condition for the survival of the class. It is the necessity of such changes that is seen to underlie the

emergence of the capital-intensive family farm from the labour-intensive homestead.

Independent commodity producers in the area of study have developed what can be characterized as a conservative, risk-minimizing pattern of farming. Complementing this are patterns of practices that limit the output and productivity of enterprises. These patterns are discussed in Chapter Six. Initially, attention will be directed to completing the analysis of the social conditions of farm production. Particularly, the structural vulnerability and risk associated with independent commodity production will be established. Following this, the patterns of farm practice are interpreted in light of these conditions. From this discussion it will be seen that regularities in behaviour which are seen as persistent cultural patterns occur because of the underlying continuity of the social conditions of production.

CHAPTER TWO

CRITICAL ANALYSIS OF CONCEPTUALIZATIONS OF THE SMALL FARM PRODUCER

A. Introduction

Interpretations of the conditions of low income farm producers are frequently premised on the assumption that they are isolated from society as a whole. A consequence of this is that in attempts to explain their condition attention is focussed on the group itself without any reference to the social conditions of agricultral production. This focus tends to be associated with the view that the activities of low income producers are conditioned by an adherence to a cultural heritage which is no longer appropriate. These producers are characterized as residual, as having outlived their usefulness because they have failed to respond to conditions which have changed around them. Such a view is incorrect, mistaking for tradition patterns of behaviour which reflect a continuous adjustment to evolving conditions of production.

This raises the question of the adequacy of the perspective (Mannheim 1936:272) which guides research into problems of the rural setting. However, it is not simply the presence or absence of traditional beliefs and values in the small farm population that is in question, but the normative deterministic model which underlies so much discussion of the small farm problem and of social science

generally (see Murphy 1971; Mills 1968; Wrong 1966). In its basic form, a view of man is involved which portrays him as the passive recipient of culture, mechanically directing his actions in accordance with internalized cultural imperatives. In this view, culture is not simply a statistical summation of behaviour in a society or a set of idealized behavioural patterns, but implies the necessity of actions taken. That is, adherence to a cultural pattern is felt as a moral imperative, as what people ought to do; hence, individuals are obliged to act in accordance with culture and find gratification in acting that way (Hallowell 1953; Spiro 1951; Kroeber 1963; Herskovits 1955; Lin- n 1936). This normative model leads to an analysis of chang which stresses the rejection or acceptance of innovation, a view which underlies diffusion studies in rural sociology (Galjart 1971) and acculturation studies in anthropology (Hedley 1971). In addition, by emphasizing the role of values and norms in defining group boundaries the normative perspective reinforces the conceptual dualism which isolates this group from society as a whole.

The aim in this chapter is to assess critically the conceptualization of the rural world, particularly as it applies to the "small farm" problem. In doing this, attention will initially be directed to the limitations imposed by the assumption of isolation. Following this, concern will be with the adequacy of normative interpretations of the behaviour of small farmers, particularly

with the normative explanations of their backwardness.

B. Assumption of Isolation

A common practice of anthropologists in the study of complex society is to isolate their subject matter from its societal setting. This tends to be accompanied by a neglect of the wider social order or at best the tacit recognition of givens. For example, according to Valentine (1968:101, 103) the study of complex societies and urban life is characterized by a narrow ethnographic focus while analysis of the wider social setting is left to other disciplines or ignored. Similarly, in acculturation studies analysis of the dominant society is ignored despite its explicit significance to the model (Hedley 1971:56). In either case, analysis of the wider social setting is ignored, and a focussing attention on a specific social context the assumption is made that it can be treated in isolation.

In turning attention to the situation of agricultural producers in capitalist society it is readily evident that production is not an isolated activity. Farm producers are integrated into and dependent upon regional, national and international markets for the disposal of their product, as well as for the purchase of products necessary for continuous production. Despite recognition of this integration there is a tendency to conceptually fragment reality by treating problems in a rural setting as though they existed

in isolation. John Bennett, for example, is particularly concerned with the way producers manipulate their environment for "purposes of survival and also of change" but accepts "the national economy, the demands of the enterprise" as givens (1969:19). The presence of this assumption can be clearly seen in attempts to understand the conditions of "small farmers." Though tacit recognition of their position in society is given, they are inevitably defined in such a way that they become the focus of analysis in a search for causes and solutions to their difficulties. They are, in effect, defined as a deviant group, and the source of their problem is located in the deviance. There is no need to deny that "small farmers" are faced with particular problems. Rather, the point is that their situation, as will become clear in subsequent chapters, cannot be understood in isolation from the social conditions of agricultural production in society as a whole.

The initial step usually taken in studies of the "small farm" problem is that of classification, that is, in deciding what constitutes a small farm. Normally, this step is considered to involve no a priori assumptions about the approach to be adopted. This reflects a positivistic view of science which assumes that facts can speak for themselves without any interpretative framework. In addition, this approach fails to recognize that facts are selected on the basis of premises, often unstated, and that the way the problem is posed unavoidably involves

assumptions about the nature of society.

It is clear that the basis of classification depends, in the first place, on the problem under consideration: that is, selectivity is based on the ends in view. In the case of Canadian "small farmers" a social problem is widely perceived in that a large number of family units are seen as having difficulties in maintaining their livelihood from their productive activities as farmers. Put differently, they suffer an income deficiency. Consequently, classifications invariably seek to distinguish "small farmers" from large successful farmers on the basis of farm income, or on what amounts to the same thing, the cash value of the product sold.

Such classifications are claimed to be objective in that they are based on more or less clearly defined and measurable criteria, but they are inherently arbitrary in that the transitional point between categories is subjectively determined. For example, the 1969 Task Force on Agriculture defined poverty in terms of a net income of $3000 or less for a family with one child (Canada 1970: 419). According to this definition, 100,000 rural producers were considered to be poor. This same figure, it may be added, was used by the Special Senate Committee on Poverty (Canada 1973:33). In arriving at the figure of 100,000, the group in poverty was taken to be those with a gross farm income of $5000 or less with allowances made for off-farm earnings. Consequently, those farms with a

gross income in excess of $5000 but which had a net income of less than $3000 were not included (Canada, Federal Task Force on Agriculture 1970:420). A further decision was taken, through lack of data, to assume that the average family size in this group included only one child. In other words, the criteria invoked for defining categories were simplified "for the sake of statistical and informational convenience" (Canada, Special Senate Committee on Poverty 1973:5). In addition, the level of income was based on the 1961 dollar value and reflects no changes in the cost of living or growth in the standard of living (Adams, et al 1971:10).

It is apparent that the categories, once established, are regarded as objectively based, since the only assumption recognized is that income level is an appropriate means of defining the problem area. However, implicit in the procedure is the additional assumption that the conditions of the "small farmer" can be effectively isolated in this way from those of other farm producers and from the wider socio-economic context generally. The group of "small farmers," however defined, is isolated and becomes the focus of analysis in a search for causes of and solutions to their difficulties. This assumption is adopted by the Task Force on Agriculture and the Economic Council of Canada (1965) who concern themselves primarily with the "successful" third of the farm population, and is clearly expressed in the 1974 Social Science Council of Canada

Report:

> It is imperative that this group of non-viable farmers should be considered as being separate from the people engaged in commercial agriculture, and their problems isolated, diagnosed and treated accordingly (1974:16).

The unity of the group, initially at least, is seen to lie in the level of income of the members of the group. They are, in fact, a "stratum," and their relationship with other strata is simply in terms of income. Unlike the notion of class (Dos Santos 1970; Godelier 1967; Poulantzas 1973) the concept of stratum expresses no internal relationship or living relationship between categories, no interaction, no connotation other than a hierarchical relationship on an income scale. It is merely the description of one dimension of their existence. Such groupings are not cultural nor do they correspond to a level of socio-cultural integration unified on the basis of function. Obviously small farmers are functionally integrated into society, but the fact remains that such integration is not the basis of classification as a strata. They are, of course, farmers, an occupational group, but they are distinguished from other farmers purely on the basis of income.

Conceptualization of the problem in this way results in an assumption of structural dualism common to the study of change in the social sciences. It is apparent in acculturation and diffusion studies, where change is seen as

the product of contact between autonomous social systems, and is prominent in studies of modernization and development (Frank 1967; Worsley 1970). The population of small unsuccessful farmers is treated as a unity distinct from its more progressive counterpart. Analysis is directed inward and fragmented as the conceptualization diverts attention from their position in the wider socio-economic structure of society. It precludes wholistic analysis which could point to conditions of production and forces of change emanating from, and through, their structural position in society. In isolating the "small farm" problem in this way the assumption is made that its emergence and development can be understood internally despite the fact that the only unifying factor is level of income.

Conceptual isolation of the stratum under study contributes to an inability to understand the extent to which conditions of production are shaped by the involvement of the producer in the economic structure of society. Nevertheless, it is recognized that "small farmers" produce a commodity which is destined to be consumed by other sectors of the economy. However, this integration tends to be seen in functional terms, resulting in a mechanistic conception of society. Integration is simply seen as the exchange of commodities by independent, though functionally dependent, groups which are unified into a harmonious social whole by a central system purpose.

In the Task Force Report the conception of society is

explicitly functional, in which various sectors (sub-systems) are considered to be integrated through exchange into a harmonious whole. Some recognition is given to the fact that there is a conflict of interest between buyers and sellers, but this insight is reduced to insignificance by stressing interdependence and by assuming that a particular activity of the system, namely that of providing the consumer with food, is its central purpose. The system exists simply to fulfill its basic function.

> The function of this system which weaves in and out of the entire economy is to process, manage, regulate and study the flow of resources from farm inputs to the final consumer. Its central purposes are to satisfy the food wants of consumers and to provide adequate income and security for all who own and/or work in these organizations (Canada, Federal Task Force on Agriculture 1970:4).

That farming is part of an extensive division of labour which does provide food for consumers is obviously true, but this does not mean that components of the system are oriented simply toward this central purpose. Such a condition might be more nearly approximated in a socialized economy, where central planning by the state allows the function of various sectors to be related to the achievement of overall aims. In a capitalist economy, however, the language of function and purpose serves to mystify the situation in which capitalist enterprises are, of necessity, organized in terms of the rational pursuit of profit. The situation is in fact characterized by a conflict of

interests as the various producers contributing to the production of food seek to maximise their own profits at the expense of other producers both within and between sectors in the productive process (see Chapter Four). Moreover, there is no coincidence of interests between producers and consumers, as the farmer seeks to obtain the highest price and lowest costs with little regard for the nutritional value of the product being sold (Turner 1970:100-101). Functionalism recognizes the interconnectedness and interdependence of productive activity, but is in error in equating final product with system purpose (Barth 1967:663). Its explanations of system behaviour, which start from the acceptance of overall societal goals, simply mask a situation marked by sectional interests, conflicts, and obscure their significance. In providing an illusion of order it hides the fact that the outcome of the productive activities for society as a whole is unplanned, the irrational result of the rational pursuit of profit by sectional interests.

Analysis of the productive system in functional terms leads itself to the assessment of the activities of components of the system in terms of purpose. Prime stress is placed on productivity and output; hence, it is but a short step to condemn producers who are lower in productivity and output, as they are seen as restricting the supply of food to the consumer as well as producing at higher costs. It is on this basis that the Task Force encourages the development of larger farms and the removal

of small farms from production. Consequently, the Task Force concerns itself with one-third of the present farm population considered viable, while it considers the rest detrimental to system purpose. In doing this they reject the social option for agriculture and "sincerely hope" that it will not be invoked (Canada 1970:9). In other words, recommendations concerning the fate of two-thirds of the farm population, writing off their future without their consent, is made on the basis of a model which does not fit reality.

This functional view of production in society reinforces the conceptual dualism imposed by initial definitions of the small farm problem. Small farmers are not only marked by their level of income but also by their limited contribution to system purpose, which is seen as a result of low productivity and output. The possibility that low output and productivity might be a consequence of the societal organization of production is lost, and attention is directed to the qualities of the group itself. The social conditions of agricultural production, and the way they shape activities remain unexamined. They are obscured because the "deviant" group is divorced from the wider context and considered in isolation.

C. Normative Determinism

As was previously mentioned, the location of small

farmers as a stratum in society is the first step normally taken in the analysis of their condition. They are related to other strata simply by their level of income. However, as the purpose of analysis is to explain their condition, additional, secondary dimensions of substructural and sub-cultural differentiation are then examined in terms of their relevance to the lower strata as such (Arensberg 1965:121). There is an attempt to differentiate the categories further in terms of internal similarities in a search for an explanation of their condition. In other words, it is assumed that because the same external forces impinge on all categories of farmers, the differences in performance can be explained by internal variations.

Instead of attempting to develop means of understanding changing conditions under which production occurs and locating the struggles of small farmers in that structure, attention is channelled into a search for characteristics that mark off the viable farm from the non-viable farm. In doing this, small farmers are inevitably portrayed as a "backward" sector that is separated from and behind more "progressive" sectors. This position is clearly expressed by Black:

> ...I do not call these areas "depressed" areas because this carries the implication that something has come along and depressed them. Instead and for the most part, all that has happened to them is that they have fallen much behind the rest of farming in the country in its march towards better

> incomes and living. [illegible]st description of the area today, other than just low income, is backward (1958:29).

Processes leading to the constitution of the present situation of small farmers are lost, and consequently, indices such as lack of capital, land, and income can only be interpreted as a function of a lack of development. They are taken as indices of backwardness. A major means of interpreting this "backwardness" is in terms of adherence of producers to traditional beliefs and values, to farming as a way of life, which are inappropriate in the modern context.

The distinction made between commercial or viable farms and small or non-viable farms is not, initially at least, based on what anthropologists refer to as a culture, but, as was shown, on differences in income. However, the category of "small farmers" does come to take on the appearances of such a unit. Commercial farms are represented as a progressive, modern sector, profit-oriented and committed to rational farming methods, while the rest are seen as a backward, traditional sector, static and resisting change. Small farmers are seen as a group marked by their adherence to traditional rural culture while the progressive sector has emancipated itself from this past. This position is clearly illustrated by Earl Tyler:

> Once established, the values and ideologies characteristic of the farmer as a social class increasingly shaped the farmers' behaviour, even when the conditions which had

> served to develop these beliefs, attitudes, values and ideology, and gave them their significances, steadily disappeared.
>
> Currently, a major section of the farm population in the Prairie Region appears to be clinging, almost desperately, to the values, ideology and philosophy dominant and appropriate 30 years ago (1970:316).

The culture of small farmers in the Prairies is portrayed as being adaptive to conditions of farm production in the 1920's and 1930's and as having been rendered redundant by subsequent external changes. Consequently, all farmers today are seen as adhering to traditional cultural patterns which condition their productive activities at the present time and cause their backwardness. Moreover, this backwardness is seen as a mark of their personality, as individual farmers are held to have lost the "versatility and adaptive ingenuity, once so evident in the development of novel farming techniques and social structure..." (Tyler 1970:316) but which are again necessary if farmers are to respond to new conditions of living. The farmer has remained static, a relic of the past (Tyler 1970:316). In effect, the position amounts to a culture of poverty of the small farmer. The formation of culture is initially seen as an adaptive response to the conditions of farm production in the same way that Lewis' "culture of poverty" is a response to the conditions of lower class life (Lewis 1966:xliv). In both cases, however, the significance of the concept derives from the fact that culture, once formed, is self perpetuating. Culture is handed down

from generation to generation, and consequently, individual carriers are no longer able to take advantage of changing conditions or the increased opportunities that may occur in their lifetime (Lewis 1966:xlv). (For a discussion of this view see Valentine 1968:17; Liebow 1967:208.)

The traditional culture of the small farmer is considered to be responsible for his inability to adapt productive activities to changing conditions of production. This assumption is illustrated by the position taken in the Task Force Report:

> Changing technology made them marginal and then submarginal but the people concerned could not change as fast in their attitudes and capacities as did the economic and technological environment surrounding (and partially submerging) them (Canada 1970: 20) (Emphasis added).

Initially this refers to approximately 100,000 - 150,000 farmers, the lowest third on the income scale. However, as the ability to meet their needs at a basic level is all that distinguished the lower one third from the middle third on the income scale, these generalizations are applied to them also. "There is no guarantee that ability, initiative or the spirit of cooperation is any more prevalent in the economically mediocre group than among the still less fortunate in the poverty group" (Canada 1970:410). In all, some 300,000 farmers lack the "attitudes and capacity" appropriate to agricultural production in the contemporary period, and therefore are not considered as

part of the future of the industry.*

Small farmers, especially those living in poverty, are considered to have limited capacity for innovations because of their adherence to a traditional culture, a culture which, according to the literature on the rural poor, is characterized by

> ...traditionalism, fundamental religion, low regard for education, short time perspective, suspicion of outsiders, inability to defer gratification, and their apathy (Abramson 1967:5).

Stress on the presence or absence of traditionalism is reflected in the preponderance of diffusion studies in rural sociology which seek to explain the reluctance of small farmers in a particular community to accept innovation. For example, Galjart states that much rural sociology has been "aimed at explaining the variance in innovativeness among individual farmers living in a single community" (1971:31).

The significance of this argument is that it isolates the problem at the individual level. It is simply assumed that the individual is failing because he is clinging to outmoded attitudes concerning his farm practice. He lacks ability and capacity because his learning has fitted him for a time that has passed. Another position does not give

*This is reminiscent of Lewis' conclusion that "It is much more difficult to eliminate the culture of poverty than to eliminate poverty per se" (1966:li).

credit to any learning but suggests that backward areas are the product of the type of population attracted to low resource areas. For example, Manning and Buckmire hypothesize that

> ...people lacking ambition, energy, and ability would choose to settle in areas lacking in natural resources and therefore characterized by a minimum of interpersonal competition for the ownership and development of natural resources (1967:11).

If the individual falls behind it is because he is unproductive, and if he is unproductive it is because he is not competitive enough. He lacks the capacity to take advantage of the opportunities that are available to him which would have enabled him to transform his productive unit. In short, all is reduced to a culturally conditioned failure to accept innovation and change.

In its extreme form this view embodies a deterministic model of man which is widely held by social scientists. It involves an oversocialized conception of man, a view in which man swallows his culture and passively follows internalized dictates (Hedley 1971). Murphy points to the wide acceptance of this view by social anthropologists when he says that the contribution of neo-Freudianism

> ...has been the peculiar view of man as the social, malleable, and plastic animal who swallows society in order to buy the acceptance of his fellows. Social science has bought this view of human nature (1971:79).

It is obviously difficult to fit change into this model, as individual members of a society not only act according to ~~normative~~ dictates, but experience culture as a moral imperative. Individuals find gratification in acting in accordance with the requirements of their culture (Hallowell 1953:661; Spiro 1951:32; Kroeber 1963:94; Herskovits 1955:330-47; Linton 1936:91-112). Change becomes the acceptance or rejection of innovations which, in its turn, is determined by the normative characteristics of that culture. Thus, traditional cultures militate against change while modern cultures with such values as competition, progress, etc., embrace change (see Galjart 1971; Tyler 1970).

The form of determinism evident in this model is unacceptable as it effectively eliminates the purposeful content of man's actions, and takes no account of the way the conditions of production shape actions and the outcome of actions already taken. People are not necessarily fully aware of the conditions under which their actions occur. Nevertheless, they act and act for a reason. Therefore, it is imperative to take their reasons into account when interpreting their actions.

For instance, small farmers are seen as engaging in practices which, from a rational economic standpoint, are irrational. Such practices may include, for instance, a failure to apply fertilizer when it is known that yields would increase substantially; failure to apply herbicides

when it is known that a 30% reduction in yield is likely to result; failure to use fallowing pens when it is known that loss of young may well occur; failure to practice insemination, or use the best quality semen available, when it is known that such practice would improve quality of stock. For adherents to the normative model such instances of seemingly irrational action are easily construed as the product of a traditional orientation to farming, a resistence to innovation, the continuation of practices which are outmoded in the contemporary context of farming.

Instances of such behaviour are classified and registered as descernable regularities characteristic of that category of farmer. It is then but a short step to assume that these regularities are the product of a shared value and belief system, a shared traditional culture. It is from the presence of such actions that the underlying values and attitudes are inferred. That is, the practices are taken as evidence of attitudes and values which have no independent source of validation. This approach is justified by assuming that values are largely implicit and have to be inferred from action (Kluckhohn 1951:346). Such an approach is plainly tautological, ammounting to little more than a reclassification of the variables for which an explanation is sought.

This approach tends to ignore explanations given by the initiator of actions. It may be true that the practices

of small farmers are guided by simple adherence to tradition, but evidence independent of the action itself is necessary if the explanation is to be accepted. The conclusion may be legitimate, if, for instance, the practices followed are justified in terms of the past with no reference to present conditions of production. Of course, it may well be the case that old practices are perpetuated, but it may turn out that this can be explained by their relevance to farm operations under contemporary conditions of production. In any case, the persistence and significance of traditional culture cannot be legitimately inferred from the actions they are meant to explain. Moreover, similar problems arise in discussions of the modern sector. For example, in rural sociology the most significant characteristic of the modern farmer is a disposition to accept change, yet the existence of this trait is assumed to exist a priori (Galjart 1971:31).

Instances of responses which would indicate commitment to tradition were totally absent in the area of study. Take, for instance, the case of failure to apply herbicide. First, it may be pointed out that timing of application is critical, though this is no longer the case with pre-emergent herbicides, as wild oats, the major weed, have to be sprayed while growth is at the two- or three-leaf stage of development. Failure in one case to apply herbicide was a result of mechanical failure of spraying equipment during the critical growth period, at a time when the

producer lacked sufficient capital to replace it. Another instance was related to the work-farm pattern, as the individual in question was unable to take time off work to apply herbicides during the critical growth period. In both cases the benefits to be derived from spraying were obvious and the inability to apply herbicide lamented. Another example was a decision not to apply fertilizer when the benefits in terms of increased yields were plainly obvious. To infer that this decision was somehow traditional fails to recognize that the farmer in question had previously used fertilizers and that the decision was a result of cash shortage due to low prices the previous year, coupled with the expectation that the low prices would continue. The decision was made with reluctance and in fact came to be regretted as prices did rise and the yield fell more than was anticipated.

Lack of traditional orientation, it may be argued, could be attributed to the peculiarities of the area in which research was done. For instance, proximity to Edmonton and the fact that most farmers in the area sell their labour power on a full-time basis may have contributed to the emergence of attitudes which are not typical of the small farmers in other areas. This seems unlikely as studies that emphasize the role of tradition in determining the acceptance of innovation do not discount other variables entirely. For instance, Leuthold hypothesizes that an important variable in understanding the processes

of diffusion is the size of farm income (1966:166). That this simple fact seems to be difficult to grasp is reflected in Galjart's comment addressed to rural sociologists:

> It is self-evident but it needs saying that many farmers simply lack the funds with which to purchase innovations. And even if they have some funds, they cannot take risks (1971:36).

The point is that it cannot be assumed that poor farming practices reflect the presence of traditional cultural imperatives. Rather, they have to be interpreted in light of the resources available to the producer and the conditions under which production occurs.* In other words, it is suggested that small farmers, like their larger counterparts, are constantly responding to changes in the conditions of production. (This theme is elaborated in Chapter Six.) That is, evidence indicating backwardness seems more likely to reflect the ongoing struggle of small farmers to adjust to the social conditions of their existence.

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*This is, in fact, recognition of the adaptive dimension of the culture concept (Valentine 1968:5). The adaptive dimension is present in Lewis' work, where the culture of poverty, at least initially, is seen as a response to the conditions of lower class life and as functioning to help the poor adjust to those conditions (Lewis 1966:xliv).

D. Summary

The application of traditional-modern, backward-progressive dichotomies to strata distinguished on the basis of income is inappropriate in understanding the "small farm" problem. It embodies an explanation of the difficulties of small farmers which amounts to no more than a reclassification of patterns of behaviour. These patterns, which may or may not be described as traditional, are the outcome of many individual actions. They are categories that of necessity submerge individual differences. This is legitimate and necessary, but it leads to confusion when the nature of the procedure is lost, and the categories become reified (Barth 1967:662). It is forgotten that they are abstractions from the ongoing process of social life and do not constitute reality itself. In the process of reification, these patterns are mistaken for things causing social action, and hence come to be seen as continuous over time. Thus, the culture of poverty, an abstraction from the actions of the poor, is initially seen as a response to the conditions of lower class life but then it is treated as though it were a thing, continuous over time, controlling life. Abstracted from the individual, then, cultural patterns are considered to be inculcated into the individual, and in effect, therefore, become their own cause. Alternatively, a traditional value is inferred from the pattern and held to be present in the

individuals from whose behaviour the pattern was abstracted. It is with the aid of this tautological reasoning that individuals can be seen as the passive recipients of their culture, and, more to the point, that the behaviour of small farmers is seen to be determined by tradition.

It is therefore not only the presence or absence of traditional beliefs and values that is in question, but also the deterministic model within which the concern for traditional culture is framed. In conjunction with the structural isolation, which divorces the producer from the wider social context, this determinism denies the relevance of the social conditions of production and the individual's reaction to them. Constraints imposed on the farm producer by the structure of production in capitalist society are ignored, while a predetermined emphasis is placed on normative characteristics. The effects of the institutional structure of society, of class position, of beliefs and values, are felt by the individual during his upbringing. But this experience is mediated through the family and other educational institutions, and commonness of conditions is experienced uniquely: the individual is not a replica of his culture. Furthermore, individuals do have passions and desires which may be rooted in childhood experience, but this does not mean they are a blind determinant of his actions, ruling every act. They may be realized in a variety of ways. The paths of action vary, and the individual, as a result

of his experiences, may be obliged to forego them to pursue other ends. That is, a simple isomorphic view of culture in which the individual inculcated with the values of his culture pursues them in a situation structured for their realization is an emply ideal (the ideology of "Everyone can make it if they try"). Thus, the migrant farmer hasn't necessarily lost his desire to farm but more likely has realized that this end or the ends he seeks through farming are impossible to achieve. In this way the structure of society determines values achieved and conditions their realization.

In seeking to develop the means of understanding the "small farm" problem it is, then, necessary to abandon the normative approach with its dualistic assumptions and overdeterminism. In turn, this does not entail the acceptance of a materialistic determinism in which individuals respond to structural pressures in a mechanistic way. This position, in fact, was criticized by Marx when he pointed out that the "materialistic doctrine concerning the changing of circumstances and education forgets that circumstances are changed by men and that the educator himself must be educated" (1967:197-98). More recently, Murphy criticized the position taken by "materialistically oriented social anthropologists" who are seen as ignoring the fact that individuals consciously respond to the conditions of their existence. Rather, they are seen to portray "men as helpless in the grips of history" that is

made through the interaction of cultures "according to natural laws" (1971:109).*

Instead, an approach is required which locates the struggles of producers to make a livelihood in the structure of a particular historic society. It has to recognize that man both creates the social conditions of his own existence and in turn is created by them.

> ...man in a period of exploitation is at once both the product of his own product and a historical agent who can under no circumstances be taken as a product (Sartre 1968:87).

Farm producers are both part of and dependent upon the social organization of production in society. Their actions as producers are moulded by the conditions under which production occurs, and contribute to the continuity and change of these conditions.

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*See also Sartre's criticism of French Marxists, 1968.

CHAPTER THREE

HISTORICAL AND CONTEMPORARY SIGNIFICANCE OF INDEPENDENT COMMODITY PRODUCTION IN PRAIRIE AGRICULTURE

A. Introduction

It was hypothesized in Chapter One that the "small farm" problem is a developmental rather than a static phenomenon, a direct response to changing conditions of production in capitalist society. In other words, the underdevelopment of the productive organization of small farmers is created by the same processes that have led to the development of "progressive modern" farms.

To understand this it is necessary to recognize that agricultural production in the West is not merely related to the economic structure of Canadian society; rather, it exists, and came into existence as an integral part of the political economy of an expanding capitalist society. The very existence of farm producers is social in that the forms production takes, its basic characteristics, are premised on their being part of society. Consequently, the problems facing individual producers are not explicable in terms of the productive unit in isolation, that is, in terms of internal characteristics, but necessitate locating the producer in the productive system as a whole.

To achieve this end it will be necessary to provide a structural model which facilitates analysis of the structural constraints bearing on individual producers.

This will make it possible to understand the extent to which changes in the organization of production, such as the development of the modern capital-intensive family farm from the labour-intensive homestead, are shaped by the structural conditions of production in capitalist society.

The categories of this structural analysis will be based on productive relationships, that is, class relations. These productive relations designate the relationship of man to the product of labour, his relation to the means of production, and the part played in the productive process by individuals and groups (Godelier 1967:93; Lefebvre 1969:5; Poulantzas 1973:28). Productive relations, class relations, refer to the relationship between men in their productive activity. In Marxian analysis it is part of a more general conception of the mode of production, which also includes the productive forces, that is, the way labour power is organized in production and the level of technology of the tools of production (Dos Santos 1970:174; Zeitlin 1968:99). A distinction will be made between relations between class members and relations between classes. The relationships involved, for the purpose of this analysis, can be identified broadly as those between independent commodity producers in agricultural production, and those between independent commodity producers and agribusiness. A knowledge of both is prerequisite to understanding the situation of farm producers. It is through an analysis of the structural position that the contradictions inherent

in the independent commodity mode of production can be understood, for they are contradictions within a particular economic structure, a structure dominated by the private ownership of capital and capitalist productive relationships. This provides the framework for understanding the struggle of farmers, particularly of the family farm, to maintain a livelihood from agricultural production.

Attention in this chapter is directed at establishing the historical significance and the continuity of the independent commodity form of productive relationship in western Canadian agricultural production. It is argued that this relationship is persistent over time, having been established from the outset of Western colonization and remaining important to the present. The persistence of this relationship is not taken to indicate lack of change. Rather, it is within the framework of this relationship that the changes in the organization of production have occurred which have led to the emergence of the capital-intensive family farm from the labour-intensive homestead. The dynamics of these changes are discussed in Chapter Five.

