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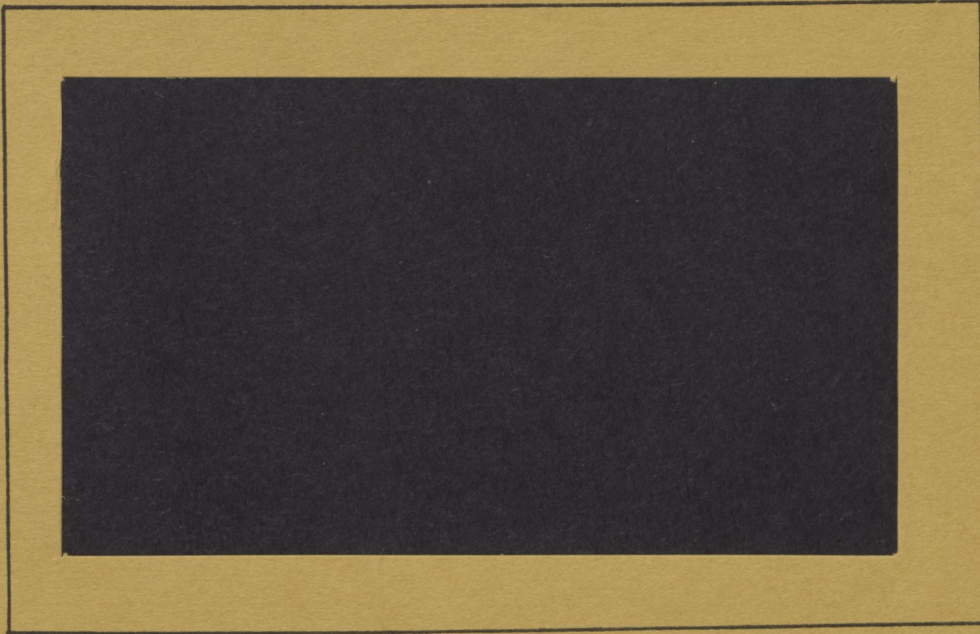
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A CLASSIFICATION OF LIMITED RESOURCE
FARMERS BASED ON BEHAVIOURAL AND
ECONOMIC CHARACTERISTICS

by

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77/3

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FOREWORD

This study on the classification of limited resource farmers is the first phase of a four-phase project designed to identify a broad range of policy instruments for improving the farm performance and general well-being of these farmers. This phase investigates the characteristics and problems of limited resource farmers, develops an initial classification reflecting the various characteristics of these farmers, and summarizes their general distribution.

The information and classification system identified in this phase will be further refined in later phases as more information on limited resource farmers is collected. The results from this study provide the initial framework and inferences for later phases of the overall project. Phase 2 will provide more detailed information concerning the economic and behavioural characteristics of the limited resource farmer and refine the classification system developed in Phase 1. Phase 3 will evaluate representative farms within the various subgroups of farmers identified in the classification system through linear programming case studies to describe (a) current farm improvement potentials, (b) physical and financial resource needs of the farmer, and (c) types of public assistance programs which could help the farmer achieve his potential. The final phase (phase 4) will be conducted in part as an ongoing component of the first three phases. It is designed to provide an integrated evaluation of the various needs of the limited resource farmer and the appropriateness of program alternatives for improving farm performance and the general economic well-being of these farmers.

The overall project is conducted under a special three-year contract funded by the Small Farms Development Program of Agriculture Canada and carried out with cooperation and additional support from the Ontario Ministry of Agriculture and Food. This publication is submitted in fulfillment of the contractual requirements with Agricultural Canada for reporting on the first phase of the project. The report was prepared by an interdisciplinary team in agricultural economics and extension education and draws strongly on M.Sc. Thesis material by Michael J. Trant prepared as part of the project.

The report commences with a section on summary, findings and conclusions. This section, together with Figure 2, page 50, provides an overview of the study for those interested in a brief description of the results. For the reader who would like to know more about the content and development of the classification system, the body of the report contains more detailed information on the analytical procedures and characteristics of the farmers in the classification sub-groups. An appendix describing detailed cross tabulations is also provided as an aid in the classification procedure.

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The authors also wish to acknowledge the contribution of Michael J. Trant through his M.Sc. Thesis research, the assistance of Jerry Bouma and Robert Seguin in interviewing farmers, and the cooperation and time spent by the farmers contacted in the survey. Helpful comments were also provided on an earlier version of this report by Professor S.H. Lane.