In Section B discussion is concerned with establishing the historical significance of independent commodity production. Section C establishes the persistence of the relationship through a discussion of changes in land ownership, input of external capital and labour.

B. Historical Significance of Independent Commodity Production

Agricultural production in Canada has always been subordinate to political and commercial interests, contributing to defense, provisioning the staple trades, and serving as an investment frontier (Fowke 1946:4). The subordinate nature of agricultural development has been clearly apparent in the Prairie provinces, where its primary function was the creation of investment opportunities for metropolitan interests in central Canada (Morton 1970: 47; Macpherson 1962:6; Fowke 1970:343). From the outset of Western colonization, the development of production was tied to investment interests in central Canada and integrated into an expanding national and world capitalist economic system.

The 1867 union of the British North American colonies in Confederation was the constitutional means by which an agricultural frontier in the West could be established (Fowke 1946:140), and its wealth channeled into central Canada (Morton 1970:47). In fact, the opening of the West seems to be a clear example of the state functioning to meet the investment interests of a capitalist class. For example, according to Levitt, railway and financial enterpreneurs were directly represented in the government, there being few politicians without such interests (1971: 50) (see Myers 1972; Regehr 1975). The purchase of Rupert's Land from the Hudson Bay Company in 1870 provided

the land base for the development of an agricultural frontier. To ensure control of agricultural development, the federal government retained jurisdiction over the control of the resources of western Canada until 1930. Consequently, unlike the other provinces in Confederation, the Manitoba Act of 1870 vested the control of crown lands in the hands of the federal government. This practice was repeated in the Acts that formed the provinces of Alberta and Saskatchewan in 1905 (Fowke 1970:246). Control of land and its disposal to railway companies and settlers was seen as means of meeting the needs of financial and commercial interests in eastern Canada (Morton 1970:478).

The commercial benefits of Western expansion were to be secured by central Canada and not diverted to the United States. In fact, John A. Macdonald, Canada's first prime minister, was convinced that the government of the United States would do everything, with the exception of armed conflict, to take possession of the Canadian West (Fowke 1946:162). The means of securing control of the West was the development of a Canadian-controlled rail transport system which would ensure that trade would flow to and from central Canada (Innis 1971:291; Levitt 1971:51). The completion of the Canadian Pacific Railway in 1885, fifteen years before immigration occurred on a massive scale, was indicative of the power of metropolitan interests in central Canada (Careless 1970:83). Supporting the East-West trade axis was a tariff policy, established in

1778, which was meant to restrict the flow of goods from the United States. It created a captive market for manufacturers in central Canada at a time when agricultural producers were interested in the lower costs of farm input which could have resulted from free trade (McCrorie 1971: 40; Fowke 1946:259).*

Agricultural production in western Canada emerged within the framework and as part of an expanding capitalist economy. National policy sought to create an agricultural frontier in the West which would serve as a hinterland to metropolitan interests in central Canada. It was annexed to Confederation as a subordinate region, a colony, and its subsequent development was shaped by the commercial and financial ties with central Canada.

To achieve the economic goals of Confederation, the federal government saw that it was necessary to establish a population of producers and consumers in the West (Wood 1951:737; Martin 1973:148). The means adopted to attract immigrants to the West was the 1872 Homestead Act which provided free land to the actual settler. The Homestead Policy varied over time, but basically it provided for the ownership, by the settler, of 160 acres of land for a nominal fee of $10. The conditions for obtaining ownership

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*The success of the national policy in developing an East-West political/economic structure has since been undermined by the development of trade and investment linkages with the United States (Levitt 1971:53-6).

of the land, which were clarified in 1880, entailed residence within three miles of the land for three years. Also, it was necessary to build a dwelling and reside in it for three months prior to application for ownership. In the first year the homesteader was expected to have broken ten acres of land. This was to be seeded in the second year while a further fifteen acres were broken, while in the third year twenty-five acres were to be seeded and a further fifteen acres were to be broken. In all, a total of forty acres were to be cultivated in the three years prior to application for patent. Pre-emption of a further 160 acres adjacent to the homestead was possible between 1879 and 1889, and again after 1904. To obtain ownership of pre-empted land it was necessary to cultivate ninety acres on the original homestead, make a payment of $3 per acre, and reside for at least six months per year for six years on the pre-empted land or on the original homestead. In cases where high population density made it impossible to obtain land adjacent to the original homestead, it eventually became possible to obtain land further afield (see Murchie 1936; Martin 1973).

The purpose of the homestead policy was to establish a class of independent commodity producers, a petite bourgeousie. As stated in the Introduction, the basic characteristics of this class are ownership, operation, and control of the means of production by the actual producer. In its pure form, the relationship of independent

commodity producer is distinguished from capitalist productive relationships in that there is no separation of the means of production from labour. Consequently, producers own the product of their labour. Complementing the aim of rapidly creating a consuming and producing public, the establishment of a class of small property owners was meant to provide a permanent population with a vested interest in maintaining the institutions of the land (Murchie 1936:93). Harsany uses this as one argument to support continuous assistance to the small farm. "The small holder is politically one of the most valuable individuals of the society; his class is internationally considered as the main opponent of extreme political tendencies" (1966:16).

The goals of the homestead policy were not fully realized until after 1900 when the number of occupied farms rose from 55,176 in 1901 to a maximum of 300,523 in 1936 (see Table 1). Since 1936 there has been a continuous decline in the number of occupied farms in the Prairies. Though successful in populating the Prairies with a producing and consuming population, the policy was harsh in human terms, as between 1905 and 1930, 40% of homestead entries failed to obtain ownership of their land (Wood 1951:739). This reflects the failure of the federal government to take into account the variety of climatic and soil conditions in planning settlement (Murchie 1936: 127). Failure in this respect can be seen in the

TABLE 1

Number of Occupied Farms on the Prairies

Year	No. of Occupied Farms	Year	No. of Occupied Farms
1971	176,653	1931	288,079
1966	194,844	1926	248,162
1961	210,442	1921	255,657
1956	232,038	1916	218,563
1951	248,720	1911	199,203
1946	269,601	1901	55,176
1941	296,469	1891	31,252
1936	300,523	1881	10,091

Sources: Urquhart & Buckley 1965, Table L1-6. Statistics Canada, 1971 Census of Canada Advanced Bulletin Catalogue 96-723 (AA6), October 1972, Table 31-2.

development of the provincial Special Areas Act which functioned to facilitate development of a lands use policy for marginal farming areas in Alberta. By obtaining ownership of lands in southeastern Alberta the government was able to ensure that they would not be cultivated during favourable moisture and price conditions or allowed to deteriorate when conditions were unfavourable (Wood 1951: 746). A further problem was the assumption that 160 acres, or with pre-emption 320 acres, was adequate for the development of a viable productive unit. It proved to be an inadequate unit for mechanized wheat production (Dawson and Younge 1940:89). Moreover, given climatic and soil variations coupled with a land tax system based on expected productivity, there were many settlers who lost their land through tax delinquency and mortgage foreclosures (Wood 1951:739). Finally, the goal of settling every quarter or half section inhibited the ready development of more viable units through land expansion (Murchie 1936:127). Lack of attention to variations in climatic and soil conditions or to active concern for the fate of settlers reflects the reasons underlying Western colonization. These were, above all else, the creation of a large consuming and producing agrarian population in western Canada which would serve the needs of financial and commercial interests in central Canada.

C. Persistence of Independent Commodity Production

The basic characteristics of independent commodity production are ownership, operation and control of the means of production by the producer. It can be argued that the basic characteristics of this class are persistent over time. To illustrate this, attention will be turned to the questions of land ownership, input of external capital, and labour.

1. Changes in Land Tenure

The Homestead Act of 1872 provided the legal basis for the development of an agrarian society of small land-owning producers in western Canada. Ownership of the land was to be held by the producers, who were free to utilize it in accordance with their own interests. In practice, farming on the Prairies has always been characterized by the existence of tenure arrangements, though the type of arrangements and their overall significance have varied.

The closest approximation to the ideal of full ownership was achieved in the early settlement period, when over 90% of all farms were owned by the actual producers. Table 2 indicates a continuous decline until 1941, with the exception of 1931, when 58.6% of farmers owned the land that they operated. Following 1941 there was an increase in the number of full owners, though by 1956 the downward trend had reappeared, reaching its lowest point of 56.8% in 1971.

TABLE 2

Ownership and Tenure on the Prairies, 1881-1971

Year	No. of Farms Occupied	Owner	Tenant	Owner and Tenant	Manager	% Owners	% Tenants	% Owner and Tenant	% Owner/ Tenant & Tenant	% Managers
1971	176,653	100,300	11,818	62,565	1970	56.8	6.7	35.4	42.1	1.1
1966	194,844	116,683	13,068	63,986	1107	59.9	6.7	32.8	39.5	0.6
1961	210,442	119,669	19,703	69,992	978	56.9	9.4	33.3	42.7	0.5
1956	232,308	136,476	26,290	67,441	1831	58.8	11.3	29.1	40.4	0.8
1951	248,720	151,216	31,292	64,638	1574	60.8	12.6	26	38.6	0.6
1946	269,601	166,820	44,329	57,395	1057	61.9	16.4	21.3	37.7	0.4
1941	296,469	173,613	62,111	59,156	1589	58.6	22	20	42	0.5
1936	300,523	191,815	57,157	50,263	1288	63.8	19	16.7	35.7	0.4
1931	288,079	198,770	42,709	45,646	954	69	14.8	15.8	30.6	0.3
1926	248,162	169,331	40,261	36,133	2437	68.2	16.2	14.6	30.8	1
1921	255,657	200,656	27,067	25,643	2291	78.5	10.6	10	20.6	0.9
1916	218,563	179,721	16,156	20,356	2330	82.2	7.4	9.3	16.7	1.1
1911	199,203	178,182	10,354	10,667	-	89.4	5.2	5.4	10.6	-
1901	55,176	50,663	2,476	2,476	-	91.8	3.7	4.5	8.2	-
1891	31,252	28,536	-	-	169	91.3	8.2	-	-	0.5
1881	10,091	9,662	-	-	88	95.7	3.4	-	-	0.9

Sources: Urquhart & Buckley 1965:351, Table L1-6. Statistics Canada, 1971 Census of Canada, Advanced Bulletin Catalogue 96-723 (AA6), October 1972, Table 31:2. Dominion Bureau of Statistics, 1966 Census of Canada, Catalogue 96-608, April 1968; 96-609, April 1968; 96-610, May 1968, Table 4.1. Dominion Bureau of Statistics, 1961 Census of Canada, Catalogue 96-537, June 1963; 96-538, June 1963; 96-539, June 1963, Table 13.

The number of farms operated by managers has always remained low; consequently, changes in the number of fully owned farms is complemented by various tenure arrangements. In Table 2 a distinction is made between tenants and owner-tenants. The former refers to those producers who rent all of the land they operate while the latter refers to those who own part of the land they farm and rent the rest. Full tenancy arrangements, which were a common means by which a farmer lacking capital could enter production, reached its peak between 1936 and 1946. Since 1941, when 22% of Prairie farmers were tenants, their number has continuously declined, falling to 6.7% of the farm population in 1971. Conversely, owner-tenant arrangements have continuously increased, rising from 4.5% of the farm population in 1901 to 35.4% by 1971. The figures for Alberta, Table 3, are further evidence of the changing form of tenure arrangements. In addition, Table 4 shows that the same trends are apparent in Canada as a whole.

In terms of land area, Table 5 shows that the amount farmed under rental agreements in Alberta rose from approximately 2 million in 1911 to 16.6 million acres in 1941. This figure was not exceeded until 1971 when it rose to 18.8 million acres. A further indication of the significance of tenure arrangements is the average rented land per farm. For instance, in Alberta this has risen continuously from 33.8 acres in 1911 to 283.8 acres in

TABLE 3

Ownership and Tenure: Alberta, 1901-1971

Year	Farm Population	No. of Farms	% Owner	% Tenant	Owner and Tenant	Manager	% Owners	% Tenants	% Part Owner/ Tenant	% Renting	Managing
	1	2	3	4	5	6	7	8	9	10	
1971	237,924	62,702	37,193	4,225	21,284	-	59.3	6.7	33.9	40.6	-
1966	281,583	69,411	43,049	4,569	21,274	519	62.0	6.6	30.7	37.3	0.7
1961	287,814	73,212	43,295	6,723	22,724	470	59.1	9.2	31.1	40.3	0.6
1956	332,191	79,424	48,298	8,484	21,886	756	60.8	10.7	27.6	38.3	0.9
1951	345,222	84,315	52,871	9,735	21,098	611	62.7	11.6	25.0	36.6	0.7
1941	383,964	99,732	62,366	17,032	19,761	573	62.5	17.1	19.8	36.9	0.6
1931	375,097	97,408	70,751	11,808	14,540	309	76.2	12.2	14.9	27	0.3
1921	365,550	82,954	65,900	8,072	8,253	729	79.5	9.7	9.9	19.7	0.9
1911	236,633	60,559	55,688	2,321	2,550	-	92.0	3.8	4.2	8	-
1901	54,489	9,479	9,076	211	192	-	95.8	2.2	2.0	4.4	-

Sources: Information Canada, Advanced Bulletin, Catalogue 96-721 (AA-4), August 1972. Dominion Bureau of Statistics, 1966 Census of Canada, Agriculture Alberta, Catalogue 96-610, Vol. (5-3), May 1968, Table 4.1. Department of Agriculture, Province of Alberta, "Statistics of Agriculture for Alberta" Publication, No. 853-7, p. 38. Dominion Bureau of Statistics, Sixth Census of Canada 1921, Vol. 5, Agriculture, Tables 1.12-1.13. Dominion Bureau of Statistics, 1961 Census of Canada, Agriculture Alberta, Catalogue 96-539, Vol. 5, Part 3, Table 3.

TABLE 4

Ownership and Tenure: Canada, 1871-1971

Year	No. of Farms	Owner	Tenant	Owner & Tenant	Manager	% Full Owners	% Tenants	% Part Owners	% Part Owners & Tenants	% Managers
1971	366,128	251,066	19,200	95,862	-	68.6	5.3	26.2	31.5	-
1966	430,522	310,684	19,769	97,597	2,472	72.1	4.6	22.7	27.3	0.6
1961	480,903	350,428	26,696	100,383	2,396	72.9	5.8	20.8	26.6	0.6
1956	575,015	442,488	35,521	90,764	6,242	77	6.1	15.8	21.9	1.1
1951	623,091	481,447	44,983	89,226	7,435	77.3	7.2	14.3	21.5	1.2
1941	732,832	548,821	94,287	84,896	4,824	74.9	12.9	11.6	24.5	0.7
1931	728,623	583,706	74,382	67,942	2,593	80.1	10.2	9.3	19.5	0.4
1921	711,090	609,572	55,948	39,962	5,608	85.7	7.9	5.6	13.5	0.8
1911	682,329	603,971	54,013	24,345	-	88.5	7.9	3.6	11.5	-
1901	511,073	444,680	43,890	22,503	-	87	8.6	4.4	13	-
1891	542,181	474,784	64,425	-	2,972	87.6	11.9	-	-	0.5
1881	464,025	403,491	57,245	-	3,289	87	12.3	-	-	0.7
1871	367,862	326,160	39,583	-	2,119	88.7	10.8	-	-	0.6

Sources: Urquhart & Buckley, 1965:351, Table L1-6. Statistics Canada, 1971 Census of Canada, Catalogue 96-723 (AA-6), October 1972; Catalogue 96-721 (AA-4), August 1972.

TABLE 5

Land Area Owned and Rented:* Alberta

Year	Total Land Area in Census Farms	Land Area Owned	Land Area Rented	% Owned	Average Land Rented Per Farm	Land Operated by Part-Owner
1971	49,506,287	31,712,473	17,793,814	64.1	283.8	28,024,215
1966	48,982,875	34,523,333	14,459,542	70.5	208.3	24,621,438
1961	47,228,653	32,021,784	15,215,864	67.9	207.8	23,470,353
1956	45,970,395	29,707,927	16,262,468	64.6	206.4	21,909,231
1951	44,659,632	29,301,589	15,158,043	65.9	179.8	20,070,004
1941	43,277,295	26,706,328	16,570,967	61.7	166.2	16,863,888
1931	38,977,457	26,920,603	12,056,854	69.1	123.8	11,736,774
1921	29,293,053	23,738,294	5,554,759	81	67	5,221,111
1911	17,359,333	15,314,783	2,004,550	88.2	33.8	-

Sources: Statistics Canada, 1971 Census of Canada, Advanced Bulletin Catalogue 96-723 (AA-6), October 1972. Dominion Bureau of Statistics, 1966 Census of Canada, Agriculture Alberta Catalogue 96-610, Vol. (5-3), May 1968.

*Shown in acres

1972 (see Table 5). More significantly, the average amount of land rented by producers has risen from 422 acres in 1911 to 836 in 1971. This meant that the average farm size of tenant owners in 1971 was 1,317 acres while the average farm size of owners was only 476 acres.

It is apparent that the growth of tenure arrangements, particularly owner-tenant, is a marked departure from the pattern envisaged in the Homestead Act and from the pattern that was established in the early settlement period. However, tenancy has always been a feature of Prairie agricultural production. Moreover, the amount of land owned by producers, which includes land owned by owner-tenants, with the exception of a slight fall in registration in 1941, rose consistently until the 1960's. The 1966 census for Alberta shows that over 34 million acres were owned by the actual producers, which amounted to 70.5% of the total farm land. The amount had fallen by 2.8 million acres in 1971 to 64.1% of the total, but nevertheless, the bulk of farm land continues to be owned by the producer, a reflection of the pattern established in the homestead period.

The development of tenure arrangements can also be seen as an extension of the basic pattern of ownership. Tenancy, it seems, was a means toward ownership of the productive unit by the producer. More significant is the increase in owner-tenant arrangements. Such agreements, whether done on a share-cropping or cash basis, permit a

temporary expansion of the productive unit (depending on the duration of contract) while allowing the producer to maintain control of the productive unit. It involves the separation from the producers of part of the product of their labour but is suggestive of attempts to maintain ownership and control of the means of production in the face of structural pressures. In other words, owner-tenant relationships seem to reflect attempts by producers to overcome capital shortage in the face of increasing land values and capital requirements in other areas, as well as an attempt to reduce risk (Andarawewa 1969:119; Murchie 1936:129).

Embodied in the Homestead Act is the assumption that 160 to 320 acres constituted a viable productive unit. Consequently, the pattern of settlement was expected to follow this form and result in the creation of an agrarian society of small producers. Calculations of average farm size suggest, however, that this pattern broke down quite rapidly, as by 1921 the average farm size in Alberta was 353 acres. Since then it has risen continuously, reaching an average in Alberta of 790 acres by 1971 (see Table 6). It may be noted that since 1941 this expansion has been made possible not by increments in the amount of farm land available, but by the withdrawl of 36,730 farms from production, a decline of 38%.

The increase in average farm size does not entail an even distribution of land among all producers. Rather,

TABLE 6

Farm Size:* Alberta, 1901-1971

Year	1901	1911	1921	1931	1941	1951	1956	1961	1966	1971
No. of Farms	9,479	60,559	82,954	47,408	99,732	84,313	79,424	73,212	69,411	62,702
Average Farm Size	284	287	353	400	437	527	579	645	706	790
Average Improved Farm Size	50	72	142	182	202	264	297	345	393	454

Sources: Dominion Bureau of Statistics, 1961 Census of Canada, Catalogue 99-537, 96-538. Dominion Bureau of Statistics, 1966 Census of Canada, Agriculture Alberta, Catalogue 96-610, Vol. (5-3), May 1968. Statistics Canada, 1971 Census of Canada, Advanced Bulletin Catalogue 96-721 (AA-4), August 1972.

*shown in acres

redistribution is marked by a growing concentration of land under the control of a relatively small number of producers. There has, in fact, always been a considerable range in farm size in the Prairies, as can be seen from the early census of Manitoba and the North-West Territories (see Table 7).

TABLE 7

Farm Size: Manitoba and North-West Territories

Farm Size	Province of Manitoba 1885		North-West Territories 1885	
	No. of Farms	% of Farms	No. of Farms	% of Farms
80 acres & under	1,429	8	151	2
81-160 acres	7,856	45	1,791	26
161-320 acres	7,151	41	4,666	67
321-640 acres	917	5	256	4
641 acres Plus	218	2	123	2
TOTAL	17,571		6,987	

Sources: Canada Bureau of Statistics, Census of Manitoba 1885-6. Canada Bureau of Statistics, Census of the Three Provisional Districts of the North-West Territories, 1884-5.

However, the bulk of farms, 94% in Manitoba and 95% in the North-West Territories, was of 320 acres or less. From Tables 8 and 9 it can be seen that by 1931 little over 72% of Prairie farms were 479 acres or less while 28% were 640 acres or more. By 1971 the distribution of farms according to size had changed considerably.* The proportion of farms of 299 acres and less fell from 43.6% in 1931 to 20.5% in 1971. At the other extreme, 5% of Prairie producers farmed 960 acres or more, while by 1971 this had increased to 22.8%. In fact, by 1971, 43.2% of all producers operated farms of 640 acres or more, farms at least twice as large as those envisaged in the Homestead Act.

The degree of concentration that has occurred is readily apparent from Table 10 which shows the distribution of total improved acreage according to farm size. From the table it can be seen that 19% of farm producers utilize practically 50% of the improved land area on the Prairies while 23% operate with a mere 4%. In fact, the two smallest categories of farm size control only 21% of the improved land, despite including 52% of farm producers.

There has been, then, a breakdown of the patterns of land ownership established in the homestead period. Farm size has increased and the redi-tribution of land indicates

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*Changes in classification of farm size by census complicates comparison, but the trend toward larger production units is clearly evident.

TABLE 8

Farms Classified by Acreage: Prairies

Farm Size	1901	1911	1921	1931	1941	1951	1961	1966	1971
Acres									
1-4	551	2,681	2,014	2,290	1,860	1,668	1,073	1,334	982
5-10	352	1,122	1,407	2,520	2,941	2,906	1,540	1,770	1,682
11-50	806	1,921	2,702	4,656	6,011	4,800	3,247	3,636	3,720
51-100	2,734	3,448	4,612	6,278	7,711	4,646	3,458	3,253	3,051
101-200	29,012	100,375	95,033	99,956	96,170	52,787	31,674	25,235	20,247
201-299	*22,975	*139,857	** 7,802	9,762	11,359	11,272	9,188	7,590	6,103
300-479	-	-	142,781	83,609	83,943	74,216	57,933	48,257	38,031
480-639	-	-	-	33,537	35,970	36,506	33,246	29,832	25,275
640-959	-	-	-	31,195	32,806	35,907	37,988	37,935	35,525
960-1,279	-	-	-	)	9,555	12,283	15,289	16,840	17,632
1,280-1,599	-	-	-	)	)	)	)	)	8,832
1,600-1,919	-	-	-	14,282	8,140	11,431	15,842	19,162	4,651
1,920 & over	-	-	-	)	)	)	)	)	8,920
Total	56,176	249,326	256,351	288,074	246,669	248,716	210,442	194,844	176,653

*In the 1901 and 1911 Census all farms of 201 acres or more were placed in the same category.

**Similarly, in the 1921 Census all farms of 300 acres or more were placed in the same category.

Sources: Statistics Canada, 1971 Census of Canada, Alberta, Catalogue 96-710, Table 4.1. Statistics Canada, 1971 Census of Canada, Saskatchewan, Catalogue 96-709, Table 4.1. Statistics Canada, 1971 Census of Canada, Manitoba Catalogue 96-708, Table 4.1 Dominion Bureau of Statistics, Sixth Census of Canada 1921, Vol. 5, Agriculture, Tables 8 and 10.

TABLE 9

Farms Classified by Acreage (Percentage): Prairies

Farm Size Acreage	1901	1911	1921	1931	1941	1951	1961	1971
1-200	58	55	41	40.2	38.7	26.9	19.5	17
201-299	42	45	3	3.4	3.8	4.5	4.4	3.5
300-479	-	-	56	29	28.3	29.8	27.5	21.8
480-639	-	-	-	11.6	12.1	14.7	15.8	14.5
640-959	-	-	-	10.8	11.1	14.4	18.1	20.3
960-1,279	-	-	-	5	3.2	4.9	7.3	10.1
1,280-over	-	-	-		2.7	4.6	7.5	12.8

Source: Derived from Table 8

TABLE 10

Degree of Concentration of Improved Farm Land: Prairies

Acres	No. of Farms	% Distribution of Farms	Improved Land Area	% Distribution of Land
179 & less	40,806	23.4	3,810,425	4.4
180-399	49,069	28.1	14,130,349	16.1
400-759	51,262	29.3	28,127,939	32.1
760 & over	33,607	19.2	41,622,090	47.5

Source: Statistics Canada, 1971 Census of Canada, Catalogue 96-708, 96-709, 96-710, May 1973, Table 56.

a marked concentration of land under the control of a small proportion of producers. The land base has been expanding only slowly; consequently, increased farm size has occurred at the expense of producers who have gone out of production. This is indicative of a process of proletarianization, a process in which the producer loses ownership and control of the means of production.

Size of land holding is not a criteria of productive relations, though it seems likely that the largest farms in terms of acreage may well be operated on a capitalist basis. However, as will be seen in the subsequent discussion on labour, the proportion of capitalist farms is small. This expansion of farm size has occurred through increasing ownership and land rental. The former is a straightforward extension of ownership of the means of production, while the latter is more complicated as it entails a loss of ownership of part of the product of labour through rental payments. However, although the producer lacks formal or legal ownership of part of the land, he does retain effective economic control over it. Rental agreements, in fact, facilitate expansion of production and contribute to the persistence of independent commodity production.

2. External Capital (Credit)

Colonization of the West provided the opportunity for well-established corporate lenders located in central

Canada to expand their operations into the new areas. Canadian banking and financial interests, in addition to railway interests, were major forces behind Confederation. Consequently, it is not surprising that the sources of finance for farmers were controlled by a small number of credit institutions, a restricted number of processors and distributors. The financing of agriculture in the West is in fact another example of the subservience of agriculture to other interests (Easterbrook 1938:74).

Farmers in the West have always been dependent on the acquisition of non-farm capital. Finance was required to bring new lands into cultivation, to purchase land, livestock, seed, machinery and building material. It has been estimated by Mackintosh that $650,000,000 of borrowed capital was held by Prairie farmers in 1930 (1935:266). Averaging at $2,659 per farm, this gives some idea of the extent to which external capital entered into farm production. Approximately 75% of this capital, supplied by insurance, trust, loan companies and private individuals, was utilized for the purchase of land (Mackintosh 1935:264-5). The other 25% was in the form of short-term loans from implement companies, banks and merchants. The high level of indebtedness reached in the mid-1930's, which was compounded by the effects of low income on the ability of farmers to repay debts or interest, declined after 1936, falling by 54% during the following decade. A reversal of this downward trend was apparent by 1951 (see Table 11),

though it was not until the early 1960's that the levels of indebtedness of the mid-1930's were exceeded. By 1964, indebtedness stood at $1,299,000,000 though by this time the number of farms had been reduced by over 30%.

TABLE 11

Estimates of Farm Indebtedness: Prairies

Year	No. of Farms	Debts (in millions)	Debts per Farm
1964	-	$1,299	-
1961	210,442	758	$3,601
1956	232,038	489	2,107
1951	248,720	410	1,648
1946	269,601	366	1,358
1941	296,469	609	2,054
1936	300,325	799	2,659
1930*	288,079	650	2,159

*The estimate for 1930 is provided by Mackintosh while those for 1936 to 1971 were provided by Lerohl.

Sources: Mackintosh 1935:266; Lerohl 1967, Tables 7, 8, 9; 27-29.

A further series of estimates by Rust for Canada as a whole for the period 1960 to 1967 indicate a 143% expansion of indebtedness between 1960 and 1967 (1968: 16). This suggests a continuation of the upward trend in the Prairies, as according to Lerohl's calculations, the post-war increase in indebtedness in the Prairies

did not greatly differ from other regions of Canada (1967: 12).

Non-farm capital has always been a feature of agrarian production in western Canada. In a society dominated by capitalist principles of production, a degree of separation of the farm producers from the product of their labour is entailed. This is because, apart from repayment of the principal, the producer has to pay interest rates, a fee derived from ownership of capital rather than from the part played in the productive process. Indebtedness may undermine the viability of productive units in conditions where declining prices and/or poor crops are confronted by fixed interest rates. For instance, during the Depression of the 1930's, declining prices and poor crop conditions led to a contraction of farm income. This decline forced producers to increase existing debts through the non-payment of interest and the need to obtain extra capital to maintain production and consumption. Despite the separation of the producer from part of the product of labour and the problems created by high levels of indebtedness, the form the transfer of capital to the producer takes contributes to the continuity of independent commodity production.

The essential features of a class of independent commodity producers are ownership, operation, and control of the means of production. The system of financing that has emerged is geared to these characteristics (Canada,

Federal Task Force on Agriculture 1970:341 ; Anderson 1967:28). Farmers do not raise their required equity capital through the sale of shares in the market. Rather, 85% of equity capital is owned by the producer and 15% raised through credit. The significance of this is that if shares were sold to raise capital then full ownership and control of the means of production would no longer be the property of the independent producer. Alternatively, credit financing offers a means of transferring control of capital to the producer, which, providing the conditions of the transfer are met, lead to eventual ownership by the producer. Of course, by the time this occurs, depreciation may be such as to entail replacement and further indebtedness.

This is, in fact, the option pursued by producers in the area of study. In purchasing farm implements, for example, they prefer to finance their expansion through cash savings. Failing this, an attempt is made to obtain the necessary capital through short-term bank loans or, if this proves to be impossible, through the credit sections of implement companies which charge higher interest rates.

From the producers' point of view, the objectional aspects involved in obtaining credit are that repayment of high interest rates undermines their ability to retain savings and that unflexible interest rates oblige them to make repayments regardless of any setback in production which they might experience. In addition, the presence

of debts exposes them to the possibility of having to sell their operation simply to repay debts. On the other hand, they find it advantageous that lending institutions, once the credit basis is established, do not interfere in the productive process. Producers remain in control of their operation and are able to manage their activities in accordance with their own interests. More important, by obtaining capital on a credit basis they are able to pursue their aims of eventually obtaining full ownership of a debt-free farm. It may be added that alternatives to this form of financing, when they are discussed, invariably involve cooperative or part-ownership arrangements in which resources are combined and ownership and operation of the means of production remain with the producer rather than with absentee shareholders.

Financing on a credit basis is consistent with the structure of the independent commodity form of production in that it leads to the eventual ownership of equity by the farm family. Thus, credit for the purchase of land (over 50% of farm credit in the Prairies in 1967), machinery, etc., facilitates their management and eventual ownership by the producer (Anderson 1967:26-7). In other words, financing is based on the objective of full ownership and control of the means of production by the farm family. This is an objective which is reflected in the federal and provincial governments' involvement in financing agriculture, a consequence of pressure from farmers

(Easterbrook 1935:75) which contributes to the persistence of the mode of production though not necessarily to its long-term survival.

3. Changes in Labour Employed in Production

A further feature of independent commodity production is that the owner of the means of production provides the labour necessary for operation. In contrast to capitalist productive relations, there is no exploitation of labour as surplus is created by the labour of the owner of the means of production. This characteristic was expected to be basic to production in the Prairies because the economic unit envisaged in the Homestead Act was a farm of 160 to 320 acres operated by the labour of the farm family. In practice this was never completely true, for there have always been forms of labour-sharing between farms and the use of some hired labour. For instance, a demand for wage labour on a seasonal basis on the Prairies was recognized by the rail companies in 1896 when they started sponsoring the movement of harvest workers from eastern Canada. This seasonal interprovincial movement of workers reached a peak of 45,400 in the mid-twenties, by which time it was being organized by the provincial governments. This movement was complemented during the 1940's by the movement of combine-harvest crews from the midwest and southern United States (Canada, Department of Labour 1960:36).

Despite this seasonal demand, which has declined with the advent of increased mechanization, the amount of wage labour employed by producers has always been small in relation to the total input of labour by the farm family. For example, Table 12 indicates that until the 1930's there was a rapid increase in the amount of hired labour employed on Prairie farms. This increase was followed by a continuous decline in subsequent years. At its maximum the amount of hired labour did not exceed 20% of the total farm labour force. Moreover, despite a decline in the number of farms and the amount of unpaid family labour available, the number of wage workers has declined.

TABLE 12

Agricultural Labour Force: Prairies

Year	Total Farm Employment	Unpaid Family Workers	Paid Workers	% of Paid Workers	% of Unpaid Family Workers
1961	282,014	52,581	39,553	14.0	18.6
1951	324,000	40,000	46,000	14.2	12.3
1941	414,000	84,000	66,000	15.9	20.3
1931	434,000	92,000	84,000	19.4	21.2
1921	363,000	56,000	65,000	17.7	15.2
1911	280,000	22,000	49,000	17.5	7.9

Sources: Urquhart and Buckley 1965:335, Table L43-66.
Dominion Bureau of Statistics, 1961 Census of Canada, Catalogue 99-522, Vol. 7, Part 1.

Clearly, the amount of hired farm labour has always been small. Consequently, the bulk of farm labour is derived from the farm family, that is, in terms of Table 12, from self-employed farm operations and unpaid family labour. This percentage would undoubtedly be higher if the contribution of women to the productive unit was fully accounted for. The method of classification of unpaid family labour includes only those women who work directly in production for more than twenty hours per week. In this respect, housework, especially in its capital-saving function, often vital to the survival of particular productive units, is not included in census calculations. Further evidence of the reliance on family labour is that the average amount of hired labour per farm in Alberta is seven to eight weeks per year (see Table 13). Moreover, the distribution is not spread evenly among farms, a further indication of stratification. Thus, for Alberta in 1971 35% of all farms, with value of product sold exceeding $10,000 or more, account for 85% of the total weeks worked by hired labour. Conversely, 65% of farms with value of product sold of $9,999 or less accounted for 15%, an average of 2.1 weeks per farm per year. The same distribution is true of paid year round labour. The 35% of all farms with a value of product sold of $10,000 or more employed 90% of all full-time hired labour. Even within this group the average number of workers per farm is only 0.3. Moreover, Table 13 indicates that only 3,036 farms, 4.8% of the total

TABLE 13

Hired Labour, Farms by Economic Class, 1971: Alberta

Value of Products Sold	Number of Farms	% of all Farms	Total Weeks Paid Labour	% of Weeks Per Economic Class	Paid Year Round Workers	% of Workers Per Economic Class	Farms Employing Year Round Workers
10,000	21,989	35	469,298	85	5,940	90	2,599
5,000-9,999	14,246	23	37,017	7	244		209
2,500-4,999	10,298	16	18,918	3	120	10	98
Under 2,500	15,991	26	27,196		318		130
Total	62,702		552,430		6,622		3,036

Source: Statistics Canada, 1971 Census of Canada, Agriculture Alberta, Catalogue 96-710, Vol. IV, Part 3 (Bulletin 4.3-3) May 1973, Tables 26:1 and 32:1.

employed hired labour and that the bulk of these hired only one wage worker.

It is apparent that the bulk of labour is supplied by the farm family and that for the majority of farmers the amount of hired labour is and always has been small. In other words, the class position in terms of labour remains that of independent commodity producer in which the labour of the farm family is the primary source of labour, and is supplemented only to a small degree by hired labour. The point made by Macpherson in 1952 that the majority of farmers are "...no more capitalist in the social sense of involving the employment of more wage labour..." (1968: 19) remains valid to the present.

D. Summary

Since the settlement period, massive changes in the organization of agricultural production have occurred. In general terms these changes can be characterized as the transformation of the labour-intensive homestead into the modern capital-intensive family farm. Indices of these changes are the increase in farm size, capital input, particularly in the application of new technology, output, and productivity, all of which have been accomplished with a decline in the number of productive units. This transformation has not been evenly spread among all producers but has been accompanied by a developing system of rural

stratification, a growing concentration of income and output into the control of a smaller number of producers.

It is suggested here that this transformation in the organization of production has occurred within the framework of the particular historic form of productive relationship established in the settlement period. It is recognized that there has always been a degree of separation between producers and the product of their labour, and that indebtedness since the early 1950's has been increasing. Moreover, it seems apparent that the transformation could not have occurred without the availability of capital from non-farm sources. Nevertheless, the [illegible] credit and rental agreements is geared to the independent commodity form of productive relations. Consequently, they can be seen as contributing to the persistence of independent commodity relations by facilitating the transformation of productive organization, which, as will be shown, is necessary for the survival of the relationship. Of course, this does not mean that growing indebtedness does not create problems for the producer but simply that it does not in itself constitute a change in productive relations.

The historically significant mode of production in Prairie agriculture, independent commodity production, has persisted over time. Although there are a small number of capitalist producers in agriculture (Mitchell 1975:11), it is apparent that the vast majority of farmers remain independent commodity producers. Moreover, although the

particular form of productive relationship persists over time, this cannot be taken as evidence of its immutability. In fact, the continuous decline in the number of productive units, the impoverishment of small farms, and the high percentage of farmers who farm and also sell their labour, are indicative of the difficulties of maintaining ownership of the means of production. In all of these respects, the Prairies, despite different historical experience, are not unique, for the mass of farm producers in Canada are independent commodity producers.

Independent commodity production, then, is the basic form of productive relationship in Prairie agriculture. It is in terms of this relationship's functioning within an environment dominated by the capitalist mode of production that the transformation of the rural world and the difficulties of farm producers can be understood. It provides a basis for understanding the structural relationship between farmers, between farms and capitalist producers in other sectors of the economy, as well as the changes and limitations to change in agricultural production. The majority of farmers continue to work within the limitations imposed by this relationship. Through their own labour they have to reproduce the material conditions of their own existence and allow for accumulation.

CHAPTER FOUR

STRUCTURAL POSITION OF INDEPENDENT COMMODITY PRODUCERS IN CONTEMPORARY CAPITALIST SOCIETY

A. Introduction

In Chapter Three it was shown that agricultural production in the Prairies was established within the context of a developing capitalist society. Independent commodity production was created to provide a producing and consuming population which would serve the needs of metropolitan interests in central Canada.

From the outset of colonization farms have produced commodities for exchange in the market. The outcome of exchange is critical to the producer, for upon it rests his ability to reproduce the means of production and relations of production. It is through the process of exchange that the commodities required for productive consumption are obtained. The farmer's ability to meet the needs for productive consumption reflects his relationship with other producers, a relationship between owners of the product of labour. Consequently, the structure of these relationships is of fundamental importance in understanding the social constraints on farm production.

The general aim in this chapter is to establish the structural position of independent commodity producers in contemporary capitalist society. More specifically, it will be suggested that their structural position in a society dominated by the capitalist mode of production

results in an imperative to continuously make changes in the organization of production. Put differently, the survival of the independent commodity form of productive relations necessitates continuous changes in the organization of farm production.

The significance of establishing this point lies in the hypothesis that this structurally induced imperative underlies the transformation of agricultural production. In establishing this imperative, a basis is provided for interpreting changes in the organization of production which have led to the evolution of the capital-intensive family farm from the labour-intensive homestead, and to the development and underdevelopment of the rural world.

Initially, in Section B, attention will be turned to the capitalist environment of agricultural production. In particular, concern will be with the practices of those corporations who use the output of agriculture in their productive process and who supply farms with producer goods. The whole complex of these enterprises will be referred to as agribusiness. An important aspect of this discussion will be the monopolistic pricing policies of agribusiness, because it is price that is the basic empirical manifestation of the relationship between agribusiness and farm producers.

This raises immediate difficulties because of the wide range of products involved in exchange and the considerable number of industries involved in their production. The

approach taken here is to examine one industry in some detail and generalize the results for agribusiness as a whole. This is possible because of the basic similarities of agribusiness firms which operate within a common economic environment and whose actions are conditioned by common production imperatives.

In examining this situation, attention will be focussed on the implement industry and on the character of the exchange relationship between farmers and that industry. Choice of the implement industry is justified on several counts. In the first place, the investment in farm machinery has consistently risen since 1941 (see Table 14), a reflection of the increasing mechanization of the production process.

TABLE 14

Value of Machinery and Equipment: Canada

1921	1931	1941
$655,180,416	$650,664,000	$596,046,300
1951	**1961**	**1971**
$1,933,312,262	$2,562,631,500	$3,909,184,700

Source: Statistics Canada, 1971 Census of Canada, Agriculture Canada, Catalogue 96-701, Vol. IV, Part 1, July 1973, Tables 2-1, 2-2.

Secondly, the relationship of the industry with farmers is unambiguous because manufacturers own their wholesale outlets and have close control over dealers, who operate on a franchise basis. Consequently, any price control by the companies is directly apparent. Finally, the implement industry is dominated by large multinational corporations which seem to be representative of developments in agribusiness and in the economy generally.

In Section C attention is first turned to the competitive structure of agricultural production. This discussion facilitates clarification of the relationship between a competitive agriculture sector and the oligopolistically structured agribusiness. In turn, this provides the basis for an understanding of the structurally induced cost-price pressures which force farm producers to continuously make changes in the organization of production in order to facilitate survival.

B. The Farm Implement Industry

1. Oligopolistic Behaviour

In contrast to the atomistic organization of farm production, output in the implement industry is heavily concentrated in the hands of a small number of large-scale producers. In 1967 the three largest producers in North America, namely Deere, International Harvester, and Massey-Ferguson, accounted for 41% of total farm machinery

sales. Moreover, by including the next three largest producers, Allis-Chalmers, White Motor Company (Minneapolis Moline, Cockshutt and Oliver), and Case (Tenneco Corporation), the proportion rose to 58% (Canada, Royal Commission on Farm Machinery 1970b:91). Not surprisingly, concentration in Canada alone showed no significant difference because North America has been a single tariff-free market since 1944, and prior to that, branch plants of the major producers had been located in Canada. For instance, in 1967 the three major producers had sales of farm machinery, including parts, which amounted to 42% of the industry's total annual sales, while the six largest had 64%, and the eight largest 71% of total sales (Canada, Royal Commission on Farm Machinery 1970b:93).

There is a considerable body of evidence which suggests that these large producers behave oligopolistically. One area of evidence that supports this conclusion is the continuous existence of small-scale firms in the industry despite their relatively high production costs. The existence of small producers would be impossible if the dominant producers followed a competitive pricing policy.

An attempt was made by the recent Royal Commission of Farm Machinery to estimate the cost advantages resulting from large-scale production of farm tractors (see Table 15). From this table the advantages of large-

scale production are readily apparent. The difference in production costs between the 20,000 and 60,000 unit production line is $463 per unit, while that between the 60,000 and 90,000 unit production runs is $291 per unit. Between the 20,000 and 90,000 units, the cost difference per unit is $754. Translated into gross returns or returns on assets the benefits appear even more formidable.

TABLE 15

Gross Profit Levels at Different Manufacturing Volumes: North America, 1967*

Per Unit	Output	20,000	60,000	90,000
	Factory Price	$ 4,000	$ 4,000	$ 4,000
	Manufacturing Costs	$ 3,875	$ 3,412	$ 3,121
	Gross Returns	$ 125	$ 588	$ 878
Plant Total	Capital Invested (Mils)	58	140.1	211.9
	Gross Profit (Mils)	2.5	35.3	79.1
	Gross returns on Assets Before Taxes	11.8%	32.7%	44.8%

*Cost estimates correspond roughly to the factory price prevailing in 1967 for the same mix of tractors.

Source: Canada, Royal Commission on Farm Machinery 1970b: 62, Table 6-1.

The accuracy of the estimates is questionable because the implement industry did not provide cost data and estimates were therefore necessary. However, if anything, the

estimates appear to understate the advantages larger firms operate with because the estimates are based on the cost of labour, fixed and variable capital, etc., for North American production runs and consequently fail to take into account the cost advantages accruing to corporations operating on a multinational basis. For example, Massey-Ferguson, the world's largest producer of tractors, has its production runs integrated on a world basis and can take advantages of cost differences in different locations. Specifically, its acquisition of Standard Motor Company and Perkins Diesel in the United Kingdom provided the opportunity

> ...to take advantage of relative cost differences between countries, and to do this not merely for the manufacture of complete machines but also in the manufacture of component parts for machines to be assembled elsewhere (Neufeld 1969:331).

It is apparent that the failure to include this consideration in analysis leads to a conservative bias in the estimates. This bias is further compounded by a failure to take into account the cost benefits of diversification, such as International Harvester's production of industrial machinery, or to take into account size of operation on a world basis. For instance, Table 16 shows that Massey-Ferguson produces 153,800 tractors on an integrated world basis, considerably more than the 90,000 upper limit in the foregoing estimates. Larger firms, therefore, are making substantial profits on their tractor manufacturing

TABLE 17

International Price Differentials: 1966-1967

	Canada	Britain	Average Difference
Suggested Retail Prices			
Under 45 HP	$ 3,399	$ 2,523	+ 884
45 - 60	4,920	3,312	+1,608
60 - 75	6,896	3,685	+3,301
75 - 90	8,511	9,739	-1,332
90 - 100	8,683	9,739	- 941
100 +	13,401	14,872	-1,471
Wholesale Prices			
Under 45 HP	$ 2,481	$ 2,069	+ 418
45 - 60	3,592	2,716	+ 876
60 - 75	5,034	3,022	+1,881
75 - 90	6,213	7,986	-1,949
90 - 100	6,339	8,018	-1,567
100 +	9,783	12,195	-2,412

Source: Canada, Royal Commission on Farm Machinery 1969a: Tables 4.2, 4.3.

TABLE 16

Number of Tractors Produced: 1966

	World	U.S.A.
Massey-Ferguson	153,800	38,000
Ford	118,400	38,600
International Harvester	108,000	62,000
Deere	78,000	60,000
Case	17,500	17,500
White Motor Company		22,000
Allis-Chalmers	15,500	15,000

Source: Canada, Report of the Royal Commission on Farm Machines, 1971, Table 2.1.

operations. For instance, the estimates for gross returns on assets (see Table 15) for 20,000, 60,000 and 90,000 unit operations was 11.8%, 32.7% and 44.8%, respectively. That high profits stemming from these advantages are not apparent in the companies' annual reports is due to the large marketing inventories they carry in an extensive distribution system and to the diversity of their operations (Canada, Royal Commission on Farm Machinery 1971: 231).

The four leading producers have considerable cost advantages over the next three, and even more over a small company like Versatile which has only one small plant located in Winnipeg which serves mainly a Canadian Prairie market. If, with such advantages of scale, the large producers were to adopt a competitive pricing policy, small producers would lose their share of the market to

low cost producers as price fell toward their cost of production. Also, economies of scale would prevent new firms, such as Versatile, from entering the industry. In reality, despite these advantages and the increased output of large producers, their share of the market has declined. The persistence of smaller producers, the entry of new producers, and the declining share of the market held by the major producers are evidence of monopoly pricing practices by the larger firms in the industry. That is, in their search for the highest possible profits, the large firms have found it in their interest to maintain prices at a level which allows smaller producers to make an adequate profit despite their higher production costs.

The form price collusion seems to have taken is price leadership, which involves firms setting their prices after the major producer in the field has set the basic price. In the past the recognized leader in North America was International Harvester.

> Traditionally, prices of most implements have been set on the basis of the prices charged by the price leader in the industry -- the International Harvester Co. Not even this company, however, has cost advantages in all the implements it produces and there is reason to believe that its role as price leader is shared in some of the newer implements by other firms in the industry such as John Deere, Massey-Harris-Ferguson, and even some of the smaller companies (Phillips 1956:162).

Collusion is of course denied by the industry with the argument that prices and price changes are set in terms of internal cost conditions. A report of the 1937 Committee on Colonization found it difficult to accept this argument because of the "...remarkable coincidence of the price increase occurring in the same month of the same year, and generally speaking, on the same implements to the same extent" (Phillips 1956:120). Recently, the mantle of price leadership seems to have been taken over by Deere. The Royal Commission, for instance, found that the timing of price changes in Canada between 1963 and 1968 suggested that Deere, in a great majority of instances, was the first company to announce price changes. They also found that price changes among the major producers were very similar, and even closer when the cumulative increases were assessed: Deere 14.8%, International Harvester 15.6%, Massey-Ferguson 13.5% and Case 14.1% (Canada, Royal Commission on Farm Machinery 1971:151).

Further evidence on the pricing policy of the industry and of the hierarchical structure of the relationship with farmers is seen in the price differences for the same product in different markets and the price changes that occurred in Canada as a consequence of devaluation of British currency.

There are substantial differences in price between identical tractors sold in Western Europe and Canada, despite an absence of tariffs. For all sizes of tractors

up to 75 horsepower, suggested retail prices are 26 - 45% lower in Britain than in Canada. The reverse is true of larger tractors which are exported from North America and carry a retail price anywhere from 11 - 40% above Canadian prices. Wholesale prices, for tractors with less than 75 horsepower, are also considerably lower, varying from 17 - 38%. In dollar terms this means a manufacturer may receive up to $1,881 more for a machine sold in Canada than for an identical one sold in Britain (see Table 17). A specific example is the Ford 5000 eight-speed diesel which was sold to dealers in Canada for $1,357 more than to dealers in Britain. Something over half of this difference, according to the Report on Prices, was a result of higher costs, leaving an additional profit of $586. That is, Ford could have reduced the price paid by Canadian dealers and still have made the same profit as it realized on its British sales. This price, of course, includes the monopoly profits mentioned above.

It is apparent that the cost benefits derived from producing tractors in Britain have not led to any price reductions for Canadian farmers. This reflects the considerable economic power of the dominant corporations to pursue a pricing policy relevant to their own interests. The study of prices done for the Royal Commission draws the obvious conclusion from this evidence: "...the companies are pursuing a discriminatory pricing policy. The Canadian farmer is the one who suffers" (Canada, Royal

Commission on Farm Machinery 1969a:35).

The effects of devaluation support this conclusion. In November, 1967, Britain devalued the pound by 14.3%, a major aim being to stimulate export sales by lowering the price of British products in other parts of the world, including Canada. Tractor prices for British-made products should have declined by the amount of devaluation or at least declined, yet the wholesale price to Canadian dealers was actually advanced approximately 14%. Again, the conclusion to be drawn is that the major corporations in the implement industry are in collusion in their pricing policies, pursuing their own profit interests without any consideration for the farmer. "While conspiracy may be too harsh a word the data suggests at least a tacit agreement on the part of manufacturers supplying tractors from Britain to maintain the price in Canada, in spite of the advantages afforded by devaluation" (Canada, Royal Commission on Farm Machinery 1969a:42). The farmer is very obviously a means in the profit-oriented activity of the implement industry. The existence of small firms, a differential pricing policy, and price collusion make it clear that the industry is organized oligopolistically. That large multinational corporations are able to use their economic power to control the price the farmers must pay for their products is, therefore, readily apparent. Moreover, it is suggested that the pricing policy of the implement industry characterizes large agribusiness corporations

and oligopolies generally (see Mitchell 1975). The relevance of this behaviour to the imperatives of corporate behaviour in a capitalist environment will be discussed shortly. In the meantime it may be pointed out that the rationale of oligopolies in allowing small firms to continue production is that the price changes necessary to force them out of the market may lead to a reduction in total income (see Baran and Sweezy 1966).

2. Dealer Competitive Structure

The major producers of farm machinery own and operate their own wholesale outlets and supply their equipment to franchised dealers who deal directly with the farmer. This means that the price of the wholesale outlet is simply a transfer payment within the same company. There are minor exceptions: for instance, Versatile supplies tractors from the factory to the farmer without any intermediary distribution organization, and Canadian Co-operative Implements Ltd. is a wholesale distribution network which is cooperatively owned by farmers. However, these are minor exceptions, for in most instances farmers purchase their equipment through franchised dealers. It is through transactions with dealers that the individual farm producer's relationship with multinational corporations in the implement industry is mediated. Hence, their structure is important to a clear understanding of the farmer's

situation.

Since the early 1940's there has been a basic change in the way farm machinery is sold at the retail level. Prior to 1940 most sales were made to agents who undertook to sell farm machinery while the companies themselves undertook the tasks of stocking new machines, supplying parts, and collecting debts through branch offices. Subsequently, a system of franchised outlets was developed in which "independent" businessmen were allowed to purchase new machines and parts from the company, provide a maintenance service, and implement the company's warranty program. In this system, manufacturers provide financial support by allowing the dealer to maintain a stock of machines for a considerable period without having to make any payments (a "floor plan"), and by providing credit and other support facilities. By augmenting the dealer's limited working capital in this way the manufacturer is providing services which are vital to the successful functioning of the dealer's business. Consequently, the independence of the dealers is severely curtailed, for they are completely dependent on the manufacturer for their survival (Canada, Royal Commission on Farm Machinery 1971: 162).

Because of their dependence, the dealers have to accept the terms of operation established by the manufacturer. Particularly important in this respect is the pricing policy, for this effects both the dealer and the

farmer. The manufacturer supplies machinery at a wholesale price over which the dealer has no control at all, and sets the lower limit to which the dealer has to adjust his profit-seeking activities. Also, in Canada the manufacturer provides the dealer with a 23% trade discount, the difference between suggested wholesale and suggested retail price, and a 4% volume discount. It is within this range that the dealer has to bargain with farmers and to realize a price that will cover his expenses and make a profit. Moreover, the situation is further complicated by the price and service competition that exists at the dealer level. Consequently, dealers cannot simply charge the manufacturer's suggested retail price for their products and therefore frequently have to survive with margins less than 23% trade discount. The calculations of the Royal Commission on Farm Machinery suggest that farmers on the average pay approximately 84% of the suggested retail price and take advantage of cash discounts and trade-ins, which leaves the dealer with a margin of approximately 7% plus a volume discount of 4% (Canada 1971:164). Of course, these margins vary among dealers and also over time. For instance, it seems reasonable to assume that the shortages of farm machinery in 1974 have pushed dealer margins close to their upper limit (see Financial Post 1974:1,4).

Competition at this level seems to aid the goals of the producers in that it leads to an increase in size of

outlets and a reduction in their numbers, thereby reducing distribution costs. It tends to decrease dealer margins and, because price cannot be increased, forces the dealer to expand and reduce costs in order to maintain or improve profit levels. Inasmuch as dealers lack the resources to do this, and the company is not prepared to finance them, they are forced out of business. This process was reflected in the loss of 1,325 retail outlets in Canada between 1962 and 1969 (Canada, Royal Commission on Farm Machinery 1971:166).

The distribution system provides the illusion of price competition between manufacturers. However, it is only the dealers who are involved in competition, for the manufacturer receives a pre-established wholesale price regardless of the final retail price. Individual farmers can influence transactions at this level, except under conditions of supply shortage, but the oligopolistic profits of the manufacturer are insulated from this. In sum, the structure of the situation for retail outlets is such that the pursuit of self interest by the dealer is effectively harnessed to the profit needs of their corporate patrons.

Farm producers have attempted to reduce prices by avoiding franchise outlets and establishing their own distribution networks. For example, in 1946 Canadian Co-operative Implements Ltd. was founded by Prairie farmers to operate as a wholesale outlet dealing directly with producers. The co-operative, still functioning, is also

engaged in manufacturing a small range of equipment such as diskers and harrows. By purchasing directly from implement producers, the co-operative is able to reduce distribution costs and pass the benefits on to farmers in terms of lower costs. Profits are distributed to its members according to the amount of machinery they purchased.

The basic weakness of the co-operative is imposed by its dependence on the implement industry for supplies. For instance, the first tractor the co-operative distributed was supplied by Cockshutt, but as they were in competition with dealers of the latter, they were allowed only a 24.6% trade discount instead of the prevailing 40% (Canada, Royal Commission on Farm Machinery 1971:185). In 1962 Cockshutt was taken over by White Motor Company, and the supply of tractors was cut off. A Clayson combine was similarly distributed but when New Holland acquired an interest in this firm, an alternative had to be sought. The alternative, a Claas combine, was eventually taken over by Ford, thereby forcing the co-operative to seek yet another machine. Currently they market a Dentz tractor and Volvo combines. Unless an independent supply of machines can be maintained, savings derived from low wholesale distribution costs will not remain available. This dependence reflects the hierarchical structuring of the implement industry, and the limited ability of co-operatives to counteract the power of the dominant oligopolistic corporations.

3. Structural Imperatives of Capitalist Production

The practice of the implement industry in this pricing policy cannot simply be understood as a "rip off" or a conspiracy of evil men. This view leaves the way open for the assumption that if good men were in control, then exploitation would not occur, or for the harmony view of the Federal Task Force on Agriculture in which industry is seen to be simply oriented to the satisfaction of consumer wants in some benevolent way. Both views fail to recognize that the corporation is part of, and works within, a capitalist environment and has to respond to the imperatives of existence within that environment.

Reproduction and accumulation in a system dominated by the private ownership of the means of production necessitate, even under conditions of monopoly capitalism, that corporations compete to maintain or improve their position in terms of their rivals. Avoidance of price cutting does not entail an absence of competition. For example, competition may occur in the search for new commodities or for cost reduction through improved technologies, organization of production, and supplies of raw materials. The outcome of such competition may decisively effect the ability of large corporations to survive (Schumpeter 1965: 84). In other words, cost pressures are as significant under conditions of monopoly capitalism as they were under its competitive forerunner (Baran and Sweezy 1966:71).

It is this competitive structure, inherent in the capitalist mode of production, that lies behind the development and organization of the implement industry. In their pricing policy, and in their behaviour generally, corporations in the industry are rationally responding to the imperatives of their situation in a capitalist environment. With this in mind, attention will now be directed towards establishing the significance of these conditions to corporate behaviour in the implement industry, and to providing the basis for accepting generalized conclusions about agribusiness and its relationship with agricultural producers.

A process of concentration in the implement industry led to the establishment of the major corporations: Massey-Harris 1891, International Harvester 1911, and John Deere 1917. The objectives of concentration were the benefits to be derived from cost reduction, resulting from large-scale production, and monopoly control over pricing. For example, the mergers leading to the formation of International Harvester created a monopoly in the production of harvest equipment. At the time of the merger, control of the market for grain binders and mowers in the United States reached 90% and 80%, respectively. The company also entered into the production of tillage equipment which until then had been a separate industry dominated by John Deere. The result was to bring non-competing industries into competition, for producers of tillage

equipment had to enter into the production of harvesting equipment to compete effectively. By 1920 the basic oligopolistic structure of the industry was established with "competition" being restricted to a few "full line" companies which manufactured a wide range of farm implements (Phillips 1956:24).

Although there are areas of cooperation between major producers, such as price collusion, competition remains. It is, in fact, structured into the very organization of the corporations, for they are oriented toward the pursuit of profit. Even if there are other goals, such as size, growth rate, dominance, these can be reduced to the common denominator of profitability. For example, according to Neufeld, the stated aims of Massey-Ferguson were:

1. To produce a market agricultural and light industrial equipment.
2. To be world-wide in scope.
3. To have a full product line.
4. To be an integrated producer.
5. To become the dominant factor in the industry.
6. To improve profits significantly.

(1969:227)

However, Neufeld argues that the primary objective was the enhancement of profitability, while the other goals were subordinate to this end (1969:227).

Since the early 1960's planning within the Massey-Ferguson organization has been directed to the concept of

profit impact. The president delineates the profit objectives of the corporation and each division has to submit tentative plans to the executive group detailing what contribution or profit impact it can make to the company's overall objectives. These plans are then assessed by the executive group and a decision made as to whether or not this potential contribution has to be revised. This means that productive units do not simply attempt to improve the results of the previous year's performance but rather to pursue pre-determined organizational profit objectives. That is, their activities become rationally oriented exclusively and continuously toward achieving the goals of the organization.