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SUMMARY, FINDINGS, AND CONCLUSIONS

This study was undertaken to investigate the characteristics and problems of limited resource farmers (defined here for 1970 as those with \$15,000 or less gross sales and for 1975 as those with \$25,000 or less) and to develop a classification system that could be used in identifying specific target groups of limited resource farmers for assistance through public and private programs. This study provides a classification of limited resource farmers in Ontario by general groups to reflect differences in 1. human and social constraints on behaviour, 2. farm resources, 3. farm and nonfarm employment, and 4. sources and levels of income. This study is the first phase of a four phase project designed to identify a broad range of policy instruments for improving farm performance and general welfare of limited resource farmers.

Data for the classification system were obtained through a survey of 193 farmers about equally divided in Grey and Renfrew Counties in Ontario. The sample included a broad range of types of limited resource farmers in order to be as useful as possible in drawing inferences for many regions of Canada. Data on individual farmers' demographic characteristics, attitudes, aspirations, farm resources, management ability, alternate employment opportunities, and physical disabilities were analyzed in depth through correlation, regression, and cross tabular analysis to form the basis of the classification.

The classification system consists of three main categories and a combined total of 12 sub-groups. The three main groups reflect the farmers' involvement in and orientation to farm and nonfarm employment. These main groups consist of farm focus farmers (including retirement age farmers still

actively farming), mixed focus farmers (part-time), and nonfarm focus farmers.

The criteria established in the course of the study to best represent these limited resource farmer groups are listed as follows:

1. Farm focus farmers: 30 days of off-farm work or less per year with \$25,000 or less gross sales (in 1975), regardless of net farm income.
2. Mixed focus farmers: a) 31 to 149 days of off-farm work per year together with evidence of active farming.
or
b) 150 to 199 days of off-farm work per year, combined with gross sales in excess of \$4,000 or a loss of \$1,000 in net farm income (reflecting a build up of inventories) if gross sales were less than \$4,000.
or
c) 200 or more days of off-farm work per year, combined with gross sales of \$4,000 or a loss of more than \$2,000 in net farm income if gross sales were less than \$4,000.
3. Nonfarm focus farmers: a) 150 to 199 days of off-farm work per year, combined with gross sales of less than \$4,000 and a loss of less than \$1,000 in net farm income.
or
b) 200 or more days of off-farm work per year, combined with gross sales of less than \$4,000 and a loss of less than \$2,000 in net farm income.

Since these criteria were developed from Ontario farmers, they may not be totally correct for other regions. Hopefully, however, they will be able to provide an initial basis for examining limited resource farmers in other parts of Canada.

These three main groups were further classified on the basis of different behavioural characteristics, resources, and needs for assistance into the following sub-groups:

I Farm Focus Farmers

1. Transition stage farmers
2. Potential commercial farmers
3. Market oriented farmers unreceptive to change
4. Traditional farmers

5. Retirement age farmers

II. Mixed Focus Farmers

1. Transition stage farmers
2. Potential commercial farmers
3. Permanent part-time farmers receptive to change
4. Permanent part-time farmers unreceptive to change, with an income derived mainly from agriculture
5. Permanent part-time farmers, unreceptive to change, with an income derived mainly from nonfarm employment.
6. Traditional farmers

III Nonfarm Focus Farmers

Generally the farmers at the top of the farm and mixed focus categories tend to be the most receptive to change, have greater management ability, and have the most potential for earning good incomes from agriculture. Those at the bottom of each category are generally the least receptive to change and the hardest to reach with current assistance programs, especially those designed for farm enlargement. It is also important to note that the classification system essentially describes farmer groups at a particular point in time, and that mobility from one category or group to another can occur. Indeed, the intention of developing the classification system is to help in the design of programs to assist farmers where possible in moving into viable commercial operations or more productive groups in the classification system, as well as to help more effectively those unable to change. The individual farmer sub-groups are described in the following sections.

Farm Focus Transition Stage Farmers

These farmers tend to be young, energetic, capable managers in the process of establishing commercial farms. Often they have limited capital

and physical resources, and are in the process of investing their farm income back into their farms. These farmers are likely to benefit from land expansion and credit programs to help them enlarge their operation. Since they tend to be the most receptive to farm improvements, some may initiate expansion programs on their own.