Organization in terms of profit impact facilitates the continuous assessment of contributions made by various divisions and personnel towards the realization of the companies' objectives. Moreover, the emphasis of profit impact is seen by Neufeld as encouraging the development of entrepreneurial spirit among management and providing a means of assessing individual performance by relating such qualities as "imagination, initiative, and ambition" to profit maximization (1969:242). The structuring of activities in terms of profit impact clearly indicates that the central concern of the Massey-Ferguson organization is profit maximization, a concern that can be considered the main objective of rival corporations in the same industry and capitalist corporations generally. Even if

"strength, rate of growth, and size" are considered to be primary objectives, it has to be recognized that profit maximization is an imperative because profit is the necessary means to all of these goals (Baran and Sweezy 1966:39).

A major area in which competition is revealed is in the corporations' ceaseless attempts at cost reduction as a means of improving the profit situation and thereby gaining advantage over rivals. For instance, the expansion of production facilities on an international basis, though partly geared to overcoming government protectionist policies, is mainly a means of obtaining the cost advantages of vertical integration, large-scale production, cheap raw materials and labour. It was the cost advantages that led Massey-Ferguson to acquire the Perkins organization, the largest producer of diesel engines in the world, and the tractor division of Standard Motors, which had previously made Massey-Ferguson tractors under contract but had not been integrated in a manner which would allow adequate cost control. In absorbing Perkins, Massey-Ferguson continued sales of diesel engines to other manufacturers and thus gained returns-to-scale which would not have been possible if engines were produced for Massey-Ferguson equipment alone (Neufeld 1969:331).

International expansion is a necessity for large corporations if they are to maintain their competitive position with their corporate rivals. They are obliged to seek the

cost advantages that international expansion facilitates through increased sales, returns-to-scale and also through the more direct advantages of locating production facilities where labour and raw material costs are lower. It is part of a search for higher profits and recognition that failure to expand internationally places corporations in a disadvantageous position with their rivals.

A possibility that emerges from the development of a strong cost-profit situation is that funds become available for investment in research and development. In this respect, the successful company has a potential sales advantage over its rivals. Conversely, failure to become involved in such research may undermine the corporations' ability to survive, in that the way is left open for rivals to gain control of the production of new products. Competition for the control of innovations was particularly prevalent in the nineteenth century when ownership of patents and the development of patent pools were used to establish a technological monopoly and thereby ruin competitors. However, despite the considerable resources at their disposal, the major corporations do not have a particularly enviable record, as the individual farmer remains the primary source of major and minor inventions of farm equipment. For example, the entire development of the disker was carried out by farm producers in the 1920's, but it was not until its commercial value was established in the 1940's that the major corporations started adding

it to their production lines (Canada, Royal Commission on Farm Machinery 1970a:32).

Under the present oligopolistic conditions of production, expenditure on research and development is primarily oriented towards the refinement of existing products rather than to the development of any radical departures from existing lines of machinery. The conservative nature of this research is a product of the drive towards profit maximization in a capitalist environment. Apart from the reluctance to spend resources on inventions for which success is not guaranteed, radical departures from existing products may render part of the corporations' normal output, and the capital equipment for its production, redundant. Though competition in terms of product refinement does exist, it is minimized by a common reluctance by the major corporations to radically modify existing production runs and an agreement to hold patent rights for one year only (see Canada, Royal Commission on Farm Machinery 1970a).

It seems clear, then, that imperatives of production in capitalist society affect corporate strategy in the implement industry, and that absence of price competition is no indication of the absence of economic struggle. Price stability, like the reduction of the extremes of technological competition, seems to be a rational response by corporations to the conditions of their existence, a means of reducing competition in areas where it

is not possible to gain certain advantage and where losses may well be incurred. For instance, if the major producers were to engage in price competition, the resultant increase in sales would not necessarily bring forth sufficient increase in revenue to balance the loss resulting from lower prices. Smaller producers may be driven from the industry, but the total effect may be loss of revenue for the industry as a whole and for those larger corporations remaining in production.

The behaviour of major corporations in the implement industry simply epitomizes that of monopoly capitalists generally. Therefore, it seems safe to assume that the character of the relationship of farms to the implement industry, though varying in concrete detail, is matched by that of their relationship with other sectors of agribusiness such as the packers, railways, petrochemical industries, and retailers (Warnock 1971; Mitchell 1975).

There is, for example, a high degree of concentration in the meat packaging-processing industry where Canada Packers, Swift, Burns, Schneider's and Intercontinental Packers, control 60% of the market. Their ability to manipulate prices is complicated by the presence of oligopolies in retailing which can be expected to use their power to minimize the price they have to pay to processors. However, the extent of the power of retailers in this relationship is questionable. For instance, David Lewis considers the processors to have considerable effect on

prices at both retail and farm levels. The major packers "...have an immense influence on the price the farmer gets and they have an immense influence on the price which the retailer has to pay" (1974:11). The validity of this view is reinforced by the existence of intercorporate links between levels of production. For example, Canada Packers is a significant shareholder in Dominion Stores and controls a rising proportion of their meat sales (Mitchell 1975:89). However, as far as the farmer is concerned, the effect is the same because the oligopolistic position of the processors allows them to pass on any reduction, stemming from the wholesale level, to the primary producers.

C. Relations Between Oligopolistic and Competitive Sectors

1. Competitive Structure of Agricultural Production

It is apparent from the discussion of independent commodity production that the organization of production in agriculture differs considerably from that prevailing in the implement industry (see Chapter Three). In 1971 the total output from farming was derived from 366,128 producers. Consequently, despite the concentration that has occurred in agriculture, the output of any single producer is small in proportion to the total output of the industry. The situation is further complicated by the entry of 25 - 30% of farm output into world markets (Canada, Federal Task Force on Agriculture 1969:16). As a result,

farmers are brought into competition with producers in other countries, though this competition is modified by tarrif barriers and subsidies.

There is, of course, specialization of production within the industry, but the production of commodities is still carried out by a large number of small producers. For instance, an output of 7.6 million hogs in 1971 was produced by 122,681 farmers. Moreover, despite specialization, competition occurs between close substitutes such as hogs, broilers, beef and mutton. This conflict is clearly recognized by various commodity groups who seek to market their products at the expense of other commodities. For instance, the Hog Marketing Board is explicit in its attempt to persuade consumers to substitute pork consumption for that of other meat products.

A consequence of the integration of many small producers into the market is that individuals exert no control over the price of the commodities they produce. Unlike the corporations of agribusiness, the agricultural producers have to accept the market price as given. In an open market situation there is no overall supply control other than that imposed by prices and costs. The output of individual producers is too small in relation to the total output of the industry to have any effect on price. Yet, if individual actions are cumulative, a response to low or high prices, then price will tend to change. In other words, the purposeful actions of many individual producers may

have unintended consequences on the price they receive for their product. Increases in total production, whether due to improved crop conditions or to the movement of units into production, tends to depress price while decreases in the total output tend to increase price. The result of oscillations in production in a competitive situation is price instability. Table 18 of hog and barley prices shows the magnitude of these fluctuations. The effects of fluctuations may be offset through the provision of subsidies, such as those provided by the Wheat Board, or through supply management arrangements such as those in the dairy industry. Even with such arrangements, farm producers are unable to manipulate prices as to the firms of agribusiness. Moreover, even when some price stability is achieved, their competitive situation prevents them from effectively controlling prices. Vertical integration in the production and distribution of fertilizers, farm implements, etc., are attempts to overcome this. However, the problems of supply faced by the Canadian Co-operative Implements Ltd. discussed earlier are indicative of the shortcomings involved.

2. The Structural Imperative of Changes in the Organization of Production

In analyzing the relationship between owners of the means of production in contemporary capitalist society, it is relevant to distinguish between a dominant oligopolistic

TABLE 18

Barley and Hog Prices: 1962-1972

Year	Average Barley Prices per Bushel. Canada	Price Changes	*Average Hog Prices Edmonton	Price Changes
1972	1.25	+ 0.56	32.01	+10
1971	0.69	- 0.6	21.25	- 7
1970	0.75	+ 0.8	28.40	- 4.90
1969	0.67	- 0.14	33.30	+ 6.80
1968	0.81	- 0.6	26.50	+ 0.80
1967	0.87	- 0.18	25.70	- 6.40
1966	1.05	+ 0.2	32.10	+ 1.10
1965	1.03	+ 0.3	31.00	+ 8.15
1964	1.00	+ 0.6	22.85	- 2.55
1963	0.94	0	25.40	0
1962	0.94	0	25.40	0

*Prices are per 100 lbs, Grade B, Dressed, Index 100, Base Price Edmonton, Alberta.

Source: Information Canada, Canada Yearbook, Agriculture 1968 Tables 11,43; 1969 Tables 11,43; 1970-71 Tables 11, 41; 1972 Tables 11, 41; 1973 Tables 11.4, 11.25.

sector and a subordinate competitive sector (Mandel 1971: 423-4). The relationships between these sectors, relationships between owners of the means of production and the product of labour, are marked by an imbalance of economic power. Corporations in the oligopolistic sector are able to expropriate a portion of the surplus created by firms in the competitive sector because of the control they exert over the prices they receive for their products and which they pay for their inputs.

> In the oligopolistic sector there will be a tendency for profit margins at given utilization to rise because neither the competition within each of these industries, nor the possibility of a new entry will be sufficiently strong to counteract this tendency. As a net result of the increase in profit margins at given utilization in the oligopolistic sector... a certain amount of profits, and a corresponding amount of internal savings have been shifted from the competitive to the oligopolistic sector (Steindl quoted in Mandel 1971:423-4).

A consequence of this is that savings are reduced and the reproductive ability of the competitive sector is impaired.

It is apparent from the preceding discussion of agribusiness and agricultural production that the relationship between these sectors corresponds to this general model. Production in agribusiness is organized on an oligopolistic basis, being dominated by a small number of large corporations, while production in agriculture is organized on a competitive basis, consisting of a large number of small firms. Consequently, the large corporations of agribusiness

are in a position to transfer to themselves a portion of the surplus created by agricultural producers. That this transfer does occur is apparent from the analysis of the monopolistic pricing policy of the implement industry (Warnock 1971:124; Beeching 1964:93).

A consequence of the transfer of surplus is that the ability of farm producers to retain the savings necessary for the reproduction and expansion of their productive unit is undermined. In other words, the independent commodity producers' ownership of the product of their own labour becomes extenuated. It is the depression of income resulting from this transfer that leads Bronson to see farmers as increasingly becoming employees of the corporations of agribusiness (1972:123).

The direct empirical manifestations of this process which confront the farm producer are the price paid for inputs, production costs, and the price received for output. In this respect, the oligopolistic behaviour of agribusiness corporations in conjunction with the competitive behaviour of farm producers result in continuous cost-price pressures on farm producers. The price-cost indices given in Table 19 are indicative of the situation faced by farm producers.

It should be noted that the accuracy of the changes shown in Table 19 are questionable because the character of farming has changed considerably from the period, 1935-39, which was taken as the base for the construction of the index. Nevertheless, the figures are indicative of the

TABLE 19

Index of Farm Prices and Costs

Year	Index of Farm Prices of Agricultural Production	Composite Index Exclusive of Living Costs	Year	Index of Farm Prices of Agricultural Production	Composite Index Exclusive of Living Costs
1960	23.04	276.7	1953	250.4	239.8
1959	242.9	269.5	1952	274.4	243.1
1958	245.5	259.9	1951	298.8	230
1957	234.2	255.9	1950	260.8	210.4
1956	234.6	247.6	1945	185.7	152.1
1955	232.7	238.3	1940	96.8	106.8
1954	236.8	237.2	1935	88.0	95.4

Source: Urquhart & Buckley 1965, Table L88-97, p. 358.

cost-price pressures confronting farm producers.

Publication of this series was suspended in 1970 and was replaced by a revised index which employs 1961 as the base year (see Table 20). The revised index indicates the persistence of the cost-price pressures. For example, by 1971, the index for the price of farm inputs had risen to 135.8 while the index for farm prices had only risen to 115.4. In other words, there seems to be no doubt that farm producers are consistently caught in a situation where production costs rise more rapidly than prices.

TABLE 20

Farm Input and Product Indexes*

Year	Total Farm Inputs	Farm Prices of Agricultural Products	Year	Total Farm Inputs	Farm Prices of Agricultural Products
1971	135.8	115.4	1965	112.0	107.8
1970	131.3	116.0	1964	108.6	101.3
1969	129.1	116.8	1963	108.0	102.9
1968	124.9	114.0	1962	105.2	104.3
1967	121.5	116.0	1961	100	100
1966	118.6	117.0			

*A discussion of the revised index can be found in Statistics Canada 1971a, Catalogue 62-002.

Source: Canadian Statistical Review, Historical Summary 1970, Catalogue 11-505 Occasional, Table 5.

Productive consumption, and, therefore, the reproduction of independent commodity production as a particular productive relationship, is dependent on the outcome of exchange. Confronted with the tendency for costs to rise faster than prices, the farm producer is faced with the prospect of a continuous decline in income. Consequently, unless changes are made in the organization of production which will compensate for the decline in income, then reproduction or accumulation cannot occur. Continuous changes in the organization of production by independent commodity producers, or capitalist producers in agriculture for that matter, are structural prerequisites for the survival of that form of productive relationship. If changes in the organization of production are not made, then reproduction becomes impossible and ownership of the means of production by the actual producer is lost.

This structural pressure to make changes in the organization of production is felt by all farm producers: it is a condition of their existence. It does not matter whether their motivation is considered to be "traditional" or "modern," they have to adjust their productive activities to those realities of their structural position. In fact, it is their adjustments to those pressures which are labeled "traditional" or "modern," though both are in this sense developmental.

The fundamantal significance of the position of independent commodity producers is that these structurally

induced imperatives not only exert a pressure towards change, but condition the direction of change. These questions will be taken up in subsequent chapters. At this point it can be suggested that it is these structural pressures that lie behind the changes in the organization of production within the independent commodity form of production, changes which have led to the emergence of the modern capital-intensive family farm from the labour-intensive homestead. These pressures can also be seen to underlie the impoverishment and proletarianization of the mass of small producers, and provide a means of understanding the contradictions within the independent commodity form of production in capitalist society, contradictions which threaten the very existence of the class of independent commodity producers.

D. Summary

The farm producer is part of, and functions within, a capitalist economic structure dominated by large oligopolistic corporations. The economic hegemony of agribusiness producers allows them to pursue their profit objectives, in accordance with the structural imperatives of their situation, without concern for the effect this might have on farm producers. Their dominance allows them to forego price competition. Conversely, the farm producer, whose industry is organized on a competitive basis,

is left with no choice but to meet the pricing policies of agribusiness. In this respect, despite functional interdependence, there is an antagonistic relationship between farmers and other producers. In a societal division of labour under capitalist conditions of production, the farmer, as a producer of raw materials and a consumer of producer goods, is a means to the profit-oriented ends of agribusiness producers. Consequently, the economic power of producers to influence the outcome of exchange to their own interests is of fundamental significance.

By pursuing monopolistic pricing policies, the corporations of agribusiness are able to transfer part of the surplus created by farm producers to their own use. In this respect, the benefits of colonization (see Chapter Two) continue to accrue to metropolitan interests in central Canada. It may be added that the East-West axis established through Confederation is being broken down by the penetration of corporations based on the United States (Bronson 1972:123).

The effect of the oligopolistic practices of agribusiness on the competitively organized agricultural sector is a constant tendency for costs to rise more rapidly than prices. That is, farmers are caught in what has come to be called the cost-price squeeze. A consequence of these cost-price conditions is a permanent tendency for income to decline. The fundamental significance of this

tendency is that continuous changes must be made in the organization of farm production which will compensate for the decline. Without these changes, which as will be shown may take a variety of forms, reproduction of the independent commodity form of production would not occur. That is, change in the organization of production is a structural imperative for the continuous reproduction of the class of independent commodity producers under contemporary conditions of production in capitalist society.

CHAPTER FIVE

CHANGES IN THE ORGANIZATION OF PRODUCTION: FROM LABOUR INTENSIVE TO CAPITAL INTENSIVE PRODUCTION

A. Introduction

In Chapter Three it was shown that the predominant form of productive relationship in agriculture on the Prairies and in Canada generally is independent commodity production. Though this relationship has been continuous over time this does not imply an absence of change. On the contrary, in Chapter Four it was established that independent commodity producers under contemporary conditions of capitalist production are faced with a structurally induced imperative to continuously make changes in the organization of production. These changes, which must counteract cost-price pressures, are necessary for the continuous reproduction of the relationship and therefore the survival of the class of independent commodity producers.

The changes in the organization of production necessary for the continuous existence of the class of independent commodity producers are those which increase the productivity of labour. In particular, this means changes in the technology of production. It is in the ability of producers to gain access to improvements in the technology of production upon which the survival of the class depends, under existing conditions of production. In this sense,

the structural conditions of production exert their hegemony over the direction of change in the rural world. It is this hegemony which has conditioned the transformation of the labour-intensive homestead into the modern capital-intensive family farm within the independent commodity form of productive relationship.

Attention in this chapter is turned to the changes in the organization of production necessary for the continued existence of independent commodity production. In turn, this provides a basis for understanding the change and direction of change in agricultural production. There are two dimensions to the survival of the class. The first of these involves the establishment or transfer of resources to a new generation of producers. Unless new personnel are produced and resources transferred to them, the survival of independent commodity production would obviously be impossible. The development of new personnel is subordinate to the reproduction of the material basis of productive units. In other words, the aspirations of potential producers cannot be realized without the recreation of the economic positions they seek to occupy. With this in mind, the second and basic dimension to the survival of independent commodity production is the reproduction of the means of production. In this respect, the changes in the organization of production necessary to ensure continuous reproduction will be established.

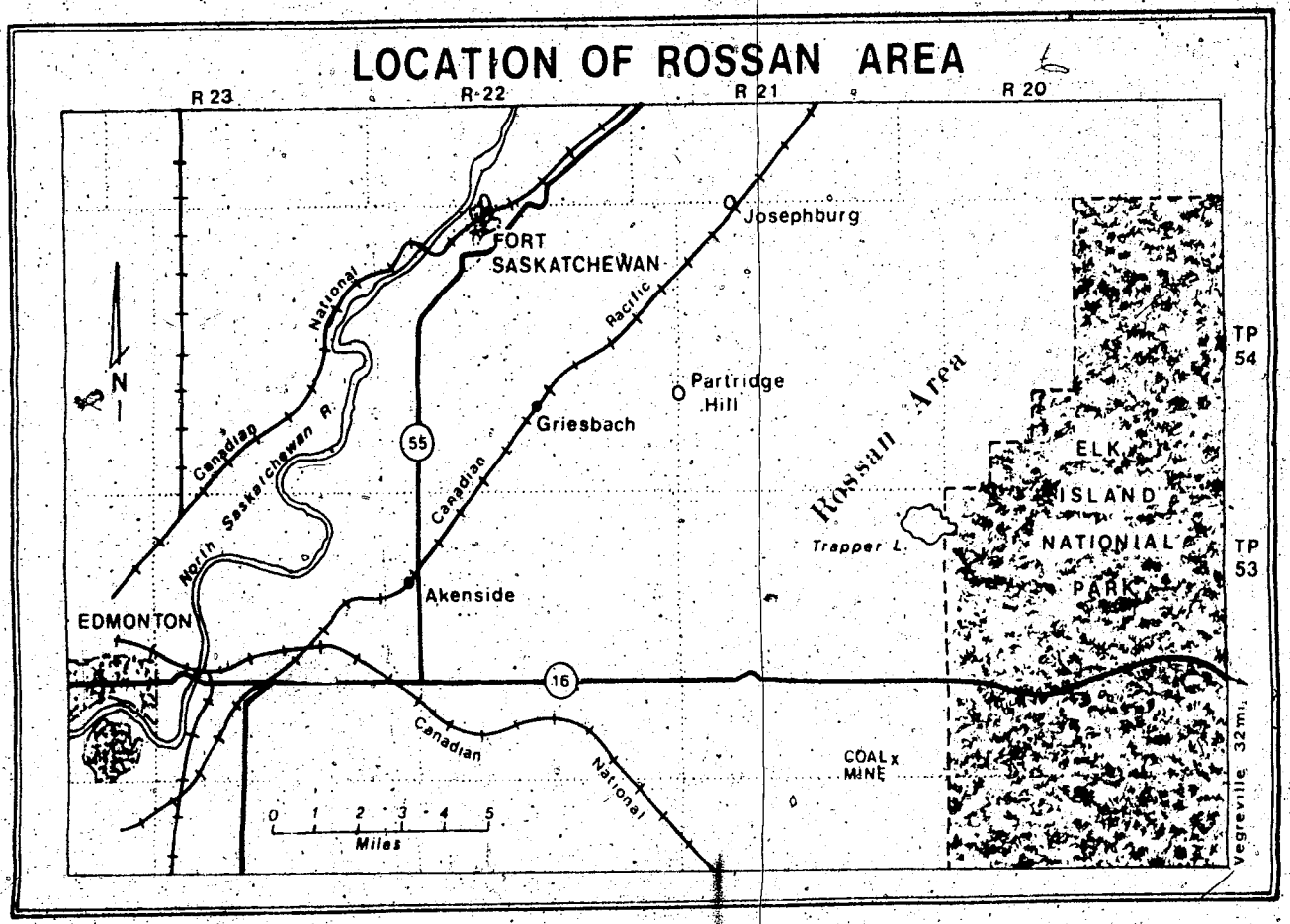
Analysis of the questions of transfer and changes in

the organization of production will utilize descriptive material from Rossan, the area of study. Consequently, the first section, Section B, is a general description of the changes that have occurred in the character of production in Rossan. This will be followed by Section C which involves a discussion of the question of the transfer of resources to new producers. In this discussion a distinction is made between the processes of fission and succession. Finally, attention in Section D is turned to the changes in the organization of production necessary to facilitate reproduction of the relationship. Discussion will focus on the variables of labour, land, and technology in establishing the necessity of continuously adopting changes in the technology of production.

B. Changes in the Character of Production: General

Rossan is thirty-five miles east of Edmonton (see Figure 1) and is included within the northwestern extension of the Aspen Parkland belt which reaches north and west from southern Manitoba and southeast Saskatchewan (Bird 1961:ix). Topography is "undulating and depressional" in the northwestern portion of the area, becoming "gently rolling" and "rolling" towards the eastern boundary with Elk Island National Park and to the south (see Alberta Soil Survey 1963). Generally, the eastern portion contains greater areas of unbroken land that have remained heavily

Figure 1


LOCATION OF ROSSAN AREA
R 23
R 22
R 21
R 20
FORT SASKATCHEWAN
Josephburg
Partridge Hill
Griesbach
Akenside
EDMONTON
Trapper L.
Rossall Area
ELK ISLAND NATIONAL PARK
COAL MINE
TP 54
TP 53
Vegreville 32mi.
National
Pacific
Canadian
North Saskatchewan R.
55
16
N
0 1 2 3 4 5
Miles

wooded, and a larger proportion of sloughs. Approximately two thirds of the area is made up of chernozemic soils while the eastern third consists of podzolic soils. As farm land, the former is rated as "good to very good arable" or "fairly good to good arable" while the latter is rated as "poor to fair arable" (Alberta Soil Survey 1963). In other words, this means that the soils range from "very good" to marginal for agricultural production. Moreover, the quality of land is further reduced in parts by excessive stoniness (see Figure 2).

Settlement in this area began in the last decade of the 19th century. To the north, in the Josephburg area, the first settlers arrived in 1891. They were from the villages of Josefberg and Brigidau in the province of Galicia, Austria (Ream 1957:65). Originally, they had settled in Dunmore, ten miles east of Medicine Hat, but after two successive crop failures, left the area to homestead near Edmonton. They moved by Canadian Pacific Railway to Red Deer, where the railway ended, and the rest of the way in wagons drawn by oxen. Part of this group moved to the Stony Plain area while the rest moved into the Josephburg area east of Fort Saskatchewan, which at the time was virtually uninhabited (see Mohr 1967; Ream 1957).

To the west, in the Partridge Hill area, there was a small number of settlers prior to 1891. These were made up of veterans of the Riel Rebellion and families from Britain, Dakota, and Ontario (Ardrossan 1972:145). In 1892

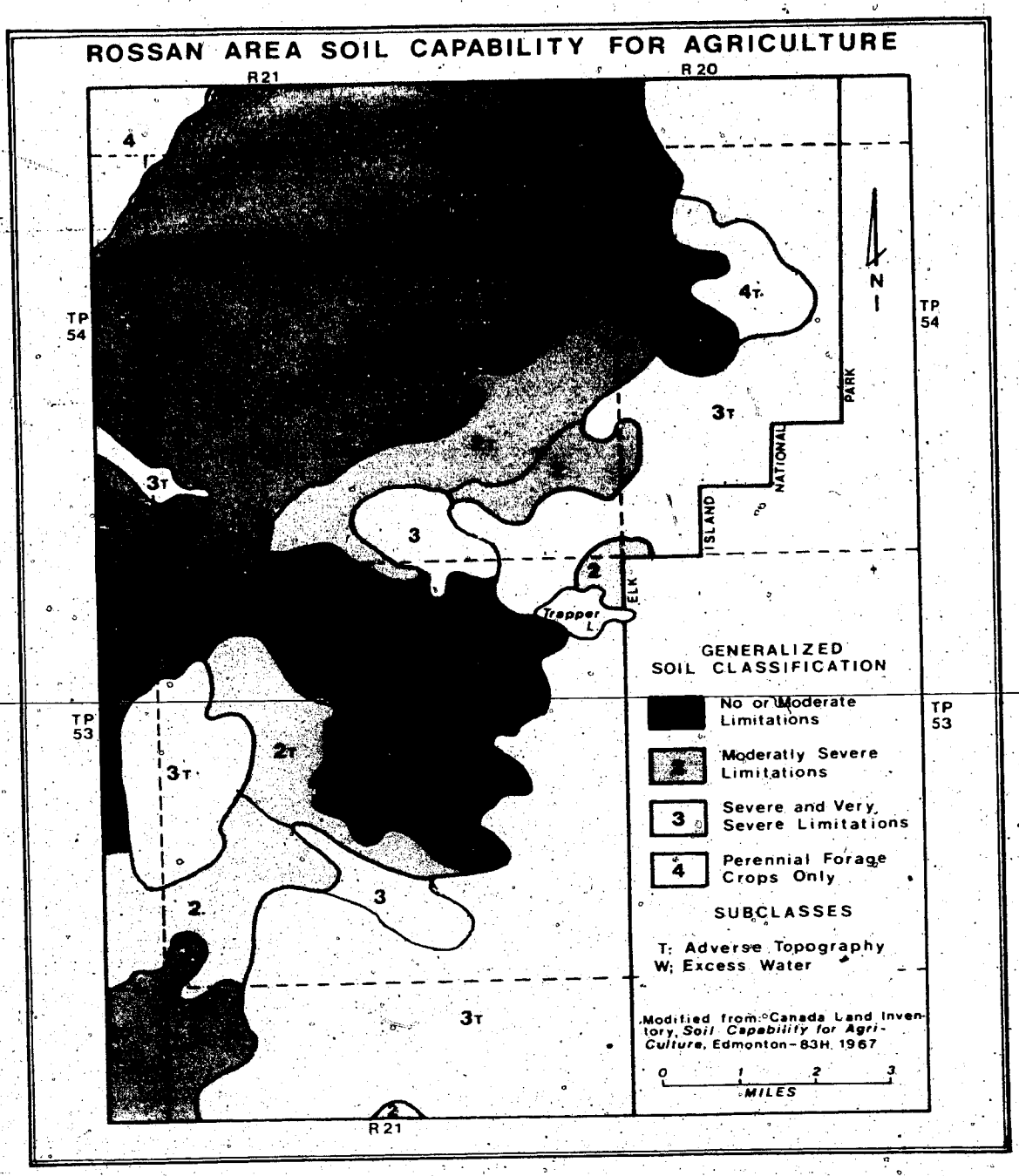

ROSSAN AREA SOIL CAPABILITY FOR AGRICULTURE
R21
R20
TP 54
TP 53
PARK
NATIONAL
ISLAND
ELK
Trapper L.
GENERALIZED SOIL CLASSIFICATION
No or Moderate Limitations
Moderatly Severe Limitations
Severe and Very Severe Limitations
Perennial Forage Crops Only
SUBCLASSES
T: Adverse Topography
W: Excess Water
Modified from Canada Land Inventory, Soil Capability for Agriculture, Edmonton-83H, 1967
0 1 2 3
MILES

Figure 2

a large colony of 298 settlers arrived in Strathcona (South Edmonton) from the Parry Sound area of Ontario. They settled not only in the Partridge Hill area, but also in Lamont, Namao, and Beaver Hills. Subsequent settlement of the area was by individuals and families from various countries which include Britain, Germany, the United States, Ireland, as well as from Ontario.

The area was quite heavily settled by the turn of the century. Table 21 shows that by 1901 the population of township TP54-R20, which includes the bulk of the area of study, was 317 in 1901. This rose to a peak of 471 in 1916 which was not exceeded until 1971 when the effects of the movement of acreages into the area raised the population to 548. The population of the eastern part of the area (TP54-R20), which consists of less than one half a township, was only three in 1901, fifty-one in 1906, reaching a peak of 180 in 1926. The slower development, which is matched by low population levels in the township (TP53-R21) to the south, reflects the marginal nature of much of the land in these areas.

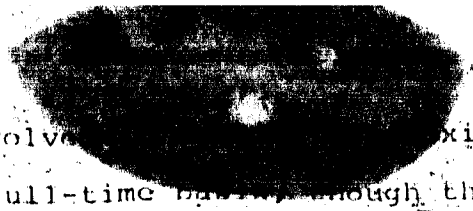
The present population of the townships T54-R20-21, which includes the area of field work, is 633. This is made up of 155 households of which approximately eighty-five are involved in farming. The rest are made up of families whose members have retired from farming, abandoned farming and sell their labour elsewhere, and the residents of acreages who are involved in other occupations. Of the

TABLE 21

Population - Townships

Year	TP54 R20	TP54 R21	TP53 R21	Year	TP54 R20	TP54 R21	TP53 R21
1971	84	549	536	1931	127	388	302
1966	82	455	446	1926	180	355	243
1961	84	459	392	1921	125	364	155
1956	92	390	259	1916	107	471	137
1951	91	347	209	1911	101	339	93
1946	110	370	223	1906	51	336	90
1941	154	385	311	1901	3	317	49
1936	123	406	290				

Sources: Statistics Canada, 1971 Census of Canada, Alberta Print-Out. Dominion Bureau of Statistics, 1966 Census of Canada, Catalogue 92-614, Vol. 1 (1-14) May 1968. Dominion Bureau of Statistics, 1956 Census of Canada, Population, Electoral Districts, Bulletin 1.1. Dominion Bureau of Statistics, 1946 Census of the Praire Provinces, Vol. 1, Population, Alberta Historical Tables, Table 7. Dominion Bureau of Statistics, 1941 Census of Canada, Vol. 2, Population, Population of local subdivisions, Table 11. Dominion Bureau of Statistics, Seventh Census of Canada, 1931, Vol. 11, Population of Areas, Table 13. Canada Bureau of Statistics, 1926 Census of Prairie Provinces, Population and Agriculture, Table 5.



households involv[redacted]ximately 50% are farming on a full-time b[redacted]though the male heads of household may sell their labour on a casual basis. The other 50% have adopted a full-time work-farm pattern in which the male heads of household sell their labour on a full-time basis and maintain farm production. The work-farm pattern, as will be shown, emerged in the 1950's, being facilitated by the development of urban labour markets in Fort Saskatchewan and Edmonton.

In general terms, the area of study was and remains characterized by mixed farming. However, particular productive units, once marked by a highly diversified form of farming, have undergone a process of specialization. By the 1930's the majority of production units in Rossan followed a pattern of farming which was characterized by a high degree of diversity and self sufficiency. Moreover, new settlers entering the area, until the early 1950's, normally sought to emulate this pattern.

Typically, production on a quarter or one half section would include the production of cereals, namely wheat, barley, and oats. A small number of cows, from two to eight, were kept for milking, and butter and cream were produced from the milk, by the farm wife. The butter was exchanged for groceries, or cash, at retail outlets in Fort Saskatchewan and Edmonton, while cream was sold directly to producers. The skimmed milk remaining after the production of butter and cream was used with grain to

feed hogs. These were seen as complementary activities. Some beef production was practiced, but the amount was small because of the heavy demands on pasture and feed made by horses, which were the primary source of power. Horses were provided with pasture in the summer and hay and green feed, oats that were cut while they were still green, in the winter. One hundred and fifty to five hundred hens were kept mainly to produce eggs. These, along with the butter, were also exchanged for groceries.

In addition to commodities produced for the market, production was also directed towards domestic consumption. Consumption of meat, which was canned or smoked for storing, eggs, milk, and butter, was complemented by the cultivation of gardens and the collection of wild berries such as saskatoons and raspberries. Vegetables and berries were stored or canned for the winter in conjunction with the other products, allowing households to be practically self-sufficient in the domestic consumption of food. Bread was made from wheat grown on the farm and milled in Fort Saskatchewan. Other domestic activities such as quilting, making soap, clothing, pillows, as well as cutting wood for fuel, or cutting pit props in exchange for coal, made for a high degree of self-sufficiency. It is not surprising that farmers remembering those days claim that all a family needed was a quarter section of land to meet their needs.

Farm income was supplemented by income derived from

the sale of labour on a casual basis. Road work was done to write off taxes or for cash. Producers were involved in construction work on bridges, railways, buildings in Edmonton and Fort Saskatchewan, as well as in working for other farmers. Such jobs involved spending a few weeks or several months during the winter away from the farm. The income derived from these sources was used to help purchase stock, implements, etc.: that is, its primary purpose was to facilitate productive consumption.

Farming, prior to the 1940's, was highly diversified and characterized by a considerable degree of self-sufficiency in terms of personal consumption needs. Groceries which could not be produced at home, such as sugar, salt, coffee, were obtained in exchange for butter and eggs. Wood or coal was used as fuel, the former being obtained locally and the latter from a small mine six miles south of Rossan. The coal was usually obtained through the exchange of wooden pit props which had been cut and shaped by farmers, and which were used to reinforce the roof and walls of the mine. Draft animals were produced on the farm and fed by products grown on the farm, thereby minimizing the use of external sources of power. Needs for productive consumption were met by the reinvestment of farm income or through the sale of labour power. The level of technology used in production was limited by the available source of power; consequently, these diversified operations could be characterized as labour-

intensive. Although the majority of farms were one quarter or one half section in size, there were a few farms that were considerably larger. The largest, for example, was 900 acres. However, even in these cases farming was diversified and highly self-sufficient in terms of consumption needs despite the inevitable emphasis on grain production.

Farmers entering production in the late 1940's and early 1950's still tended to adopt the traditional diversified approach to farming. However, since this time there has been a gradual specialization of existing productive units while new units entering production have tended to be more specialized from the outset. The area as a whole remains characterized by mixed farming because specialization has taken a variety of forms such as dairying, hog production, cow-calf enterprises, and grain and beef production, with perhaps an emphasis on the latter.

The loss of functions has been slow and, in fact, it is still possible to find instances where some of the activities of the earlier period persist. For example, the production of butter was abandon in the early fifties, though the production and separation of cream was fairly widespread until the mid-sixties. In fact, three farmers were still producing cream in 1972, though one of these abandoned production the following year. In the past, hog production was considered to complement the production of milk, though it is not necessarily dependent on it. However,

hogs were raised partly as a valuable means of disposing of skimmed milk, and therefore it is common for both activities to disappear together. Finally, the production of eggs is no longer a significant activity, though occasionally a few are retained for domestic consumption.

An example of this process is provided by a producer who started production in 1958 on one half section of land and developed an enterprise which consisted of a maximum of 200 hogs and eighteen cows. The cows were milked by hand and cream was sold to a dairy while the skimmed milk was fed to the hogs. In addition, he was self-sufficient in feed, growing oats and barley as well as a small amount of wheat. During 1964-65 he abandoned cream and hog production because of low returns, and started growing cereals as a cash crop, and at the same time started developing a herd of cattle for beef production. The growing herd size which has currently reached approximately 80, created a demand for extra pasture; consequently, he purchased a further quarter section. He also rents land, farming altogether one and one half sections. In addition, the male head of household also sells his labour on a full-time basis.

With the exception of two productive units, all farmers who were in production prior to the 1960's have abandoned their diversified operations. They have specialized in either grain, hay, cow-calf or beef enterprises. New producers entering farming in the 1960's have added a further

specialization to the list, namely, dairying. The process of specialization has occurred with a decrease in the input of family and hired labour, which has been made possible by changes in the technology of production. Of particular significance in this respect is the development of alternative sources of power which have facilitated the development of capital-intensive enterprises.

Patterns of domestic consumption have changed considerably. Farm houses are equipped with electricity, gas, hot and cold running water, electric or gas stoves, refrigerators, deep freezes, etc. There is a dependence on a wide variety of provisions and household furnishings. The farmers' consumption patterns are those of urban dwellers; in their words, "We live like city folk now." A consequence of this is that self sufficiency in domestic consumption has practically disappeared although to a small extent it remains in the consumption of meat and vegetables which are produced on the farm.

A further change has been the breakdown of the casual work pattern which was used to supplement farm income. This has been replaced by the sale of labour on a full-time basis, usually by the male head of household, while continuing farm production. Approximately fifty percent of the farmers in the area have adopted this pattern.

Though the area as a whole can be described as one of mixed farming, it is apparent that individual productive units have become progressively more specialized.

The diversified enterprises of the 1930's, with their high degree of self-sufficiency in domestic consumption, have been replaced by units specializing in one or two commodities, and largely dependent on external sources for domestic consumption. Farm size has increased, and labour intensive methods have been replaced by highly mechanized farming based on alternative sources of power. Of course the process of change has not been uniform for all productive units. However, it can be said that even the smallest farms have participated in the process of specialization, though often they are the last to dispense with traditionally predominant functions.

c. Development of New Productive Units

The basic productive unit in agriculture is the farm family. In particular, production is centered around the male or female heads of the household. Offspring of the farm family are a further source of labour who are employed throughout the year in various chores such as milking and feeding stock. Sons in particular, once they are able to operate tractors and combines, are able to provide extra labour during the critical periods of spring and harvest. In fact, it is common practice to keep them out of school during those periods. This is, however, a temporary expedient because, although a small amount of additional livestock may be introduced to facilitate education of the young, often associated with 4H programs, there is no

expansion of the productive unit based on this source of labour. In other words, the basic division of labour is between husband and wife, while the labour of offspring is employed in activities that are already being performed. Production is geared to the needs of a single nuclear family.

The process of creation and recreation of productive units is obviously of fundamental importance to the continued existence of independent commodity production. In the area of study the source of personnel for new productive units, with the exception of three "hobby farmers," has been the sons of farm families. The processes by which they have been established in farming can be termed fission and succession or inheritance. The former entails the establishment of a separate productive unit, while the latter involves the transfer of the existing productive unit.

1. Fission

In the process of fission, parents actively help to establish their sons in farming. The nature of assistance varies, but invariably involves the lending of machinery in exchange for labour until the son can purchase his own. This may be supplemented by the provision of land or the rent for land, items of machinery, livestock and seed. Such practices varied, but the purpose behind them was the establishment of independent productive units.

The most recent successful occurrence of the process

of fission involves Jason Kline, a farmer who started production almost three decades ago, in 1947. Jason's father had started farming in 1936 by homesteading 160 acres of virgin bush. Like many of the earlier pioneers, he had started with no capital and had raised the cash for farming by selling his labour to other farmers in the area. With the help of three sons and the use of hired labour he eventually built up and operated a farm of 960 acres. The main cash crops were barley and wheat, though these were complemented by cows and hogs in the typical mixed farming fashion.

Jason started farming independently in 1947 with one half section of rented land. His father gave him five horses, one sow and pigs, one cow, plough, disk, wagon and harrows. In addition, his wife was given two cows by her parents. In the first year of operation Jason purchased a used binder at an auction for forty dollars, borrowed a seeder, and used his father's tractor in exchange for labour. A bumper harvest of 100 bushels per acre of oats in 1951 when the average yield for census district 11 in that year was 55 bushels per acre (Love 1968:34) provided the basis for purchasing a 38 horsepower John Deere tractor and becoming independent of his father. By this time, he had also entered into an agreement to purchase a half section of land. Initially the operation was primarily concerned with grain though the traditional combination of cows and hogs were kept to supplement income. In 1967 the

production of cream was dropped as production began to be focussed on the slow process of developing a cow-calf operation in which calves are sold as feeders when they are weaned. Relying on natural increase, the process is slow because it takes two years before a cow will calve, and, in increasing herd size, only female calves can be retained. In other words, it takes two years before a cow can calve, and a further seven months before the calf is marketed, or, if the female calf is kept for reproduction, a further two and a half years before she produces a marketable commodity. At present, herd size is approximately fifty cows and twenty-five yearlings, the maximum that can be handled with his present land base of 480 acres.

The development of the farm has entailed considerable hardship because for many years consumption had to be kept to a minimum. In this respect the cash provided by cream and hog production was vital. Despite hardship, Jason is one of the few in the area who is able to avoid selling his labour on either a full- or part-time basis. On reflection he wishes that he had been able to do something other than farming and thought that it was advisable for his son to choose an alternative occupation. Nevertheless, his son does want to enter farming. As a result, in 1973 he rented a quarter section of land for his son and lends the machinery to allow him to begin his operations. In other words, the process of fission, in which the son of a farmer strives to establish an independent productive

unit is again underway.

The process of fission has been common in the past although the results have seldom, since 1950, led to the development of self-sufficient productive units. More typically, producers who start farming through a process of fission find that they lack the resources necessary to establish a viable productive unit and are obliged to sell their labour in order to provide an adequate income. For example, Jack Rhome, the son of the largest producer in the Rossan area during the 1940's, attempted to establish an independent productive unit in the early 1950's. Lacking capital, he incurred debts to purchase land and cultivated the land with machinery which he borrowed from his father in exchange for labour. In addition, the capital shortage he experienced meant that he was unable to construct the facilities necessary, particularly barns and fences, to establish a mixed farming operation. From the outset he was unable to generate enough income from farming to maintain his livelihood and consequently was constrained to seek full-time employment at a fertilizer plant in Fort Saskatchewan.

Jack continued to work at the fertilizer plant for thirteen years without making any headway towards becoming a full-time farmer. However, when his father retired and Jack took control of the "home farm" he was able to forego the sale of his labour power. In this case, success was the result, not of the process of fission, but rather of

its failure. Jack was able to realize his ambition of becoming a full-time farmer only after he had gained control of the land and equipment previously used by his father. It may be added that this success was shortlived because rapidly falling barley prices in 1968 forced him to seek full-time employment again, this time with the municipality. If it had not been for the rising consumption needs of a growing family he feels that he would have been able to "tighten his belt" and thereby avoid selling his labour. At present, he has resigned himself to this pattern, though he hopes to be able to farm on a full-time basis when his children leave home.

A further example of the problems created through the process of fission involved three brothers who were the third generation of a pioneer family. On the death of their father in 1960, following a pattern of ultimogeniture, the youngest son, Ian, inherited the "home farm" while the elder brothers, Bruce and Andrew, inherited one quarter section each and a small amount of machinery. The elder brothers, both of whom wanted to farm, lacked sufficient land or machinery, and, as a result, continued to sell their labour on a full-time basis and farm at the same time. By 1972 they had made no progress towards achieving their goals of becoming full-time farmers. Bruce, in fact, had practically abandoned farming, maintaining only a small herd of cattle and purchasing their feed. Andrew had expanded to some extent in that he had purchased a further

quarter section for pasture. However, he was farming with inadequate buildings and equipment and continuously operating at a loss. At the time, both were clearly aware of the possibility that their aspirations would never be realized because they lacked the capital necessary to develop a viable productive unit.

Two years later the prospects changed. Inflated land values resulting from the development of acreages in the area allowed Andrew to sell his land and purchase a farm in the Athabasca area. The transfer allowed him to increase the size of his landholdings to three quarters of a section and to gain access to better quality soil, buildings, and fences. He still sells his labour, though only on a part-time basis, but believes that he could dispense with this if he wished. This success does not, of course, support the idea that fission is a viable means of starting new productive units. In fact, success occurred despite the fragmentation of the family's capital, for inflated land values of $40 - 55,000 per quarter section in 1973 provided access to capital which would not have been otherwise available.

Because he inherited the original farm, Ian was from the outset able to farm on a full-time basis. This has been partly aided by the fact that, unlike his brothers, he remained unmarried and therefore was not faced with the problem of meeting the consumption needs of a growing family. Nevertheless, occassionally he has been obliged to sell his labour on a short-term basis to supplement

low farm income. He, too, has been considering taking advantage of high land prices and purchasing a more viable farm elsewhere, a reflection of lack of capital.

The process of developing new productive units through fission has been common, especially where there was more than one son. However, it has been accompanied by a considerable degree of hardship which is reflected in reduced personal consumption and the adoption of a work-farm pattern (see Chapter Six). The basic problem is that the capital necessary to begin production has increased substantially since the pioneer period, and fission inevitably involves starting with little or no capital. Successful fission depends on the ability of the parents' farm to save a sufficiently large portion of income to provide the basis of a new productive unit. The low income of farms in the area means that the only savings available are usually already invested in production. Consequently, there is little or no surplus available for sons to start new productive units. Moreover, unless the ownership of land is transferred to the son, the supply of credit available to him is severely limited. Therefore, even if he is prepared to take the risk of investing heavily in production, the credit needed to do this is not readily available. In addition to this, any transfer of savings that does occur undermines the viability of the existing productive unit. The point worth stressing here is that the fragmentation of holdings has lead to the creation

of enterprises which have lacked the capital necessary for the establishment of viable farms. In fact, with the exception facilitated by rising land values, the process of fission has not led to the establishment of any full-time farms since 1947.

2. Succession

The process of succession involves the direct transfer of the original productive unit. It is usually the youngest son who inherits the family farm, as by the time the father retires the older sons are usually married and have either set up their own farms or sought alternative occupations. There are two ways in which this transfer occurs. In the first place, the process may be similar to that of fission, in which a son establishes, with the help of his father, a separate productive unit until his father retires. Alternatively, the son may seek alternative employment or remain on the farm as a low-paid hired labourer until his father retires. In either case, when the parents retire it is common for the son to enter into agreements to purchase the farm. The necessity for such agreements stems from the fact that low income has invariably meant that all savings have been invested in the farm and are the only source of retirement income.

The process of transfer is not without difficulty. In fact, there is an inevitable conflict of interests between the son and his parents. This is particularly apparent when the son remains at home to work on the farm.

The nature of the underlying difficulty can be illustrated by the conflict between the second and third generations of a pioneer family. In this case, the father, Gordon Ryan, was operating a typically mixed farm. During the 1950's, two cows were kept for milking. Cream was separated and marketed while the skimmed milk was fed to hogs. One hundred and fifty to two hundred hogs were marketed annually and provided the primary source of income. In addition, fifteen to twenty beef cattle and one hundred and fifty laying hens provided supplementary sources of income, while grain and hay were grown for feed.

The son, Matthew, started farming with his father as soon as he had completed grade twelve and left school. In the first years he simply labou[illegible] for his father, receiving only spending money. The [illegible]ctation of his father was that Matthew would take over [illegible]ion of the farm at some unspecified time when he decided to retire. In the meantime, Gordon planned to continue the same mixed farming enterprise, though allowing a slow expansion in the number of cows for milking. Basically, he saw the enterprise as having served him well in his lifetime and believed that it would provide a secure income until he retired.

The desire of Gordon to maintain ownership, control, as well as a mixed enterprise, was perceived by Matthew to be at variance with his own long-term interests. The mixed enterprise had developed around the needs of the father's family. However, Matthew considered this type of

enterprise, especially with its reliance on an unstable market for hogs, to be an inadequate basis for meeting his future needs. Instead, he wanted to start a dairy, being attracted by the stable price maintained by supply management through a quota system. Also, he had observed that the dairies were the "smartest looking outfits" in the district and that children attending school from such families always looked more prosperous than other children.

Because his father maintained ownership and control of the farm, Matthew, lacking collateral, was unable to obtain credit and the capital necessary for expansion. He was not able to farm in a way commensurate with future interests as he perceived them, and had no prospects of being able to do this until ownership was passed on to him in his father's will. The conflict of interests, based in the system of ownership, was intensified when the son married and his consumption needs began to rise. It reached its peak in 1965 when Matthew threatened to leave farming completely unless he was allowed to develop a specialized dairy operation. This possibility, in conjunction with the support of the agricultural agent for the area, a family friend, convinced the father to facilitate conversion of the enterprise to a dairy. The means of doing this was the establishment of a legal partnership in which 50% of control went to each partner. There was a further delay in getting his father to "sign the papers" necessary for raising a loan, during which time expansion was slow. But

eventually this was done and credit became available to Matthew, allowing him to finance the expansion he considered desirable. By 1973 he had purchased his father's share in the business, and thus obtained ownership of everything except the land.

The eventual resolution of this conflict in Matthew's favour allowed him to develop the largest dairy in the area. The first shipment of milk was made in 1965 from twenty-five cows which were milked by hand. Since then a new barn, milk tank, pipes and an automatic milking machine have made it possible to expand production to 50 cows. Specialization has reached the point where the 320 acres used for pasture, hay and grain are no longer enough for self-sufficiency in feed. Consequently, because he lacks the time to operate rented land, Matthew has become dependent on other producers in the area to supply him with hay. The outcome is that this particular productive unit is one of the few that provides a sufficient income to support a family without either husband or wife having to sell their labour elsewhere.

In this case the structurally based conflict of interest between father and son was resolved successfully. The son was able to develop a modern farm and his parents did achieve security on their retirement. Other examples of sons working with their fathers reveal the same conflicts, though the resolution is not always as satisfactory. For instance, another producer working in cooperation with his father since 1963 has been unable to develop production in a manner

that he considers desirable because he lacks the capital. Consequently, expansion has occurred slowly and represents an extension of his father's mixed farming enterprise which relies mainly on hog production for a cash income. At this point he feels that he will be unable to expand production unless he builds new barns and installs equipment which will allow him to manage a greater number of hogs. To do this will require considerable investment of capital which he is unable to obtain.

In this system of private ownership of the means of production by individual operators conflict of interests is endemic to the process of transfer. Parents have ownership and control of the productive unit and, providing their own indebtedness is not problematic, have control over the access to available credit. Sons, on the contrary, lack the collateral necessary for credit and are therefore dependent on their parents for the capital necessary for mechanization and expansion.

Traditionally, the mode of inheritance involves the transfer of control of the productive unit to the youngest son when the father decides or is obliged to retire. Because the only savings are likely to be those embodied in the productive unit it is not surprising that there is a reluctance to incur debts and jeoparadize the basis for some security in old age. Consequently, parents tend to expect younger sons to remain on the farm as labourers with the goal of eventual ownership, or to encourage sons to

develop an alternative source of income until they are ready to retire. Sons, however, especially when they marry and experience rising consumption needs, are in a different position because their interests lie in developing a productive unit which has some chances of meeting their future needs. They lack ownership and therefore the basis of credit, and are thus in a position of dependence on their parents to facilitate expansion and modernization. Unless this occurs, the reproduction and expansion of the means of production for the succeeding generation are jeoparadized. In either case the structure of ownership underlies the difficulties that aspiring farms have in rising the capital necessary for creating new enterprises or modernizing [illegible] already in existence.

Structurally Induced Changes in the Organization of Production

Independent commodity producers are continuously confronted with cost-price pressures which emanate from their structural position in capitalist society. To permit reproduction of the means of production it is necessary to make changes in the organization of production to compensate for these pressures. In particular, reproduction of the independent commodity form of relationship requires continuous changes in the technology of production. This necessity shapes the transformation of the rural world.

1. Labour

In the area under study a traditionally significant means of increasing output has been through the use of casual or permanent hired labour. According to older farmers, the practice of hiring labour was common until the 1940's when labour was used for clearing the land during the winter and in all phases of farm activity during the summer. The use of hired labour facilitated expansion at a rate that otherwise would not have been possible given the limited labour-intensive technology that was available. The primary sources of this labour were small farmers and new arrivals in the district who were attempting to raise the capital to "get started," the sons of farmers, and transient workers who worked on a casual or full-time basis.

Since the 1940's the use of hired labour has practically disappeared and even the largest firms rely almost exclusively on family labour. The only farms that do employ labour on anything approaching a regular basis are the dairies, all of which have developed since the mid 1960's. They tend to employ "boys" who are still at school to help with the milking for two or three hours per day. An exception, following a recent expansion from thirty-five to fifty cows, is the largest dairy in Rossan which started hiring a full-time labourer in 1974. Producers specializing in other commodities such as grain, hogs or cattle make no use of hired labour at all.

The limited amount of hired labour employed does not reflect lack of demand on the part of producers. In fact, all the full-time farmers and the majority of those aspiring to be full-time farmers express a desire for skilled and reliable labour, especially on a casual basis. They see extra labour as a means of reducing the hours they work and of facilitating a fuller use of their equipment.

Inability to hire reliable and skilled labour is not the consequence of an absence of such personnel. In fact, there are many farmers and their sons in the area who sell their own labour on a full-time basis. They constitute a pool of skilled labour potentially available to other farmers. In other words, there is both a demand for labour and the presence of a group of skilled farm workers. The difficulty in matching supply with demand arises from the fact that labour in a capitalist society is a commodity. Consequently, its allocation to various industries depends to a considerable extent on the wages and conditions of work that can be offered. It is the inability of farm producers to compete effectively in a growing urban labour market (particularly in Fort Saskatchewan) that underlies their inability to hire labour.

Prior to the 1950's, Fort Saskatchewan was primarily a service center for a rural hinterland, which included Rossan. In 1951, for instance, 75% of all occupations were related to the service industry, the only significant exception being the provisional gaol (see Edmonton 1953-54).

Lack of growth in the three decades prior to 1951 is indicated by a virtually static population. In face there was a slight decline during the Depression of the 1930's (see Table 22).

TABLE 22

Population: Fort Saskatchewan

1901	306	1951	1,076
1911	782	1956	2,582*
1921	982	1961	2,972*
1931	1,001	1966	4,176
1941	903	1971	5,726

*Parts of Strathcona 83 were annexed to Fort Saskatchewan

Source: Dominion Bureau of Statistics, 1961 Census of Canada Population Historical 1901 - 1961, Catalogue 92-539, Vol. 1, Part 1, Table 6. Statistics Canada, 1971 Census of Canada, Population, Census Tracts, Catalogue 92-710, Vol. 1, Part 1, Table 13.

Table 22 indicates a doubling of the population between 1951 and 1956 and a continuous growth in subsequent years. This growth has been facilitated by the movement of industry into the area. The first industry to move into the area was Sherrit-Gordon in 1952, which established a plant producing nickel concentrate, and ammonium sulphate fertilizer as a by-product. Attracting this development was the

availability of natural gas in the locality, the basis of a low cost supply of ammonia, an abundant water supply, rail connections, the proximity to Edmonton and a ready supply of labour. Subsequently, Inland Chemicals Canada Ltd., Dow Chemical, and the Peace River Glass Company moved into the area (see Ream 1957; Edmonton 1953-54; Edmonton 1964).

The significance of these developments for Rossan was that they offered an alternative source of employment to small farmers and the sons of farmers. In the pre-war period small farmers and the sons of farmers sold their labour to other farmers on a casual basis and, as mentioned previously, they also sought to supplement their income by seeking seasonal work in railroad, bridge, road construction, etc. With the industrial development of Fort Saskatchewan it became possible to obtain full-time employment within four to fourteen miles from their farm. Moreover, because little travelling time was involved, it became possible to sell their labour on a permanent basis as well as working on their farms. A consequence of this possibility is a current situation in which approximately 50% of census farmers in the township sell their labour on a full-time basis.

The development of an urban labour market in the post-war years has absorbed the labour that was once available to producers in the area. A shortage of labour has developed because the income of producers in Rossan and

surrounding area is too low to allow effective competition in the urban labour market. When farmers were asked what they considered the returns on their labour to be they invariably replied that they had never bothered calculating it. In this respect, it may be noted that this characteristic seems to be common to the mass of Prairie and Canadian farmers (Warnock 1971:121). Also, when producers were pressed to estimate the returns for their labour, the figures seldom exceeded 50 - 60¢ per hour. It is not surprising to find that farmers cannot offer wages that would attract skilled farm labour.

This problem is further illustrated by the attitudes of farmers who are selling their labour on a full-time basis. While wanting to increase their income, they would not sell their labour to other farmers because of the low wages offered, long hours worked which include weekends, and uncertainty of employment. They consider that if they were to work under those conditions they might just as well work for themselves. In the past it was possible to employ labour under these conditions, paying, for instance, two dollars for ten hours of stooking, because of the high unemployment during the Depression and the reduced wages in other sectors. For example, farmers fortunate enough to be hired on road construction crews in the 1930's were earning twenty-five cents per hour. Under post-war conditions of relatively high employment, farm producers in the area have not been able to compensate for cost-price

pressures by employing extra labour. Moreover, before it would be possible to hire labour it would be necessary to raise productivity to the point where competitive wages could be offered.

2. Land

Another traditionally important means adopted by farmers of raising output has been through changing the amount of land used in the productive process. Changes in the input of land do not occur in isolation from other changes in the organization of production. In fact, under conditions of cost-price pressure, land expansion must be accompanied by changes in the productivity of labour. Moreover, private ownership of land underlies a series of difficulties associated with this means of expansion.

It was noted earlier that settlement followed the pattern established by the homestead acts. Pioneers entering the area in the 1890's rapidly extended their holding either through pre-emption or the purchase of Canadian Pacific land, Hudson Bay land, or land abandoned by settlers leaving the district.

According to older inhabitants of the district, the majority of farms in the area were no more than a quarter section (160 acres) by the 1930's. This is supported by census data which shows that 63% of all farms in the Strathcona and Clover Bar districts were less than 200

acres*, while a further 28% were between 201 and 479 acres (see Table 23). Data from the 1971 census indicates that the basic pattern of land holdings has changed only slowly for 58% of all farms in Strathcona 20 are 239 acres or less (see Table 24).**

There has been a slow increase in farm size but, significantly, the degree of concentration is far less than that for Alberta and the Prairies as a whole. This is illustrated in Tables 23 and 24.

From Table 23 it can be seen that in Strathcona area there were over twenty percent more farms in the 1 - 200 acre category than in Alberta and the Prairies as a whole. In the categories representing larger farms it can be seen that the opposite is true: the percentage of large farms in the Strathcona and Clover Bar districts is relatively

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*Changes in census subdivisions complicate comparison. However, the Strathcona and Clover Bar subdivisions of the 1941 census approximate the Strathcona 20 subdivisions of the 1971 census. Any discrepancy between these divisions over time does not adversely effect comparison in the present context as the character of farming is the same.

**Census classification of farm size varies and does not correspond to the units adopted in the survey system. The categories adopted in the text are those under which farms of quarter, half, three quarter, etc. sections would be classified. This seems justified because the normal practice in the area of study was to increase farm size by quarter section units.

TABLE 23

Census Farms Classified by Size: 1941

Farm Size, Acres	1-200	201-479	480-639	740 & over
Prairies	38.7	32.1	12.1	17
Alberta	42.4	30.5	10.3	16.8
Strathcona and Clover Bar	63	27.6	5.7	3.8

Source: Dominion Bureau of Statistics. Eighth Census of Canada, 1941, Vol. 8, Agriculture, Part 1

TABLE 24

Census Farms Classified by Size: 1971

Farm Size, Acres	1-200	201-479	480-639	640 & over
Prairies	17	25.3	14.5	43.2
Alberta	21.3	27.4		

Farm Size, Acres	1-239	240-399	400-559	560 & over
Strathcona 20	58	19.5	10.2	12.4

Source: Statistics Canada, 1971 Census of Canada, Catalogue 16-708, 96-704, 96-710, Vol. 4, Part 3, Table 31

small in comparison to the figures for Alberta and the Prairies. Though the categories for 1971 in Table 24 are not directly comparable, the figures can still be seen to indicate the persistence of this difference.

The relatively slow expansion of farm size in the area in comparison to Alberta and the Prairies as a whole is related to the peculiarities of local conditions. The difference up until the 1940's probably reflects the fact that much of the land was heavily wooded and had to be cleared by hand. In fact, producers entering production in the 1930's began with as little as twenty to thirty acres of cleared land. Of particular importance in subsequent years, it is suggested, is the close proximity of an urban labour market and, more recently, a growing demand for acreages. Moreover, the latter conditions have come to control the possibility of land expansion within the area of study in the last decade.

A basic point to recognize is that independent commodity production is based on ownership of the means of production by the producer. Consequently, the settlement of land was also the allocation of land held by the state to the private ownership of individual producers. Therefore, once free land was alienated, the expansion of land holdings required that some producers abandon production in order to make their land available for purchase or rent.

Until the 1940's it is apparent that there were few alternatives available to producers who may have wished to

abandon farming. In a situation of high urban unemployment and low farm prices, the pattern of mixed farming, supplemented by production in the garden and off-farm work when this was available, provided a basis for maintaining livelihood. There was, in other words, a high degree of self-sufficiency. Consequently, the opportunity for land expansion was limited because producers stayed on their farms rather than "seek unemployment" in urban areas.

From a pre-war pattern of casual work and a high degree of self-sufficiency, farming has become more specialized and a pattern of full-time work and farming has developed. The full-time work-farm pattern, as was mentioned earlier, was facilitated by industrial development in Fort Saskatchewan and Edmonton. In other words, producers whose farm income was insufficient for their needs were able to supplement their income by selling their labour on a full-time basis. Thus, their land did not become available to other producers.

This situation is widely recognized by farmers in the area who wish to expand their operations. Conflicting interests over land, rooted in the system of private ownership, are reflected in frequent expressions of disdain by full-time farmers for their part-time neighbours who are seen as not really farming. The more successful producers express the belief that their part-time neighbours should move off the land and make it available to larger and more successful enterprises. In other words, farmers wishing to

increase their output through land expansion have, as a result of the private ownership of land, a structurally determined interest in other producers' abandonment of farming.

Since the mid-1960's the situation has become more complicated as there has been a growing demand for residential land. One consequence of this is an inflationary pressure on land prices. In the late 1940's and early 1960's it was possible to purchase one quarter section of land for approximately $3,000. By the mid-1960's producers were still purchasing land for farming, though the price of even poor quality land had risen to over $20,000 per quarter section. Since then the price has risen to over $40,000 per quarter section.

One effect of inflated land prices is that part-time and ex-farmers have started to retain their land for speculative purposes. As a result, producers who have been in the practice of renting land cannot be sure that it will not be withdrawn from production.* That is, farmers cannot plan their productive activities on the basis of its continuing availability. A more important effect, however,

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*The high land prices do not seem to have unduly affected the rental value of farm land. In fact, the common practice was to obtain land on a share-cropping basis in which one third of the crop value was paid to the landowner. In cases where rental agreements were in operation in 1973, the best land was rented for nine dollars per acre.

is that a situation has developed in which the price of land is too high ~~to allow farmers~~ to purchase it and operate it profitably. Consequently, competition for land use has created a situation in which land is being completely withdrawn from production. The point has been reached where producers believe that farming has no future in the area, and that if they wish to continue farming they will have to move to another area where land is less expensive.

The least productive farm land, that which is wooded and hilly, has been in greatest demand for residences. Despite its poor quality, the land was still valuable as a source of hay and pasture. Given the developing specialization in livestock production, the withdrawl of this land is creating a growing shortage of land for summer pasture. This shortage has forced producers to move further and further afield in search of land for purchase or rent and has caused a fragmentation of holdings.

Fragmentation of holdings may create considerable difficulties for producers. This can be illustrated by the difficulties experienced by a dairy farmer in operating a quarter section of land fifteen miles from the main farm. At the time of purchase approximately twenty-five acres were cleared while the rest was heavily wooded and marked by three large sloughs. The land was marginal, with a soil rating of four, or poor to fair arable (Alberta 1963). In the course of a single summer eighty to ninety acres were cleared, bringing the total available for cultivation to

approximately 110 acres. From 1970 to 1973 approximately seventy acres were used for hay, a mixture of timothy, alfalfa, and broam, while twenty acres were used for wheat and the rest for pasture.

Over the three-year period the diary farmer was never able to perform field operations adequately. In the first year a failure to apply fertilizer contributed to a low yield of approximately ten bushels per acre or less. The following year he did not apply herbicides, with the result that he had a high yield of wild oats but another low yield of wheat. In the third year, the crop was not harvested at all because the cows he kept in the pasture had continuously broken out, both trampling and eating the grain. Furthermore, he was never able to finish harvesting the second cut of hay, and bales were left lying in the field, hindering the following year's operation. Moreover, one of the years he failed to collect bales from the field and he was faced with a shortage of feed at a time when prices rose from $0.45 to $1.50 per bale. Finally, he experienced continuous difficulty in looking after the livestock he kept in the pasture.

From the producer's viewpoint the distance of the additional land from the main farm was the cause of the difficulties he experienced. Moving equipment between the two locations consumed a considerable amount of time, and, in addition, the situation was complicated by local variations in weather. On several occassions, for example,

he would move equipment from the main farm on the basis of conditions there, only to arriye at the new land and find that the wheat or hay was too damp to cut, combine, or bale, etc. Because of the time taken to move equipment, it was often left on the new land at a time when it could have been used more effectively elsewhere. His resolution to these problems was the sale of the land and a reluctant decision to become dependent on other producers as a source of feed.

It has to be recognized that the difficulties associated with fragmentation of land holdings are not explicable simply in terms of distance. In the example mentioned, distance was critical because of the heavy existing demands of the original operation. The producer believed that if the land had been closer to his existing holdings he would have been able to farm it successfully. At the time of purchase such land was not available to him at a price that he could afford.

Fragmentation and its attendant difficulties are experienced by many farmers. The problem is exacerbated by the withdrawl of land from production for acreages. Some producers have started to adapt to this shortage by further specialization. For example, instead of attempting to be self-sufficient in the production of feed, livestock and milk producers have started to purchase it from other producers. Another alternative that is considered by farmers is the sale of their land at inflated prices and the purchase

of a more viable unit in an area where land prices are lower.

The ownership of land under a system of capitalist production means that it only becomes available for expansion if it is sold or rented. Given the pattern of land settlement, land expansion by producers necessitates that smaller producers abandon farming. Cost-price conditions which force producers to expand are the same conditions that undermine the viability of smaller farmers, forcing them to forego ownership of their land. In the area of study the process has been modified by close proximity to an urban labour market and the more recent use of land for acreages. Consequently, under a system of private ownership, producers have to watch land go out of production because they cannot afford to buy it.

A final point is that even if land could be easily acquired through purchase or rental agreements it would not be a sufficient means of maintaining the existence of a class of independent commodity producers. Permanent cost-price pressures subject the operating margins of producers to continuous downward pressure. Land expansion may facilitate higher output, but unless costs are continuously reduced to compensate for this pressure, operating margins will continue to decline. In other words, a point is reached when the productivity of labour must be increased if incomes are to rise. Land expansion may improve productivity to some extent if natural fertility of the newly acquired land is higher than land already under

production or if there is over-capacity in equipment. However, the gains from this source will eventually be exhausted and changes which will increase labour's productivity will become necessary.

3. Changes in the Technology of Production

Farming in the settlement period was labour-intensive although mechanization in agriculture had been underway since the 1830's-40's. The major source of power was the horse, but in instances where farmers lacked the funds to purchase one they used oxen. Consequently, all field operations--ploughing, harrowing, seeding, swathing, binding, stocking, hauling--were done with horse-drawn implements. It was only in threshing that an alternative source of power, steam, was in use, though there were instances of settlers using a cradle and flail. In other areas vital to the survival of the homestead, production was carried out by hand. Buildings were rudimentary, consisting of materials that could be secured locally from the environment. For instance, dugout shacks consisted of a pit three to four feet in depth with walls of sod two to three feet high. Beams placed over the walls were covered in hay and topped by a layer of sod. Other sod roof shacks were built of wood and chinked with mud. Fuel for heating and cooking was wood, which, like the building material, had to be cut by hand axe and hauled by horse or oxen.

The limited technology available in the homestead period is reflected in the equipment brought by early settlers. For instance, a family arriving from Dresden, Ontario, in 1893 had among their possessions: two mares and a stallion, neck yokes, reach for wagons or sleighs, plow and harrow, and axe handles (Ardrossan 1972:165). Also included were a cow, sheep, hens and rooster, as well as household necessities. Another homesteader arriving in the area in 1918, who had previously been farming on poor soil near Leduc, brought horses and horse-drawn implements which included a sleigh, binder, plough, harrow, seed drill and disks.

Horses were the basic source of power for field operations and transport. A consequence of this was that land had to be reserved for pasture and, when the supply of hay was reduced because of settlement, land had to be put aside for the production of greenfeed. The use of land for greenfeed and pasture for horses seems to have been a factor in restricting the number of cattle that were kept.

More significant is the limitation on the productivity of labour imposed by horse-drawn implements. The physical limitation of the capacity of draft animals set limits on what could be accomplished by the labour of one man. Horses were only able to work for eleven hours, with a rest and feeding time of one and one half hours at midday. This involved more labour time as the horses had to be

unharnessed, rubbed down and fed in the evening. During the eleven hours spent in the field it was possible, under good conditions, to cultivate five or six acres. The cultivation of 160 acres, therefore, would take a single producer, operating at six acres per day, 26 2/3 days or 293 hours. Obviously, a large producer would need considerable labour input. For example, the largest producer in the area during the 1930's, in fact, one of the largest around Edmonton, farmed 900 acres, 300 of which were summer fallow. In order to operate this land he had to hire between five and seven labourers.

Breaking new land also absorbed a considerable amount of labour time. A producer moving into Rossan in 1918, for example, purchased three quarters of a section of which only twenty-nine acres were broken. Using horses, the labour of two sons and one or two hired men, he was able to clear between thirty to forty acres per year. In all, it took twelve years to clear and break his land, and part of this was done by tractor.

A major innovation in farm production was the development of alternative sources of power, particularly the tractor. The first tractor, a 16-30 Oil Pull Rumley, arrived in the area in 1920 and was used for breaking sod. Horse-drawn implements remained prominent through the 1920's and 1930's, and it was not until the late 1940's that work horses were completely replaced by tractors. Initially, tractor size was small, averaging forty to fifty horsepower

in the early 1950's but by 1974 these had largely been replaced by tractors of 90-130 horsepower. This has been accompanied by changes in the size of implements.

The result of the adoption of tractors and their steady increase in size has been a tremendous saving in the amount of labour entering into production. It was mentioned above that one man operating a team of five or six horses for eleven hours per day was able to cultivate five or six acres. This contrasts with the 50-60 horsepower tractors of the early 1950's which, drawing an eight foot implement, were able to cultivate five to seven acres per hour. In other words, an hour's work on a tractor was equivalent to eleven hours spent in the field with horse-drawn implements. In eleven hours it became possible to cultivate between fifty-five and seventy-seven acres instead of five. The trend toward larger tractors has led to further reduction in labour time as 100 horsepower tractors are able to cultivate ten to fifteen acres per hour. (These figures vary with soil conditions and topography, of course.)

A further advantage of tractors is that they do not have to be rested at noon but can run as long as an operator is available. Hence, it is common for farmers to work continuously for sixteen to eighteen hours during critical periods in spring. With a large 100 horsepower tractor this makes it possible to cultivate 160-270 acres per day. The result of this increase in productivity and

in the length of the working day is that a single producer can handle larger amounts of land than did the large producers in the 1940's.

Another area in which considerable labour saving has occurred is in harvesting. Though some threshing was done with a flail in the 1890's this seems to have given way very rapidly to steam driven threshing machines which in turn were replaced by gasoline-run threshers by 1910. The latter change saved a considerable amount of labour because it was no longer necessary to haul wood and water. Initially, while fields were still small, harvest operations involved cutting grain and stacking it in the barnyard to await the arrival of threshing crews. When fields became larger the threshing was done from stooks which were left in the field.

A considerable amount of labour was required during harvest. Prior to threshing, harvesting operations involved swathing, binding and stooking. Because threshing was done from stooks, crews as large as sixteen to eighteen men were needed to keep machines working full time. A twelve-man crew, for instance, needed two men on a machine, two in the fields, and eight men hauling the grain to the machine. In addition, considerable labour was expended by the farm family in feeding the large crews.

The arrival of the self-propelled combine has completely revolutionized harvest operations. The first task during harvest is cutting the grain and leaving it in

windrows with a self-propelled swather. Following this, a combine moves over the field picking up and separating the grain and either spreading the straw or leaving it in rows. Grain is collected in tanks on the combine and then transferred to a truck for "hauling" to storage bins. From the latter it is eventually taken to elevators or cleaned and retained as seed. Following combining, the straw is baled and stacked.

In contrast to the pre-war period, harvest operations can now be done entirely by a single operator. Consequently, there is a considerable saving of labour as large threshing crews are no longer required. The variety of operations still leaves room for a division of labour to occur because operations such as swathing, combining, hauling grain and baling could be carried out at the same time. However, because farmers lack the income to hire labour, the extent to which this occurs tends to be restricted by the availability of family labour, the occassional cooperative arrangement, and custom work. When there are no sons or daughters available to help during harvest the common practice is for the farmer to operate the equipment in the field while his wife hauls and stores the grain. However, in instances where the male has been incapacitated, females involve themselves in field operations. Where sons are old enough to handle equipment, the division of labour may be extended during harvest so that operations are carried out simultaneously.

Since the arrival of the first combines in the area during the early 1940's harvest methods have changed drastically. By 1951, farmers still relying on older methods found it impossible to get their threshing done, and were obliged to either purchase a combine, perhaps cooperatively with other farmers, or to get their combining done on a custom basis.

It is not solely in field operations that technological change has allowed considerable saving of labour. For example, in dairy farming, larger barns, automatic milking machines, storage facilities and improved feeding techniques have allowed farm families to continuously milk from thirty to fifty cows. Moreover, they have been able to do this while producing the bulk or all of the necessary feed.

In general, it is these advances in the technology of production that have provided the means by which the organization of production has been transformed from the labour-intensive homestead into the capital-intensive family farm. This is seen in the changes that have occurred in the area of study. The original pattern of diversified family enterprises employing a heavy input of family and hired labour has given way to larger more specialized enterprises operating with a considerably reduced supply of labour. This change has been made possible by the complete displacement of a technology based on the draft power of animals in all phases of productive activity.

There are considerable discrepancies in size and degree of mechanization between productive units. Yet even the smallest producers have sought to adopt technological innovations. One of the smallest producers, for example, started farming with horse-drawn equipment on one quarter section of land in 1948. In the following year, with a loan, he was able to purchase a small tractor. Since then he has lacked sufficient income to purchase any new equipment, but has tried to improve his operation by purchasing used equipment. This practice has disadvantages due to frequent breakdown of equipment; nevertheless, it is a common practice among smaller farmers. (This practice is discussed more fully in the following chapter.)

In the previous chapter, it was established that under contemporary conditions of production in capitalist society, the class of independent commodity producers in agriculture is confronted with continuous cost-price pressures. It was further pointed out that if this class is to survive, individual productive units must, therefore, continuously make changes in the organization of production to compensate for cost-price pressures. To this it can now be added that the only changes in the organization of production which, in the long run, can compensate for these pressures are those which increase the productivity of labour. In particular this means that because increases in the amount of labour time and the input of land are insufficient to

counteract cost-price pressures in the long term than changes must be made in the technology of production. In other words, there is a structurally induced necessity to adopt innovations in the technology of production and thereby increase the productivity of labour.

It is this selective pressure that exerts hegemony over the development of the rural world. The results of this pressure, the outcome of the varied individual responses to these conditions, are the changes which are characterized by the development of the modern capital-intensive family farm from the labour-intensive homestead. These changes are seen in the area of study. Moreover, all farmers in the area of study, whether large or small, full-time or part-time, and no matter what commodities they produce, recognize the necessity of continuously changing the technology of production. (This is discussed more fully in the next chapter.) In fact, the major source of discontent is that despite having made these changes in the past they see themselves as no better off. By the time the debts incurred for expansion are paid for they are back where they started. That is, they end up with worn out machinery and the necessity of replacing it. In this vital respect they are faced with the same imperatives as capitalist enterprises in which the necessity of accumulation forces them to perpetually revolutionize the

means of production (see Marx 1972).*

E. Summary

It has been seen that the organization of farm production has undergone considerable change since the days of the labour-intensive homestead. In the area of study, the labour-intensive diversified enterprises with their high degree of self-sufficiency, which characterized production prior to the 1940's, have given way to capital-intensive units specializing in the production of one or two commodities. The size of productive units has increased, and the limitations on productivity imposed by a technology reliant on draft animals have been removed by the adoption of alternative sources of power. Changes have not been uniformly followed; however, even the smallest producers have participated in the process. With respect to these changes it is important to observe that they have occurred within the framework of the independent commodity form of productive relationship.

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*This statement has to be modified under conditions of monopoly capitalism. Schumpeter (1965), for example, stresses the unabated competition of monopolistic enterprises in areas other than price competition. On the other hand, Baran & Sweezy (1968) point out the conservative policy of monopolies with regard to making radical changes in the means of production. This latter position is supported by the evidence mentioned in the previous chapter concerning the implement industry.

Of fundamental importance to the reproduction of the class of independent commodity producers is the inter-generational transfer of productive units. The personnel who make up the new generation of producers are the sons of farmers who develop their aspirations and learn their skills within the context of the farm family. Aspirations and skills are of little value unless the material basis for the development of new productive units is provided. Traditionally, as was shown, this occurred through processes of fission and succession, though it is the latter that now seems to predominate. Successful continuation of these processes depends on the ability of the original productive unit to generate and save a sufficiently large portion of income to provide the basis for the emergence of new enterprises. A growing inability to do this is reflected in the failure of the process of fission to operate successfully, and in the fact that marginal farms are unable to provide for either fission or succession.

In the previous chapter it was established that under contemporary conditions of production in capitalist society producers must continuously make changes in the organization of production. Unless changes are made, cost-price pressures will reduce income below the cost of production. A variety of changes can be made by individual producers which will facilitate their personal survival, but unless they lead to higher output at lower cost then the survival of the class will be jeoparadized. From the discussion, it was

established that changes in the input of land and labour are insufficient to compensate for cost-price pressures. (Other possible changes are discussed in the following chapter, such as reducing personal or productive consumption, but these two are also ineffective.) Consequently, it is only the adoption of changes in the technology of production that offers the possibility of overcoming cost-price pressures. As a result, it may be said that changes in the technology of production are a structurally induced imperative for the continued existence of the class of independent commodity producers. It is changes in the productivity of labour, brought about by the adoption of new technology, that have facilitated the development of the modern capital-intensive family farm from the labour-intensive homestead. Moreover, as these changes have been necessary for the reproduction of the class, it can be stated that the structurally induced imperative exerts hegemony over the transformation of the rural world.

CHAPTER SIX

FARM PRACTICES OF INDEPENDENT COMMODITY PRODUCERS: A RESPONSE TO THE SOCIAL CONDITIONS OF PRODUCTION

A. Introduction

In general terms a pattern of farming has emerged in the Kossan area which can be characterized as conservative and risk-minimizing. This is what Bennett, in his study of Saskatchewan farmers, refers to as an "averaging game" (1969:126-7). It involves an attempt to adopt innovation and to expand production slowly while reducing the risk of rapid alienation from the means of production. Complementing this are patterns of practices, such as the reduction of productive conversion, which limit the output and productivity of individual enterprises. They are practices which undermine the viability of the enterprise and threaten to result in the eventual loss of ownership of the means of production.

These patterns, especially those with dysfunctional consequences, are the very ones likely to be labeled "backward" and understood as the product of tradition. This position was criticised and rejected in Chapter Two. In this chapter the criticisms are furthered by showing that the "backward" patterns do not indicate the persistence of a traditional culture. Instead, they reflect the ongoing response of independent commodity producers to the evolving social conditions of production. To the extent that these

patterns have their counterpart in the past, they are indicative of the persistence of conditions which generate underdevelopment. Put differently, regularities in behaviour which appear as persistent cultural patterns occur because of the underlying continuity of the social conditions of production confronting independent commodity producers.

It has been shown that the social relations of production incorporate farm producers into an economic structure dominated by the capitalist mode of production. The class position of independent commodity producers exposes them to continuous structural pressures which have to be met by changes in the organization of production. In particular, the continued existence of this class under contemporary conditions of production can only be achieved through continuous changes in the technology of production which facilitate increases in the productivity of labour and output. In this way structural pressures exert hegemony over developments within the class of independent commodity producers.

In Section B analysis of the conditions of production determined by the class position of independent commodity producers is completed. Particularly, attention is turned to the vulnerability and risk associated with independent commodity production. Specific reference will be made to the way the effects of natural hazards and disability are focussed on productive units.

Individuals have no choice because as independent commodity producers they have to accept and respond to these structural pressures to ensure their own survival or the transfer of resources to a new generation of producers. Collectively they may struggle to change these conditions, but as individual producers they are constrained to accept the historical conditions of production laid down before them.

This points to the concern of Section C which is to examine the farm practices that have emerged in the area of study. In particular, it will be shown that the conservative, risk-minimizing pattern of farming and dysfunctional practices that characterize it reflect the pragmatic response of producers to the social conditions of production.

B. Structural Vulnerability and Risk in Independent Commodity Production

1. Introduction

Variations in agricultural output are subject to considerable fluctuations in any society. However, the way the effects of these variations are felt will depend on the social organization of farm production. Under capitalist conditions of production the effects of variations in income have to be borne by the productive unit in isolation. Private ownership of the means of production is at the same time ownership of the product of labour. Consequently,

the effects of production or non-production are for the individual independent commodity producer alone to bear. Under these circumstances the agricultural production of independent commodity-producers in capitalist society is characterized by a high degree of risk.

A significant consideration in this respect is the price instability which confronts individual producers. The effects of this have already been mentioned in Chapters Four and Five and will therefore not be discussed further at this point. However, it is worth reiterating the point that under such conditions planning is difficult because there is no means of determining the net income that can be generated by a year's labour. Moreover, for individual producers such fluctuations may make the difference between survival and failure. Low prices may result in an inability to cover costs and to acquire the income necessary for continuous production. The point is that independent commodity producers own the product of their labour and have to bear the effects of price fluctuations from their own resources.

2. The Effects of Natural Hazards on Producers

It is not only price fluctuations that confront producers as a problem which threatens the very basis of their existence. The difficulties and risks associated with farm production are further compounded by such factors as

illness, disease in crops and livestock, variations in land quality, and weather, etc. These, it might be concluded, can simply be seen as "acts of God" whose effects are randomly felt by producers operating under any system of production. From one perspective this is correct; nevertheless, there are social dimensions of these difficulties, for the way the effects are felt will vary with the social nature of agricultural production.

There are a variety of natural hazards which producers have to cope with if they are to continue production. Variations in weather, such as a wet spring or fall, prevent producers from working in the fields; variations in moisture levels and the amount of sunlight affect the quality and therefore the price of crops; heavy spring rain may wash out newly seeded fields while late summer hail may destroy crops immediately. Other forms of natural hazard experienced in Rossan are, for example, the decimation of sheep, especially lambs, by coyotes, the loss of grain to migrating geese, the loss of livestock due to diseases such as arthritis and mastitis.

As mentioned, under contemporary conditions of production the independent commodity producer has to bear the risks associated with production. For instance, a dairy producer who loses a cow from production through contraction of mastitis has to pay the cost of replacement. Moreover, under the present system of supply management in the dairy industry the farm producer loses part of his

quota, his right to market milk, if production drops below the level specified in his contract. This means that he has to replace cows lost from production immediately, despite any hardships that this might incur and despite the fact that he may have replacements that are very close but not quite ready to enter production. The processor remains unaffected by the difficulties individual producers might face. Moreover, if the processors are oversupplied they have the right to reduce the price individual producers receive for part of their quota.

A similar situation exists in the sale of hogs. These are sold on the open market but the producer is paid on the basis of the weight and backfat content of the carcass. More to the point in this context is that if a carcass is found to have arthritis, for example, then that part of the carcass is discarded, or perhaps the whole carcass is discarded; and the payment to the producer is reduced accordingly. This means that the producer has unwittingly invested money in feed and facilities for four and one half to six months for which there is no return. The producer has to take this risk and pay the consequences.

Steps can be taken to alleviate the effects of these hazards through insurance policies and by adopting preventive measures where they are possible. However, these actions increase the cost of production and therefore depend on the resources available to the producer. Cash

shortages experienced by producers adversely affect their ability to handle difficulties of this sort. This means that any of the hazards may critically affect the ability of farmers to continue production.

3. The Effects of Illness, Accidents and Aging on Producers

The social conditions of production in capitalist society also determine the manner in which illness, accidents and aging are felt by independent commodity producers. Disability of any sort may critically influence production because of the limited supply of labour available to producers. (The limited supply of labour is discussed in Chapter Five.) In capitalist enterprises the effects of disabilities incurred by workers do not threaten production because their labour power can always be replaced. The independent commodity producer, on the other hand, has to rely on the voluntary help of relatives and/or neighbours to overcome a labour shortage imposed by disability. If such help is not available, the farm family is faced with the prospect of being forced out of production.

Production is organized on the basis of individual units whose survival depends on their ability to complete their own work. This limits the amount of help that producers can extend to others experiencing difficulty. They cannot simply forego their own productive activity to help other producers, for their own livelihood is involved.

This difficulty is especially acute during spring and harvest because producers, in response to cost-price pressures, tend to remain in the fields as long as conditions and their endurance allow. The result may be a sixteen- to eighteen-hour day, which makes finding time to help others extremely difficult. This is further compounded for those producers who are selling their labour power on a full-time basis. The aid farmers can offer to their relatives or neighbours is dependent upon their own work being completed. Moreover, any delay this entails increases the likelihood of inclement weather adversely affecting production.

Despite such difficulties help is extended. In a recent incident a farmer nearing the age of retirement was prevented from working when he developed two hernias. His daughters had left home and his wife was unable to operate the machinery; therefore, there was no available labour within the nuclear family for cultivating or harvesting. Relatives and neighbours cooperated in doing all the field work for him that year, spending any spare time they could find from their own work to help. Nevertheless, without a long fall this would have been impossible. The producer did not recover sufficiently to return to farming and therefore he was obliged to abandon production the following year. His land was rented to another farmer and he became dependent on full-time employment in Fort Saskatchewan.

The necessity of maintaining production encourages farmers to continue with production despite disability. Thus, one producer whose ankle was broken by a bull jumping a fence still did all his field work. This was done despite the fact that he had to go back to the house and rest every hour. Another producer was spending eighteen hours per day seeding despite having an injured shoulder and bronchitis. He was completely disabled for several weeks after this and nearly contracted pneumonia. Still another producer consistently operates a tractor despite a disability resulting from a war injury which persists in causing dizziness and blackouts.

Given the nature of production, the social consequences of disability are focussed on the individual producers alone. Not only do they have to endure the immediate disability, but they are faced with the prospect of the loss of their livelihood unless production continues. This forces producers to adopt behaviour which is clearly injurious to their health, and which eventually may compound their difficulties.

A further dimension to this problem is the constant exposure of producers to the dangers associated with the operation of farm machinery. Records are not kept and until the 1968 Royal Commission on Farm Machinery no study had been done on farm-associated illnesses. However, it takes little contact with farmers to realize that they suffer a variety of ailments associated with their

productive activities. The range of disabilities experienced is considerable and includes broken limbs, lacerations, knee and back injuries and deafness.

Some of these injuries could be avoided if more precautions were taken by the operators of farm machinery. On the other hand, there are some areas of disability, for instance, noise levels which contribute to deafness, continuous vibrations which contribute to joint and back ailments, in which the operator is powerless to do anything about them. Remedies can only be achieved through improvements in the design of equipment that takes into account the health of the operator (Canada, Royal Commission on Farm Machinery 1968). There have been recent improvements in design, such as the provision of a cab and roll bars for tractors, but such items tend to be extras which have to be paid for by the farm producer. In this respect, the viability of the farm is significant, because if the producers' income is low, it is unlikely that they will be able to afford the luxury of protecting their health, that is, protecting their health from the effects of machinery which could have been more appropriately designed in the first place. Farmers, especially those on low incomes, are therefore obliged to work with labour-saving machinery injurious to their own health and which may become a significant factor in influencing their ability to farm.

Finally, aging also becomes a problem under capitalist

conditions of production. As producers approach the age of retirement they are less able to perform the operations necessary to maintain their livelihood. This is especially significant when it is recognized that cost-price pressures encourage producers to expand production to the limits of their capacity. As they get older it becomes harder to maintain the same work load. Therefore, activities are reduced and incomes decline. Producers from this group become prime candidates for becoming part of the rural poor. Moreover, it is producers in this group who are least able to leave farming for they find it difficult to find a place in the urban labour market.

Two producers in the Rossan area face this problem. Farming one quarter and one half sections of land with ancient machinery and inadequate buildings, their product income never exceeds $5,000. They lack the resources to make any improvements on their farms, regarding $200-300 as a large outlay. Both have searched for full-time employment in the urban labour market but neither have been able to obtain it. Instead they are obliged to accept casual manual labour whenever it is available. In one case, the producer was able to obtain work for two consecutive years at a liquor store but the opportunity for tenure was denied him because of age. Both farmers recognize that they are among the last to be employed on jobs and among the first to be laid off. In their present

situation there seems to be no means by which they can increase their income.

The situation of agricultural producers generally is subject to hazards which, under any system of production, may render the season's work pointless. However, the consequences of setbacks in production will vary with the way production and distribution are organized in a society. In this respect, it can be said that the situation of independent commodity producers is characterized by a high degree of risk, which is a consequence of their structural position in capitalist society.

Independent commodity production entails ownership and operation of the means of production; as a result, producers own the product of their labour. Consequently, production and non-production are for the individual producer to bear. It is because production is structured this way that the effects of setbacks, resulting from natural hazards, illness, etc., have to be absorbed by the productive unit in isolation. Consequently, the way production is organized creates a situation of considerable risk for the individual productive units, as any setbacks may threaten their very existence.

C. Farming Patterns of Independent Commodity Producers

1. Introduction

Attention in this section is turned to the farming

practices adopted by producers in the Rossan area. This will include a discussion of the practices of conservative, low-risk expansion, mixed farming, and the adoption of a work-farm pattern of farming. In addition, the dysfunctional practices associated with these patterns and how they undermine the viability of productive units will also be discussed.

It is argued throughout that the practices adopted by producers are not the product of traditional consciousness. Rather, they are seen to be generated by the social conditions of production. In particular, they have developed in a situation characterized by a high degree of vulnerability and risk, and in which it is necessary to continuously increase output and productivity if reproduction is to occur.

In examining farm practices in the area of study it has to be noted that there is considerable diversity between operations. Product income ranges from less than $5,000 to over $50,000, and the range of commodities produced varies considerably. Although such variations point to significant differences between productive units, the social conditions impinge equally on all producers. However, differences in the organization of productive units and in the resources available to producers affect their ability to cope with these conditions. The significance of such differences will be indicated wherever it is considered relevant.

2. The Practice of Debt Minimization

Behaviour easily equated with the persistence of "traditional" attitudes is a widespread, verbally expressed reluctance on the part of producers to incur heavy debts. This reluctance is expressed in such statements as "Why should I spend my time working for someone else," "I want to be able to sleep at night and know that I will still own this place in the morning," and "I do not want to run the risk of losing my shirt." Producers who are in debt express similar sentiments, believing that the interest rates they pay are too high and that others are gaining the benefit of their labour. Despite the verbally expressed antagonism practically all producers have incurred debts at some time, either for the purchase of land or machinery. However, in practice there is a tendency to minimize debt and seek alternative means of expansion.

To simply assign the practice of minimizing debts to an outmoded tradition ignores the situational rationality of such behaviour. It was pointed out that the conditions under which producers operate are characterized by a high degree of risk. As owners and operators of the means of production, farmers have to bear the consequences of both production and non-production. Any variations in income, whether due to weather, price or cost changes, etc., have to be borne by individual productive units. Consequently, if a producer decides to expand production and does this

through obtaining loans, he is making himself more vulnerable to failure because payments become a fixed part of costs until they have been liquidated. Fixed interest rates guarantee returns for the lender regardless of fluctuating farm income.

In controlling debts the expectation is that the productive changes facilitated will increase income sufficiently to make repayment possible. Nevertheless, given the risks entailed in farming, any setback experienced by a heavily indebted producer may be crucial. Failure to meet payments could result in complete loss of livelihood, alienation of the means of production and proletarianization. Widespread awareness of this danger stems from personal experience over the years of irrational, unpredictable movements in prices, variations in output due to the weather, problems associated with illness, etc.

In addition to their own experience farmers learn from the example of those who have gone into debt and experienced difficulties. Thus, all can point to the example of a producer in a neighbouring district who "lost his shirt." In this case the farmer entered barley production on a large scale, farming five and one half sections of land which was partly rented and partly purchased through a loan. In addition, he was in debt for the new machinery he had to purchase to farm this land. Unfortunately, expansion occurred as barley prices fell from $1.05 to $0.87 per bushel. Because fixed costs were so high and could

not be covered out of his returns, he was obliged to sell most of his land and return his machinery. He managed to retain only one quarter section of land and insufficient machinery to farm it, and was obliged to start selling his labour power on a full-time basis. The observation of other producers was that "He did it just like the economists say" and still he failed. In other words, an attempt to become a large and "progressive" farmer failed, not because of any lack of initiative or entrepreneurship, but because planning by the individual was thwarted by an unplanned, uncontrolled decline in price. If he had chosen 1973 to make this expansion, the results would have been very different as prices again began to rise.

In contrast, other producers who also incurred losses when barley prices fell were able to escape the extreme consequences of loss of ownership because their fixed costs were relatively low. In one instance, the producer had taken over his father's farm in 1964 and was cropping 640 acres. He produced only grain and followed a rotation of wheat-barley-barley-summer fallow, the latter being used as a method of weed control rather than moisture conservation, although when prices were high he cropped continuously with the aid of fertilizer. This producer had been farming on a full-time basis for four years when barley prices fell, an effect in this case compounded by a poor quality crop. Because his debts were low he was able to retain ownership of his land and machinery but nevertheless

had to take a full-time job. However, he believes that he would have been able to remain farming on a full-time basis if it had not been for the higher consumption needs of a growing family. Eventually, when his children leave home, he expects to become a full-time producer once more. The solution is not considered to be particularly desirable, but it does provide the producer with some hope for the future.

The practice of minimizing debts is not simply a product of experiencing or observing the effects of debt on others. It also reflects the difficulties independent commodity producers have in raising capital (see Chapters Three and Five). Practically all producers in the area have incurred debts to purchase land, the exception being three instances in which the transfer of resources between generations was by succession and the amount of land proved to be adequate for farming. Debts incurred in purchasing land, usually financed by the Farm Credit Corporation, range from approximately $3,000 to $16,000 depending largely on the date of purchase. This does not imply a traditional reverance for the land; rather, ownership is seen as contributing to security, ensuring that a vital resource is continuously available for production. This is particularly important in the present situation of land shortage in which ownership is the only way to guarantee permanent use. Ownership also contributes to a degree of security, especially in old age, as land purchase entails a "savings"

that can be realized at a later date, for while equipment and buildings depreciate, land retains and increases its value. This is especially true in the Rossan area where inflated land prices have encouraged the retention of land on a speculative basis. Consequently, with the exception of one small producer on forty acres of rented land, all producers own or are in the process of purchasing all or part of the land they operate. This does not mean that total ownership is always sought. Rental and share-cropping arrangements, arrangements in which one third of the crop is paid to the owner, are commonly accepted by larger farms and are used as means of expansion without increasing debts.

A dysfunctional consequence of purchasing land is that it absorbs capital that could be used to purchase equipment which could raise the productivity of labour. In this sense the purchase of land could be labelled retrogressive, the persistence of behaviour inappropriate to the present context of farming. Farmers, in fact, occassionally give capital saving as a reason for renting land instead of purchasing it. However, a significant point to bear in mind is that ownership of the land is prerequisite to obtaining much of the farm credit that is available. That is, producers must gain ownership of land to provide a basis for obtaining the credit necessary for expansion, yet the process of purchasing the land undermines their ability to retain savings that could be invested in capital equipment. The importance of owning land is reflected in

the point made by the Federal Task Force on Agriculture, namely that "Traditionally, farm lending institutions, both public and private, have depended almost exclusively on the value of assets owned by the potential borrower as the basic criterion of his eligibility for a loan" (Canada 1969:354). Under these circumstances the advantages of succession over the process of fission in the establishment of viable productive units can be understood (see Chapter Five). The producers who have invested the g[illegible]ount of capital in equipment and buildings, up to $35,0[illegible] have taken over the family farm through succession and have not been involved in the purchase of land. Other producers have gone into debt purchasing land and have experienced a credit shortage. In their view, the only time credit is likely to become available is when they have too much money to need it, or consider themselves too old to take advantage of it.

3. Balanced Expansion and the Reduction of Productive Consumption

Recognizing the effects of cost-price pressures, farm producers do seek to increase the productivity and output of their enterprises. The opportunity to do this and the way it can be done are limited by the resources available to the producer and the nature of their productive organization. The expressed ideal, a reflection of limited resources and the risks involved, is for expansion to occur

gradually. For example, a means of slow, continuous expansion is through the purchase of equipment over a given period of time. This is particularly the case with tillage implements which producers consider should be replaced over a five-year period. The cycle is started with the purchase of a larger tractor, which is paid for on a cash basis through short-term bank loans, or loans from the implement industry. Tillage implements, such as cultivators, diskers, seeders, which are now undersized, are replaced at yearly intervals or sooner if surplus income is available. This means that for most of its working life the capacity of the tractor is underutilized. However, the practice does allow a steady increase in productivity to occur while minimizing the level of indebtedness.

Cyclical replacement of equipment is an ideal that is seldom achieved in practice. The time taken to renew tractors, for instance, ranges from two years to over twenty-five years. The possibility of meeting this ideal depends on the resources available to the producer and the conflicting demands of the enterprise. Circumstances of different producers vary, but even where investment has been high, the structural conditions of production in conjunction with the imperatives of particular enterprises exert a constraining effect on investment decisions.

An area in which investment in machinery and equipment has been high is in dairying. The four dairies have in-

vested in refrigerated bulk tanks, automatic milking equipment, the extension and construction of barns, and quotas (the right to ship milk to the processors under the system of supply management that exists in the dairy industry). For the producers concerned this has entailed contracting debts of $15,000 to $35,000 for capital equipment. In all cases, the opportunity to enter dairying was only possible because the producers were able to take over their parents' farm through succession. This meant that they did not have to incur debt to purchase land and were able to use their land as the basis for raising the capital necessary to initiate production.

Supply management controls price but not costs. Therefore, the dairies are confronted with the same structural pressures as other producers. Consequently, since the dairies entered production in the mid-1960's, they have been under pressure to consistently increase their productivity and output. In order to raise output dairy producers have found it necessary to increase their investment rapidly in selective aspects of their enterprises. These changing investment requirements can be illustrated by the example of Paul Freeman, a dairy producer who increased the number of cows he was milking from twenty-five to forty.

The first point to be made is that the basic herd size necessary to maintain a particular level of production is considerably higher than the number of cows being milked.

Replacements have to be available when cows are calving. Failure to allow for this would not only reduce income on a temporary basis but would also force the producers to forfeit their part of the quota that could not be filled. In this respect, it may be added, if a cow is lost from production due to death or illness it has to be replaced immediately even if this entails purchasing a new one, which it normally does. In addition to immediate replacement, heifers have to be kept for the eventual replacement of cows already in production and for any expansion that is contemplated. Consequently, raising the number of cows in production from twenty-five to forty required that the basic herd be increased from fifty-five to approximately ninety.

An immediate result of this increase is that Paul was faced with the problem of meeting the increased feed requirements. Because the demands were already high there was no opportunity to significantly increase the amount of time spent on field operations. Consequently, because he wished to remain self-sufficient in the production of feed, and thereby gain a degree of protection from cost pressures, he decided to abandon hog production, which had been a secondary but significant source of income. In doing this he became more specialized than considered desirable but was able to maintain self-sufficiency in feed. To facilitate feeding with a minimum of labour Paul kept his cows in an open plan barn during the winter. Each

animal had its own stall which it was free to leave at any time to feed and drink in a central feeding area. This saved labour because feed did not have to be taken to individual stalls. An increase in barn size was necessitated by the changing size of the herd. However, this was achieved at minimum cost because Paul, a skilled carpenter, was able to do all the work himself and to make use of secondhand building material.

Because it was impossibly time consuming to milk forty cows by hand, it became necessary to utilize methods which would simplify this labourious task. To this end, a milking parlour was built and the process of milking was mechanized. The milking parlour was arranged into two parallel rows, approximately six feet apart and separated by a shallow pit. This facilitated easy access to the udders of eight cows. When the cows entered the stalls they were fed a mixture of barley and oats supplemented by minerals. The amount was determined by the needs of particular cows and fed to them automatically.

Once the cows were in the stalls, the first step in the process of milking involved cleaning the cows' nipples (previously with hand milking the whole udder had to be cleaned) and attaching vacuum claws to them. Milk was collected in a container attached to the claws, transferred to a pail, and then carried by hand and poured into the bulk tank. Following the removal of the claws the cows' nipples were brushed with a solution to prevent chapping,

covered with cream to make cleaning easier, and dipped in a solution which prevented the development of some forms of mastitis.

Because the operation entailed carrying pails of milk to the bulk tank, it was desirable to have two people milking, usually Paul, and his wife or his father. When production expanded beyond thirty cows it was found necessary to install a pipe system which moved the milk directly from the claws to the bulk tank. This allowed a single operator to perform all the milking operations in the same amount of time that it had previously taken two. Also, it was necessary to increase the capacity of the refridgerated bulk tank because of the increase in output.

Paul felt that he had no alternative but to steadily increase production, and that the nature of his enterprise determined the areas where immediate investment was required. In increasing output Paul was able to keep his indebtedness below $15,000 because the changes were made slowly and all the building and installation of equipment was done with family labour. In addition, it was not necessary to purchase new cows because the herd size was increased through natural reproduction.

Investment demands determined by the changing nature of the enterprise cannot be avoided. Attempts are made to minimize debts by restricting the rate of expansion, acquiring used equipment, and by producers doing whatever

construction work is possible themselves. Where there are conflicting replacement needs for equipment the investment is made in the area where returns are most directly affected. Thus, the dairy mentioned above, for example, and others in the area consistently defer renewal of field implements in favour of equipment directly involved in milking operations. In turn, this creates further problems because the producer is not only obliged to operate with inadequate equipment but is faced with the need to make a larger than normal outlay to replace it when renewal becomes imperative.

The situation is further compounded for smaller producers because they are invariably in a position where practically all of their buildings and equipment need replacing. An extreme example of the difficulties faced in obtaining and replacing equipment is provided by a small producer, Robert Black, who moved into the Rossan area in 1948. In order to start farming, he purchased one quarter section of land for $2,500 under the Veterans Land Act, and an additional quarter section in 1960 for $4,500. A problem faced by Robert, and one which he still continues to face, was that the soil, an Angus Ridge Loam, suffered from excessive stoniness which made field operations difficult. This, in conjunction with a rolling topography, sloughs, and woods, meant that the quality of the 160 acres that were cleared was low. A further difficulty was that Robert, as a new arrival in the district, lacked relatives

or close friends from whom he could borrow machinery.

From the outset, low farm income has consistently been supplemented by off-farm work, Robert working as a casual, unskilled labourer in Edmonton and Fort [illegible] and his wife as a nurse in Lamont. However, while this extra income has allowed payments on the land to be made, it has not been sufficient to make heavy investment in buildings and equipment possible. In fact, the only new equipment that was ever purchased was a tractor in 1949. Since then low farm income has meant that an outlay of $300-$00 is large and stretches resources to their limits. Consequently, in attempting to improve productivity, Robert has been obliged to purchase and operate with very old used equipment, some of which was designed to be drawn by horses. For example, his most recent purchase was a thirty-year old combine which cost $100. Robert recognizes the need to expand output and increase productivity but is in a situation where all his buildings and equipment need replacing. With equipment that is inadequate and subject to frequent breakdown, productivity, output, and farm income are bound to remain depressed. That is, he is caught in a vicious circle, his low income obliging him to pursue practices that guarantee that income will remain low.

This producer and others are at a point where the continuity of production is jeopardized. By allowing all of their equipment and buildings to run down, the capital

needed to establish a viable productive unit is pushed ever further from their reach. Producers do not follow this practice by choice, for they are well aware of the dysfunctional consequences of their actions. Their own lack of resources leave them with no alternative but to adopt practices which make their own position more and more untenable.

As mentioned, the level of product income varies considerably in the area of study, from less than $5,000 to over $50,000. Nevertheless, it is found that all producers are to some extent obliged to defer the renewal of equipment. The difference lies in the alternatives available to individual producers. Larger producers may have some degree of choice in deciding what equipment is to be retained in production, while smaller producers seldom have the luxury of this choice. But even large producers are not always free to choose. In 1973-74, for example, the largest producer in the area made no returns on his investment because feed costs were high. Like his smallest neighbour he was "working for health that year."

4. Small-Scale Innovation and the Reduction of Operating Costs

Where it is possible to raise productivity without any heavy capital outlay innovations are readily accepted by all producers. To some extent this has been possible in the improvement of livestock, though the nature of the

enterprise under capitalist conditions of production may come to inhibit the innovations that can be accepted. Two aspects of livestock production, breeding and feeding, serve to illustrate the desire of producers to improve their productive units and the factors which come to inhibit such improvements.

It is apparent to all producers that advances in the technology of breeding and feeding can lead to a direct increase in their income. Hence, it is not surprising that producers attempt to put their knowledge into practice. The knowledge on which they base their activities is derived from farm journals, visits to research farms, and the practice of neighbours.

One of the dairy producers has considerable expertise in breeding, and won prizes in two provincial-wide contests in 1967. In one of these his herd was second for butterfat content, and in the other, out of 500 entries, his herd was among the top five for aggregate herd improvement. The producer reads widely on the subject and is keenly aware of the improvements that can be made and the way to achieve them. Despite being one of the largest farmers in the area, he has not been able to make all the improvements he considers desirable. He has ignored improvements in breeding practices which could be made to increase the herd's ability and endurance of standing on concrete, and to improve conversion ratios and reproductive capability. Instead, his breeding program has focussed

attention on improving the mammary system because such improvements lead to immediate gains in income. He knows what semen is best for improving the quality of his herd but at $50 per vial, despite having a product income in excess of $50,000, he is unable to afford it. Instead, he purchases $10-20 vials which facilitate only limited improvements.

Smaller producers in livestock production also seek to breed better quality animals. Again, the possibility exists of purchasing semen which could bring significant improvements in such areas as conversion ratios and weight gains. The cost of semen, occassional failure of fertilization to occur, and the time involved in the operation discourage or prevent smaller producers from practicing insemination. They do practice insemination occassionally but generally rely on the services of a bull.

An example of the gains that could be obtained through this method is provided by a farmer who started a cow-calf operation in 1965. Prior to specialization he followed the traditional diversified farming pattern which involved milking twelve Holstein-Fresians. The latter were bred to an Angus beef bull in 1965. Two years later he introduced a Hereford and finally in 1970 a Charolais. As a result of this program he has been able to raise the average weight of calves at the end of summer from 450 pounds to 650 pounds. In terms of 1973 prices this resulted in an increased income of approximately $100 per calf.

Similarly, farmers are well aware of the increase in their income by adopting better feeding programs. The advantages that can be achieved include rapid weight gains, healthier livestock, and better quality carcasses. Yet, with the exception of the dairies, the facilities of producers do not provide an adequate basis for developing such a program. For example, a small hog producer combines barley and concentrate, a mixture of soya bean, rapeseed, meat scraps, vitamins, and medication for weaners, on the basis of weight, despite being aware that the most rapid weight gains and the best backfat ratings could only be achieved by mixing feed on the basis of protein level. This producer recognizes that the advantages of scientific feeding practices can only be gained if animals are fed individually in pens. However, because he lacks the facilities to do this, his hogs take five and one half to six months to fatten, instead of a possible four and one half months. Not only do the hogs take longer to fatten; they are also unable to get the best index ratings because the level of backfat is high. The producer does improve the quality of his animals through purchasing better quality sows and through breeding, but is unable to do anything about his feeding practices without a considerable capital outlay. The same situation is faced by other small hog producers.

In addition to the restrictions imposed on the adoption of known and beneficial innovations by the limited

development of the organization of production, small producers are frequently obliged to reduce their operating costs by discarding productive farm practices. That is, as well as deferring the renewal or expansion of fixed capital, farmers confronted by a cash shortage may feel obliged to compensate for this by making reductions in expenditure on variable capital, which in turn leads to a direct reduction in income. For example, the small producer mentioned above consistently reduces, below the optimum ration, the amount of concentrate used with barley in preparing feed for his hogs. This practice which directly reduces weight gains and increases the amount of time needed before the hogs can be marketed is a consequence of a low product income of $6,000 and less. In fact, he varies the amount of concentrate used directly with hog prices.

A further example of the way small producers reduce their operating costs is by reducing or abandoning the application of herbicides and fertilizers despite recognizing that yields will be directly affected. The reasons for adopting these retrogressive practices stem directly from their situation. In one case a small producer was in the unenviable position of being unable to afford the $300 necessary to replace a fertilizer box which had deteriorated beyond repair. Nor could he afford the $250 necessary for the fertilizer itself. He saw himself in a vicious circle, needing a good yield before he could afford fertilizer,

yet unable to get a good yield without its use. In another case a producer who had been using fertilizer regularly found that his income had dropped to a level that forced him to reduce his operating costs. He considered raising a loan to finance his operation but could not see how he would be able to repay it. Consequently, the only way he could reduce operating costs and still receive some income was by not applying fertilizer. Again, this producer was well aware of the dysfunctional consequences of his actions but felt constrained to adopt a practice which he knew would further reduce his income.

Both large and small producers fail to take advantage of the many available innovations which would contribute directly to higher productivity and output. In addition, low-income producers who are faced with a cash shortage frequently reduce operating costs by adopting practices which clearly reduce productivity and income. These farmers are well aware that their actions undermine their operation by guaranteeing to reduce their income even further, but they see these actions as providing the only opportunity of remaining in production. Confronted with a lack of savings, producers forego the use of innovation which they know would increase their income. It is not the perversity of tradition that elicits such practices but economic necessity.

5. Limited Cooperation Between Productive Units

The restricted resources available to productive units and the risk involved in production occassionally lead to limited forms of cooperation. In the Rossan area the forms this has taken are conditioned by the prevailing relations of production.

It is readily apparent to producers that the high capital outlay for equipment and the shortage of labour are sound arguments in favour of entering into cooperative agreements. For example, a combine is a relatively expensive piece of equipment which individual producers use for only two or three weeks during the year. It would, therefore, seem advantageous for producers to share the expenses incurred by purchasing a combine cooperatively. Moreover, there was a tradition of sharing in the ownership and operation of threshing machines which provides a precedent for such cooperation. In fact, when combines first became popular, between 1940 and 1950, there were some instances of shared ownership, but considerable animosity was generated over the allocation of time for the use of the implement with the result that such agreements were quickly terminated. The difficulty producers have in cooperating with respect to combines is a product of technological change within the independent commodity form of production. In combining, the machine moves over the field collecting the cut grain from windrows, whereas with threshing, the grain is cut, stooked, and hauled to the machine. Grain

left on the ground is extremely vulnerable to the effects of snow as even a light covering will prevent combines from getting into the field. Consequently, combining has to be completed in a two- to three-week period to minimize the dangers of an early snowfall which would prevent the crop from being harvested. Because there were no product-sharing agreements supporting cooperation in the use of combines, it was possible for one producer to successfully harvest his crop while another, sharing the combine, would lose his. As a result, producers have sought to obtain ownership of their own combines.

The over whelming tendency has been for producers to purchase their own equipment rather than to rely on any form of cooperative agreement. There are exceptions to this. For example, ten producers formed a machine co-operative to purchase a grass seeder, fence pounder, and a stack mover. For the individual producer this provides access to equipment which is not vital or used frequently enough to justify purchasing it on an individual basis but which can save a considerable amount of labour time. As far as members of this cooperative are concerned, this was possible because the equipment involved could be shared without creating any major problems in the allocation of time. This was deliberate, and they consciously avoided purchasing equipment, such as a combine, which would create problems in its usage.

On a broader scale, in 1973-74, farmers cooperated in the establishment of a seed cleaning plant in the area. The total cost of this was to be $110,000 of which two thirds would be paid by the government and county if producers raised the other third. Initially organized by members of the Unifarm local organization this was done by selling $100 shares.

In both of these examples, cooperation is premised on the independence of farmers to pursue their own productive activities. It reflects the desire of producers to take advantage of cost-saving equipment while maintaining the independent commodity form of productive relationship. Consequently, such sharing is confined to a limited range of equipment and facilities.

There are two instances in which producers are currently involved in limited forms of product and equipment sharing. One example involves two brothers who have farmed cooperatively since 1989 and a son of one of the brothers who joined them in 1965. Cooperation between the brothers developed out of the process of fission.

Prior to their father's death one of the sons had started farming a separate unit with the use of his father's machinery. When the father died another son took over the original farm, but the practice of sharing continued. Basically, cooperation is in the purchase of machinery and its use in field operations. Expenses and labour are shared, though there is no rigid calculation of the latter,

and the product divided among the three producers. However, even in this case the extent of cooperation is limited as the main source of income is livestock which is produced and sold on an individual basis. That is, most of the field crops, barley, oats, wheat, and hay, are used as feed, though surplus is sold as an additional source of income. In effect, this means that the sharing that does occur is still oriented to the existence of independent productive units. This limited cooperation is reflected in a low level of income of individual units, $5,000 to 6,000, and in the need for one of the producers to supplement his income by driving a school bus.

In the other example, David Roberts, a producer operating a beef-grain enterprise, has entered into limited, informal agreements with his brother, a sister and brother-in-law, and a cousin. With his brother, who sells his labour on a full-time basis, in a fertilizer plant in Fort Saskatchewan, David shares ownership of a new tractor and in return for labour provides feed for his brother's cattle. Also, David keeps a small number of cattle for his sister and her husband in exchange for their labour, especially during harvest. Finally, since 1972 he has rented one half section of land with a cousin and shares the labour and expense involved in cropping grain.

David is well aware of the advantages of sharing and has attempted to persuade several producers to form a productive cooperative. Though the other farmers involved

could see the advantages of forming a production cooperative they were not prepared to enter into any agreements which entailed foregoing individual ownership of the means of production. The reasons for not doing this vary though they all seem to be rooted in the character of productive relations. A common reason given for not forming a cooperative farm is that differences in land quality and physical assets make it difficult to decide on an equitable distribution of income. The example of the cousins cooperating in grain production epitomizes the problem. They rented the land and thereby avoided any problem associated with variations in land quality. Moreover, they also rented a tractor, despite one producer's having a perfectly good one, because they could not agree on how this would effect distribution of income. In particular, David's cousin offered to pay for half of the fuel costs but would not pay anything for the depreciation of the tractor.

Producers are also reluctant to give up the freedom of action that they associate with their independence. In particular, they seek to retain their freedom to sell their land when they want to retire, their life savings in effect, and, more recently, to retain ownership of their land for speculative purposes.

The most acceptable cooperative agreements are those which are premised on the continuing independence of productive units. In this respect cooperation is seen as a means of improving productivity while minimizing costs.

These agreements allow individual producers to function more effectively without giving up ownership or control of the means of production. Moreover, even where cooperation involves some product sharing, the basic independence of productive units remains intact. The reasons given for not cooperating further are invariably practical, involving different interests which are rooted in the private ownership of the means of production.

6. Mixed Farming Practices and Their Limitations

A traditionally important means of reducing the high degree of risk associated with agricultural production is through the adoption of a pattern of mixed farming. Because of the persistence of structurally induced uncertainty, the behaviour that constitutes this pattern is continually regenerated. However, the emergence of more specialized forms of farming indicates that structural pressures are undermining the possibility of such a response (see Table 25).

In Chapter Five it was pointed out that the Rossan area was characterized by a highly diversified form of farming. Income from a variety of sources was a means of protecting individual enterprises from the price fluctuations of a particular product. In the past, this was complemented by a reduction of personal consumption which allowed savings to be channeled into investment. This practice has continued, despite rising expectations, and

TABLE 25

Types of Enterprise: Rossan, 1973

Product Type	Number	Product Type	Number
Specialized	17	Mixed	23
*Dairy	4	Beef-Grain	12
*Beef	8	Hog-Grain	4
Grain	5	**Other	7

*With one exception, dairy and beef producers attempt to be self-sufficient in the production of feed.

**This category includes farms which produce more than two commodities. These may include grain, hogs, beef, sheep, cream, turkey.

every family can talk of times when they had to "tighten their belts." This is achieved through delays in the construction of housing, doing without holidays for many years, reducing consumption of clothing, furnishings and entertainment. These practices, it may be added, are not considered to be desirable because farming is not seen simply as an end in itself.

Reduced personal consumption was accompanied by a high level of subsistence production which met most of the household's basic needs. These subsistence activities were heightened, but practically all households still [illegible] garden, which with bottling and freezing means [illegible] vegetables are available for the year (s[illegible] or [illegible]). It is commonly acknowledged by producers in the area that the management of household consumption on reduced income has been vital to the continuing existence of productive units. The continuity of these practices is indicative of the limited savings.

As a result of structural pressures the viability of family farm enterprises has been steadily undermined. The response is the emergence of more specialized forms of productive enterprise. However, structural vulnerability remains, and is in fact heightened by specialization. Therefore, it is not surprising to find that producers consciously endeavour to maintain some degree of protective diversity.

The primary forms of specialization that have developed involve livestock, for example, cow-calf, beef, hogs, and

dairy operations. In these operations a degree of protective diversification is maintained by remaining self-sufficient in the production of grain and hay that is used to feed livestock. This is done in an effort to avoid the effects of price fluctuations in these commodities which might otherwise undermine the viability of productive units. The practice of maintaining this diversity reduces the gains in productivity which may be derived from specialization, but the value of such benefits are questionable if the existence of the enterprise is jeopardized.

Farmers feel the effect of conflicting tendencies in trying to maintain their livelihood. In the first place they are keenly aware of the need to continuously increase productivity and output if they are to maintain their income. It is this which underlies the process of specialization. On the other hand, they recognize the risks associated with farming and the heightened vulnerability brought about by specialization. Their approach is to strike a balance and try to take into account both sets of demands. However, a balance at one point in time is eventually undermined by evolving structural pressures and producers are continuously obliged to become more specialized at the expense of their protective diversity. The alternative to this is the acceptance of a decline in income

The experience of the dairies is the clearest example of these pressures. As was mentioned earlier, all the dairy producers recognize that continuous expansion of

output is necessary, and all have responded to this imperative. A result of this is that they have all increased the size of their herds and thus have been confronted with increased demands for feed and pasture. For example, one producer increased the number of cows he was milking from twenty-f to fifty, but failed to adequately estimate the amount of extra pasture he needed. To compensate for this he had no choice but to take land out of grain and hay production, with the result that he was no longer self-sufficient in feed. Another dairy producer met an increase in demand for feed by renting one half section of land. This land was lost from production in 1972 when it was sold for acreages, forcing him to become reliant on the half section he owned. At that time total herd size was approximately sixty and the land he had available was sufficient to provide all the feed he needed. However, he did have to abandon hog production, which was a supplementary activity, to remain self-sufficient in feed. All the dairy producers considered that the expansion they have to accept will eventually make them totally reliant on other sources of feed. None of them enjoy the prospect of becoming dependent because they see it as reducing their chances of survival.

Other livestock producers, particularly those in cow-calf and beef operations, with their heavy demands on pasture, face similar difficulties in trying to retain the security of diversity. One form of diversification, for

example, involves the sale of grain and beef. Producers have adopted this option in an attempt to balance the effects of fluctuating beef and grain prices. However, as herd size increases the rising demand for feed and pasture reduces the amount of grain available for marketing. The problem is exacerbated by the movement of acreages into the area and the subsequent loss of pasture land available for renting. Nevertheless, cow-calf and beef operations attempt to maintain diversity yet meet the need for continuous expansion.

Hog producers also pursue a policy of diversification, maintaining self-sufficiency in feed and selling surplus grain. For example, one small producer, marketing approximately 200 hogs per year, considered that he would have been out of business in 1973-74 when grain prices were high if he had been dependent on external sources of feed. Nevertheless, this producer was not particularly happy about his situation as he considered that he was losing money by feeding grain to his hogs when he could have been maximizing his income by selling the grain directly. The opportunity cost was such as to make the abandonment of hog production very attractive, yet such a move was resisted because he remembered that four years earlier grain prices were "rock bottom" and that he would have been "up against the wall" if he had been dependent on grain production. Another small hog-grain producer avoided the problem of feeding high-priced grain to low-priced hogs by

abandoning hog production completely until hog prices rose and/or grain prices fell. Providing specialization has not progressed too far this type of movement is possible because of the small amount of time, four and a half to six months, required to raise a litter of hogs.

With the exception of a single grain producer, all the farmers in Rossan attempt to protect themselves from fluctuating costs and/or prices by some form of diversification. The reason for this exception was not disdain for the practice but rather a lack of facilities, fences, barns, which would allow him to keep livestock. All producers considered the protection offered by some form of diversification desirable even though they recognized that higher productivity and output could be achieved through greater specialization. However, the structural pressures underlying the process of specialization comes into conflict with the desire for diversification. Producers feel obliged to become more specialized and thereby adopt practices which increase the vulnerability of their productive unit. The present pattern of diversification continues not because of the persistence of traditional values, but because of the continuity of the conditions of production to which the response is an adaptation.

7. The Full-Time Sale of Labour and Its Effect on Farm Practices

A final means of coping with low farm income is for members of the productive unit to sell their labour power

while maintaining farm production (see Table 26). This course of action is not particularly new as it has always been common, especially for males, to supplement their income through casual or seasonal labour. Since the early fifties this casual pattern has been replaced by a situation in which 50% of the male farm producers sell their labour on a full-time basis. Of the wives of full- and part-time farmers only two had full-time non-farm jobs, and two others supplemented their income through the sale of Amway and Tupperware products.

TABLE 26

Farm Type and Sale of Labour: Rossan 1973

Product Type	Full-Time Farmers	Full-Time Sale of Labour
Specialized	10	7
Dairy	4	0
Beef	3	5
Grain	3	2
Mixed	8	15
Beef-grain	3	9
Hog-grain	3	1
Other	2	5

Farmers make it clear that in adopting a work-farm pattern they had little choice. Those who started farming since 1950 through the process of fission have adopted this

pattern from the outset. They have never been in a position to establish viable productive units. Other producers who have adopted this pattern have tried farming on a full-time basis and failed. The immediate reasons for failure vary but include falling prices, loss because of adverse weather, inability to renew equipment, and rising consumption needs of growing families. Particular motives vary, but limited income and saving ability of their productive units underlie their difficulties.

While the adoption of a work-farm pattern provides a supplementary source of income it also makes farming more difficult. The problems that arise stem from the fact that full-time labour necessitates a definite and regular allocation of time to non-farm work. For most producers this entails spending a minimum of eight hours per day actually working, and in addition to this a further one to two hours commuting.

Obviously this places a considerable physical strain on the producer. For instance, a small producer working in Edmonton and who maintains approximately twenty cattle and some hogs finds that during the winter he spends eight hours labouring in the Edmonton Livestock Market, two hours travelling, and at least four hours feeding and watering his stock: a minimal working day of at least fourteen hours. During spring this same producer will spend eight hours or more doing field work for as long as two or three weeks. The situation during harvest is somewhat better for

it is common practice to take holidays at this time. Nevertheless, this producer as well as others will spend sixteen to eighteen hours in the fields.

Aside from the physical strain, the rigid demands of a non-farm work schedule are in conflict with the farmers' needs to be able to adjust their activities to soil and growth conditions. As a result, producers find themselves farming by the calendar instead of by local conditions and are often obliged to forego some field operations.

Field work for the cultivation of wheat, oats, and barley involves approximately ten operations. The land is cultivated or ploughed as soon as the fields are dry enough in spring, usually during the last week in April or in early May. This is followed by harrowing to level the ground, disking to pulverize the soil, harrowing, and seeding. For wheat, seeding is usually completed by about the 15th of May, while the seeding of barley, which grows faster, can be left until approximately the 10th of June. A rod weeder may be used if the weeds are up before the grain, otherwise the herbicide is applied when growth conditions are appropriate in July. During harvest, the grain has to be cut, combined, and the straw baled, hauled and stacked. Finally, the land is cultivated once before field activities cease for the winter.

The difficulty of completing these operations is epitomized by a grain producer who has adopted a work-farm pattern. Lacking time, he invariably finds himself seeding

by the calendar instead of by the growth conditions of weeds. For example, in three consecutive years, 1970 to 1973, the spring was too dry and the weeds did not grow. Therefore, he was obliged to seed his land without cultivating again for weed control. If he had been farming on a full-time basis he would have been able to put off seeding for another two weeks, but the demands on his time stemming from his off-farm work schedule made this impossible. A direct consequence of this was that herbicides had to be used to control the growth of weeds, thereby increasing the cost of production. More significant in the present context was the producer's failure to apply herbicides on two occassions because the weather and the growth conditions of the weeds conflicted with the time he had available to perform the operation. The end result was an estimated 30-35% reduction in yield.

During harvest similar problems arise. Although producers in a work-farm pattern take their holidays at this time, there is no guarantee that the weather will adjust to their schedule. In 1971, for example, another producer was able to crop only 30 acres of wheat out of 480 acres because during the time he took his holidays the weather was unsuitable. Moreover, apart from his suffering the deterioration of his crop due to its being left in the field over winter, he was obliged to spend his time in spring harvesting instead of planting a new crop. The result was that he lost a year's crop because he had enough

time to seed only 35 acres.

These problems are faced by all producers involved in a work-farm pattern. In addition, producers find difficulty in adequately supervising their livestock especially during spring when they are calving, and in maintaining buildings, fences, and equipment. Farmers do seek to compensate for this by purchasing labour-saving equipment and in adjusting their enterprise to their work routines. For instance, one producer has cut out all field work and developed a small beef enterprise. However, the dilemma remains as producers are continuously obliged, by cost-price pressures, to increase the output of their enterprise, and therefore the demands on their labour time.

The adoption of a work-farm pattern is a direct result of the low income and savings of farm producers. It is an option which reflects the conditions of their existence and is only followed when other alternatives fail. It is an option which facilitates immediate retention of ownership of the means of production, but which has dysfunctional consequences that further undermine the viability of productive units. The dysfunctional practices clearly stem from the conditions under which they are forced to operate. Producers were always aware of the detrimental consequences of their actions but felt powerless to do things differently.

Lacking the time to farm adequately or to expand production, producers involved in a work-farm pattern find it virtually impossible to raise their income sufficiently to

become full-time farmers. Furthermore, the income derived from unskilled labour is low, and they cannot hope to accumulate the savings for expansion from this source. The difficulty of achieving their aspirations to become full-time farmers is reflected in the fact that those who have entered a work-farm pattern in the last two decades remain part-time farmers. The only exception to this is a producer who took advantage of inflated land values to sell his land and started farming in another district. Of those remaining in the district three see some chance of becoming full-time farmers when the consumption needs of their growing families decline. However, this reflects the marginality of their position. In effect, the adoption of this pattern seems, for most, to be a step towards total alienation of the means of production. Individual producers will undoubtedly survive for the duration of their productive life, but the chances of financing a new generation of producers seem to be practically absent.

8. Aspirations and the Pursuit of Farming

It might be argued that attempts to continue farming, despite mounting difficulties stemming from the conditions of their existence, reflect the persistence of tradition in that a more rational response would be to abandon farming completely. This would especially seem to be the case for those producers who sell their labour on a full-time basis and/or those who have been unable to renew their equipment.

To some extent this argument seems to be supported by the fact that farmers are inevitably the sons of farmers and have learnt their skills in the context of the farm family. It also finds support in such statements as "Farming is in my blood," "All I want to do is farm," or "Farming is a way of life." However, to stop at this point is to ignore the situation which confronts farmers in seeking alternative forms of employment and does not take into account the dynamics of their non-farm experience in shaping their aspirations.

Farming is not simply an end in itself but is also a means to other ends. Producers accept what are generally seen as middle-class goals such as income security during working life and old age, providing a good standard of living and education for their children, high level of income and consumption which included good housing, clothing, furnishings, natural gas, electricity, indoor plumbing, etc., and time for holidays and leisure. These desires are reflected in the fact that producers will adopt a work-farm pattern rather than unduly reduce the consumption needs of their families. As they see it their material desires are those of "city folk." There is frequent reference to the neighbourliness and cooperation of the old days, and old-timers are likely to remark that despite the material improvements the quality of life has deteriorated: "No one drops by any more." However, this is not a goal that everyone strives for. The "way of life" that people strive

for includes a high level of material consumption and therefore a high level of income. Consequently, it is not surprising to find that the reasons given for remaining in farming have more to do with the alternatives at their disposal than with the value of farming per se.

In this respect it is relevant to point out that despite the considerable array of skills that producers have developed in the course of farming, such as building, welding, maintaining and repairing machinery, they lack formal qualifications. Moreover, with one exception who had passed grade 12, no farmer in the Rossan area had more than a grade 10 education. Lacking formal education, farmers find that the opportunities open to them are extremely limited. In the area of study, for example, the occupations of part-time farmers included unskilled and semi-skilled labour on production lines, labouring on construction sites, night watchmen, road graders, storemen and salesmen for an implement dealer, unskilled labour in the livestock market and janitors. Generally, the jobs open to them are for unskilled manual labour at the lowest socio-economic levels of society.

Such opportunities provide little incentive to abandon farming. Nevertheless, 50% of the producers do sell their labour on a full-time basis. Their experience frequently provides further incentive to remain in farming. For example, producers who were employed in a nickel refining plant were unanimous in finding that their work was

repetitive, monotonous, with no opportunity for developing any skills or pride in their work. Also, lacking formal education, their chances for promotion were limited to a few supervisory positions, though even these were barred to some because younger people were senior to them. They also felt they had little security, recognizing that they could be laid off when technological changes rendered their labour superfluous.

Moreover, eight-hour shifts which rotated on a weekly basis, thereby allowing equipment to be operated continuously, completely disrupted their family and community life. The weekly variations in shifts meant that they were only free one weekend per month and that they were either sleeping or working at the times they could have been with their families. This problem is particularly acute when their children are at school. The same difficulties affected their involvement in the community. In fact, it was the practice of the community organization to schedule beer festivals, ball games, picnics, and other activities in a way that would allow all shift workers to participate to some extent in the course of a year.

The alternatives open to farm producers are limited because the skills they have developed in the course of their productive activities remain unrecognized. Farmers recognize that their limited formal education condemns them to work that is poorly paid, lacks security and the possibility of advancement, and is often repetitive and

lacking in interest. Consequently, it hardly seems surprising that they attempt to remain in farming? Many, in fact, express a desire to abandon farming but realistically recognize that there are no worthwhile options open to them. This does not mean that farming continues indefinitely, as the increasing difficulties in maintaining farm production slowly force many producers to take the least desirable option.

D. Summary

By virtue of their class position, independent commodity producers are faced with an imperative to continuously increase output and productivity under conditions of uncertainty and risk. The variety of individual responses are shaped by these conditions in conjunction with the demands of their particular enterprises and the resources at their disposal. The practices which producers adopt in response to these conditions can be characterized as a conservative, risk-minimizing approach to expansion and change. This response is traditional in the sense that it has been followed before, but its persistence is not due to the existence of any traditional consciousness. Rather, it reflects the continuous adaptation of producers to problems confronting them.

It is apparent that all, including the smallest producers, were acutely aware of the need to increase productivity and output. Producers sought to take advantage

of innovations but the extent to which this could be done was limited by the resources available and the organization of particular enterprises. Moreover, the limited resources of producers forced them to reluctantly adopt practices which undermine their own position.

The conservative, risk-minimizing approach to farming contains its own limitations. Although the pattern of farming may protect the producer from rapid alienation of the means of production, it also guarantees that savings will remain low and the ability to cope with evolving conditions of production will be impaired. Consequently, a situation prevails in which it may take very little to turn a small surplus into a deficit.

As a result of this situation producers frequently find themselves in a position where they are obliged to adopt compensatory practices which may further undermine their position. In particular, slow expansion is replaced by a slow reduction in productive consumption. In doing this, producers attempt to avoid any practice which will lead to a direct decline in income. They do this by delaying the replacement of buildings and equipment. For the smallest producers this option is often no longer sufficient and they are forced to further curtail productive consumption by reducing expenditure on operating costs. This latter practice may well become self-perpetuating because it leads to a direct reduction in income and thereby undermines the opportunity for subsequent

expansion.

All producers engage in the practice of reducing personal consumption. Ideally, this is a temporary expedient, but the effects may easily become cumulative. The smallest producers experience this effect most seriously. By running down all their equipment and reducing expenditure or operating costs, the capital needed to "set them on their feet" retreats even further from their reach. They are always close to losing ownership of the means of production, wondering how they will manage to survive another year.

A means of retaining ownership of the means of production and of averting, to some degree, the practice of reducing productive and personal consumption is the adoption of a work-farm pattern. This practice creates considerable physical strain and adversely affects farming activities as well as family and community life. It is not a desired option; rather, it is adopted out of necessity. Initially it is considered as a temporary expedient, but the failure of producers who have adopted this pattern to become full-time farmers suggests that it merely delays the process of proletarianization. A qualification in this regard is the possibility, recently open to producers, of selling their land for residential purposes and of purchasing farms in districts where land prices are lower.

The practices adopted by producers in the area of study are a product of the evolving conditions of production

in capitalist society. Confronted with developments which undermine their existence, producers are obliged to pursue actions which undermine their own existence. In this sense their underdevelopment, their "backwardness," is a product of development. The patterns of action emerging from the productive activities of independent commodity producers are not to be simply mistaken for the outgrowth of tradition. Instead they reflect a dynamic response to evolving conditions of production. They are the manifestations of a continuous struggle by producers to maintain their livelihood under conditions of production which circumscribe their every activity. It is these conditions which mould their actions and the outcome of actions already taken, regardless of their personal desires.

CHAPTER SEVEN

CONCLUSION

The aims in this thesis have been to determine the social conditions of agricultural production and to show how these conditions determine the development and underdevelopment of productive organization. In pursuing these aims it has been recognized that agricultural production cannot be comprehended in isolation from the productive basis of society as a whole. Therefore, it was necessary to employ a conceptual framework which avoided the tendency in anthropology to divorce subject matter from its wider societal setting.

The framework of analysis has been productive or class relations. These relations are seen as structuring society as a whole, while the dynamics of relations between classes structures its development. In particular, it was shown that a class of independent commodity producers was established in western Canada as a means of realizing metropolitan interests in central Canada. Moreover, despite the changes in productive organization that have occurred, the relationship was shown to be continuous over time, the vast majority of farmers remaining independent commodity producers. It may be added that this is the most widespread productive relationship in Canadian agriculture generally (see Johnson 1972; Ryerson 1950).

This includes all those productive units, commonly referred to as family farms, in which the farm family owns and operates the means of production.

By placing productive relations at the center of analysis, producers are located in the structure of society as a whole and a means is provided for relating the structural conditions of existence to individual productive units. The concept of independent commodity production directs attention to the social dimension of production because it recognizes that farmers produce commodities as part of a social division of labour. This does not mean that individual producers who enter this relationship are not engaged in some production for household consumption. In fact, the historical variation in household consumption in the area of study was pointed out. The point is simply that the concept refers to the societal dimension of production, bringing out the interdependence of productive units in a social division of labour.

More significantly, the concept recognizes that the division of labour between productive units and the process of exchange is founded in relationships between owners of the product of labour. This involves a relationship between the oligopolistic corporations of agribusiness, which are based on capitalist productive relations, and the independent commodity producers of agriculture. In turn this reflects a more general division within the contemporary capitalist economy between dominant monopolistic

and subordinate competitive sectors. The role of government in colonizing the West epitomizes the historic subordination of Canadian agriculture to other commercial and industrial interests (Fowke 1946:4).

The outcome of the dynamics of class interaction under contemporary conditions of production is that independent commodity producers experience continuous cost-price pressures. Moreover, the only way that continuous reproduction of the relationship can be achieved, by individual as opposed to collective action, is through changes in the organization of production which increase productivity and output. This means that continuous improvements in the technology of production are a structural imperative for the persistence of the class of independent commodity producers.

A further consequence of the social organization of production in capitalist society is that a high degree of vulnerability and risk is focussed on independent commodity producers. Agricultural output is subject to a considerable degree of uncertainty in any society, though the way setbacks are felt is determined by the social nature of production. Independent commodity producers in capitalist society own the means of production and the product of their labour. This means that the effects of any setback in production through illness, poor crop conditions, etc., are focussed on isolated productive units. Creditors, it may be added, bear no part of this risk.

From the analysis of the social conditions of independent commodity production it is apparent that producers are confronted with a structurally induced imperative to make changes in the organization of production under conditions of high vulnerability and risk. If individuals are to become independent commodity producers they have to accept these historically determined conditions of their existence regardless of their personal desires. Collectively they may struggle to change these conditions, but as individual producers they are obliged to pursue their goals within the relational structure of a particular society. It is these conditions which shape the actions and the outcome of actions taken by individual producers, and which underlie the development and underdevelopment of the organization of production of independent commodity producers.

In the area of study producers recognized the conditions of their existence and attempted to adjust to them through their farm practices. It is their striving to do this which underlies the gradual transformation of the small diversified farm of the 1930's into its contemporary specialized counterpart. This, it was suggested, is an instance of the transformation in the organization of production from the labour-intensive homestead into the modern capital-intensive family farm. These changes, it may be added, have occurred within the framework of the independent commodity form of productive relationship.

Coexisting with patterns of modernity are patterns of farm practices which may easily be mistaken for tradition. In the area of study this involved what was termed as a conservative, risk-minimizing pattern of farming, which was seen to contain its own limitations. While reducing the possibility of rapid alienation from the means of production, the practices involved ensure that savings will remain low and subsequently the ability of producers to cope with difficulties is impaired. As a result, producers are frequently obliged to adopt practices which further undermine their position. In particular, slow expansion is easily replaced by a slow reduction in productive consumption, which, with the smallest producers, often includes a reduction in operating costs. Such practices, at various times, were adopted by all producers, though it is among the smallest farmers that they appear most frequently.

These patterns of practices are not the product of a traditional approach to farming (see Chapter Two). They reflect a continuous dynamic response by producers with the resources and alternatives at their disposal to the existing conditions of production. Their persistence over time points to the continuity of the conditions shaping the continuous regeneration of the activities indicated by these patterns.

Rather than evidence of tradition it can be suggested that these responses are indicative of the limited ability

of the independent commodity form of productive relationship to provide the basis for the organizational changes necessary for survival. The difficulty is reflected in the intergenerational transfer of productive units. Personnel constituting the succeeding generation of producers have traditionally been the sons of farmers who developed their aspirations and skills in the context of the farm family. The availability of new personnel is vital to reproduction of productive relations; however, they are dependent on the creation of new economic positions for the realization of their aspirations and skills. Traditionally, it was shown, this occurred through the process of fission or succession. Because of the fragmentation of resources entailed, the process of fission is proving to be an inadequate basis for establishing a new productive unit. Succession is a more successful means of transferring resources, providing intergenerational conflict can be resolved, because the land base provides access to credit. However, where farms are small and do not provide a basis for livelihood for the present farm family the possibility of succession seems remote.

The problem of intergenerational transfer and the persistence of dysfunctional farm practices reflect the basic limitation of independent commodity production in capitalist society. They point to a contradiction between the ability of productive units, based on the labour power of the farm family, to generate and retain savings in a

situation where the capital requirements of farming are constantly increasing (Anderson 1947:28; Canada, Federal Task Force on Agriculture 1969:335). Reductions in productive consumption and the adoption of a work-farm pattern reflect a process of proletarianization in which labour is divorced from ownership of the means of production. The independent commodity form of production has facilitated the transformation of the rural world. It has provided the framework for the evolution of the capital-intensive family farm from the labour-intensive homestead. However, the increasing difficulties faced by independent commodity producers point to the eventual demise of the class unless the structural conditions of production are altered (see Johnson 1972).

It is suggested that the motive force directing the transformation of agricultural production is the struggle between classes. This does not mean that classes are conscious of their structural unity or that they act as a unit in pursuing their interests. In fact, although independent commodity producers are a class in terms of productive relations there are conflicting interests within the class that obscure the basic social cleavage. As was seen, there is conflict between commodity groups, between producers over the allocation of land, and between generations over the transfer and utilization of resources. However, analysis in terms of productive relations makes it possible to see how such conflicts reflect the basic

structural conditions of production in capitalist society (see Chapter Five).

The dynamics of class interaction exert hegemony over the direction of change in the organization of agricultural production. It has led to the evolution of the capital-intensive family farm from the labour-intensive homestead within the framework of the independent commodity form of productive relationship. In addition, the dynamics of class interaction underlie the difficulties faced by producers and the continuous regeneration of seemingly traditional farm practices. In this sense both the development and the underdevelopment of productive organization are the product of evolving structural pressures of capitalist society.

The adoption of a framework based on productive or class relations seems to provide the basis for overcoming the tendency in anthropology to view its subject matter in isolation from society as a whole. This conceptual isolation leads to an analysis of change which portrays the transformation of the rural world in terms of the impact of an external system, or acculturaltion (Bennett 1967:442). The perspective adopted here avoids the difficulties of this approach, discussed in Chapter Two, by explicitly recognizing that the very existence of farm production is social, in that its form, its fundamental characteristics, and its development are dependent on its relations in society as a whole. As was shown, this was

readily apparent in the creation of a class of independent commodity producers in western Canada as part of an expanding economic frontier. Other examples include the creation of the reservation system for Native People and the presence of poverty in a society that necessitates its existence.

Furthermore, it is necessary to avoid the errors of normative determinism in which the existence of patterns of behaviour is equated with their desirability (see Chapter Two and Barth 1967:662). This perspective, in conjunction with conceptual isolation, serves to mask reality by placing producers outside of society and showing them to be a cause of their own backwardness. This is part of a more general orientation to the situation of underprivileged groups, such as Native People and the urban poor, which ignores the structure of society in which aspirations have to be pursued. It reflects an ideological view of a classless society in which anyone can be upwardly mobile if they try.

Knowledge of the structural position of producers in society provides a basis for understanding the situation of agricultural producers. This structure is not to be seen as deterministic in any mechanistic sense as it is a historical and continuing product of man's activities. Within this structure producers pursue their productive activity with the resources and alternatives at their disposal. Traditional and modern patterns of action indicate

a continuous struggle by producers to maintain their livelihood under historical conditions over which they have little control. It is the structural conditions of production that provide the framework of their fate, turning ends into illusions, and forcing producers to adopt actions which undermine the ends they pursue.

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APPENDIX

PROBLEM SELECTION AND METHOD

My master's thesis was a critical analysis of acculturation studies of North American Native People. In this study I came to the conclusion that the underlying framework was an inadequate basis for analyzing questions of socio-cultural change or for understanding significant social issues in a contemporary context. Moreover, I came to believe that the assumptions underlying and structuring acculturation studies were part of a wider normative perspective which was generally dominant in social science. My subsequent work has been shaped by this critical point of departure, for in developing a program for doctoral research I was concerned with establishing a viable alternative to existing theories of change.

Choice of the "small farm" problem as a practical social issue towards which my research could be oriented was related to these theoretical concerns. In the fall of 1971 I moved into the Rossan area to live, with the expectation that I would develop a research proposal concerning Native People in northern Alberta or British Columbia. Through casual friendships developed with neighbours I became aware of the difficult circumstances under which farmers in the area were labouring. In particular, I remember spending a Sunday afternoon with a small, part-time farmer who ended a discussion on farming

by dejectedly saying that he had always worked hard but knew that he was getting nowhere and that he didn't know what to do next.

It was through the latter and other such encounters that I began to realize that the examples of difficulty were part of a broad social issue, namely, the "small farm" problem. Also, it became apparent that this problem lent itself favourably to the theoretical questions which I intended to pursue. I came to see small farmers as a clear example of a class that was part of the productive system of society, and that an understanding of their situation necessitated a theoretical orientation which was able to comprehend the significance of this involvement. Moreover, a brief perusal of the literature supported my belief that the general acculturative model of change played an important part in interpretations of rural development. Like that of Native People, the urban poor, etc., the situation of small farmers was widely portrayed as being a product of their own perversity.

It was on these grounds that I decided to orientate my doctoral research towards rural social change and to collect data relevant to this from the area in which I was residing. Once this decision was taken, it was necessary to seek greater involvement with producers in the Kossan area. Initially, this produced a certain ambiguity with the friends I had developed, for I was no longer

simply a neighbour but also a student of rural life with an active interest in learning about their situation and in gathering information from them which would further my studies. The situation presented two general possibilities. I could have concealed my interests by not stating them or by purporting to pursue a related topic such as construction of a local history. The alternative which I followed was to be completely open about my work. An advantage of being open was that it continuously resulted in questions being asked about the nature and purpose of my work. Despite ideals of contributing to theoretical developments in anthropology and, more pointedly, towards a clearer understanding of the situation of agricultural producers, the immediate reality was the presentation of findings in a doctoral thesis. Under such circumstances, questions such as how my work was to be used and if it would benefit the farmers were not necessarily conducive to a satisfactory answer.

An initial difficulty created by making my intention explicit was that I was immediately labeled as an "expert," despite a singular lack of knowledge concerning agricultural production. This was a distinct disadvantage, because many farmers had extremely disparaging attitudes about experts because they felt that experts held them in low esteem and invariably offered advice which was completely out of tune with the realities of their lives.

At the outset, I was unaware of this though it was apparent that there was a considerable reluctance to converse freely with me, especially about the problems that they personally experienced. However, once it became apparent through my actions that I did not fit this stereotype, their reserve disappeared and I was welcomed into the community. In fact, in subsequent months farmers frequently recalled their initial failure to interact freely with me, saying that they had thought I would not take them seriously.

The problem of increasing my contacts with farmers was primarily achieved through becoming a member of a community organization in January, 1972. At that time the active membership consisted of fifteen families, though the demands of shift work made their attendance at monthly meetings and work-bees irregular. A potential limitation of the organization was that its membership did not represent all the types of farms present in the district. Only two of the members were full-time farmers, nine were farmers who also sold their labour on a full-time basis, two were full-time labourers who had given up farming, and two were non-farmers. However, the community-sponsored dances, whist drives, ball games, picnics, etc., were attended by a considerably wider range of families. Hence, by attending these functions I was able to meet most of the families in the district. In addition, through friendship with a neighbour who was a member of the Church of God I

met other families whose religious convictions led them to avoid many of the activities sponsored by the community organization.

Through these various means I was able to establish contact with forty farmers of which twenty-two were part-time and eighteen were full-time, six full-time labourers who had abandoned farming, and six retired farmers. The farms in this total included a full range of the types of product output: dairy, beef, grain and various combinations of mixed farming.

I arranged to visit all of these farms and have their operations explained to me. Also, I participated in a variety of tasks such as cultivating, bailing, hauling bales, feeding livestock, etc. which helped to increase my familiarity with the operation of a farm. During these visits I did not directly record conversations because I believed that this would cause discomfort. Consequently, I simply attempted to recall what I had learned and make notes of these when I was alone. However, towards the end of my stay in Rossan, in the Spring of 1973, I felt a degree of acceptance which allowed me to be more direct in recording information. This allowed me to conduct a series of semi-structured interviews with thirty full-time, part-time and retired farmers which were meant to determine more accurately the extent to which the conclusions I had reached were supported. The request for an interview was

generally accepted and an invitation was extended to come early to see the farm and join the family for the evening meal. In selecting families for the interviews I attempted to include full- and part-time farmers in equal proportion, and to take into account various types of farming, levels of product income, and variations in soil quality. Where it was possible I supplemented and checked field data against available census material for the subdivision Strathcona 20 which encompasses the Rossan area and for the unorganized townships which are geographical units of 36 square miles.

A final point, in this context, is that the method of presenting data drawn from the area of study created the possibility that the identity of individuals might be revealed. To provide a degree of anonymity the boundaries of the area of study have not been precisely defined, and the area has been ficticiously referred to as Rossan. In addition, where personal names have been used to facilitate presentation, pseudonyms have been adopted.

The extent to which field work has influenced the development of my thinking has perhaps been understated in this thesis where the emphasis has been placed on the development of a particular theoretical perspective. In fact, I cannot overstress the value of the experience, as it imparted a strong sense of realism on the process of theory building. Observation of the varied and continuous struggles of producers pointed to the complexity of the

phenomena to be explained and interpreted and, therefore, to the inadequacy of an approach which sees action as unmediated responses to structural causes. Field work raises more clearly the question of how the structures of a particular historic society can be seen as bearing down on individual producers without determining the course of every act. That is, experience in the field raises clearly the problem of relating the particular milieu of individual producers to their structural position in society as a whole.