Farm Focus Potential Commercial Farmers

This group of farmers also consists of quite good managers who are receptive to farm improvements. These farmers tend to be middle aged (40-55), supporting families, working established farms, and somewhat more security oriented than transition stage farmers. Many have sons or daughters expected to take over the farm in the near future, and expansion programs may be appropriate in these cases. Many other farmers, however, are primarily interested in doing a better job with their existing operation, and may be helped most by credit and assistance for farm reorganization and improved livestock.

Farm Focus Market-Oriented Farmers Unreceptive to Change

Farmers in this group tend to have moderate-sized, established farms and moderate management ability. Generally they are low volume operators who are reluctant to make farm improvements for a variety of reasons. Many are in their late 50's and early 60's without a son or daughter to take over the farm, while others are strongly security oriented and reluctant to take risk. Some also have physical limitation which prevent them from expanding their operations, even though they were previously receptive to improvements. The stop loss stabilization measures of the Agricultural Stabilization Act and provincial income protection plans are likely to have appeal to this group.

Farm Focus Traditional Farmers

These farmers represented a significant group of limited resource farmers with generally low managerial ability and low farm acreages. They are generally averse to making changes in their farm operations, oriented towards self-sufficiency, and often operating their farms with outdated technology reminiscent of farms 30 to 40 years ago. Management is often the most limiting factor to more successful farm performance, so that agricultural programs to assist the group must provide management counselling as a prerequisite to other assistance. Many of these farmers, however, may be the clientele of general welfare programs rather than farm improvement programs.

Farm Focus Retirement Age Farmers

Retirement age farmers are all 65 and older and are still partially active in farming, even though the farm is often seen as a means to keep them active and busy, rather than operated as a commercially oriented enterprise. These farmers are often reluctant to undertake farm improvements, particularly if they involve a large capital investment or time commitment. Possible assistance for these farmers may be through non-agricultural programs such as pensions, or an agriculturally related program which might provide an annuity based on the equity they have built up in their farms, and which would be reclaimed from the estate upon sale of the farm on the operator's death.

Mixed Focus Transition Stage Farmers

The farmers in this group were very similar in characteristics and resources to the farm focus transition stage farmers, and also were in the

process of establishing a viable commercial operation. The main difference between the two groups was that the mixed focus farmers were relying on their nonfarm job to generate capital to expand their farm, rather than generating it from farming. Both groups are likely to benefit from similar programs for expansion.

Mixed Focus Potential Commercial Farmers

This group of farmers is also quite similar to their farm focus counterpart, except for their involvement in nonfarm work which limits somewhat their farming activity. They are also likely to benefit from similar programs for farm reorganization, or expansion if they have a son or daughter to take over the farm.

Mixed Focus Permanent Part-Time Farmers Receptive to Change

These farmers were not contacted in the survey because of the manner in which the sample was selected, but they were identified by agricultural and ARDA Representatives in the two counties. These farmers can be described as progressive farmers committed to both agriculture and nonfarm employment on a permanent basis. They tend to be good managers and receptive, but their agricultural activity tends to be limited by their nonfarm work. They are likely to benefit from programs to improve their farm labour efficiency so that they can do more with their existing resources and available time.

Mixed Focus Permanent Part-Time Farmers, Unreceptive to Change With An Income Derived Mainly From Agriculture

Farmers in this group tend to be older (over 50), security-oriented, moderate managers operating moderate-sized farms, who are supplementing their farm income with nonfarm earnings. Since agriculture still is their main

source of income, they are likely to desire stabilization programs (like the farm focus market oriented farmers unreceptive to change).

Mixed Focus Permanent Part-Time Farmers, Unreceptive to Change
With An Income Derived Mainly From Nonfarm Sources

These farmers are very similar in behavioural characteristics to the previous group of mixed focus farmers, but they tend to be operating smaller farms and are primarily dependent on their nonfarm job. Agriculture is still an important source of family income, however, and not treated as a hobby or past time. Their resistance to change and their reliance on nonfarm employment makes them difficult to motivate for farm improvements, and they may require better nonfarm earning opportunities to improve their well-being.

Mixed Focus Traditional Farmers

These farmers tend to be the least receptive of the mixed focus farmers, and very similar to their farm focus counterparts. They tend to have the lowest management ability, smallest farms, out-dated technology, lowest aspirations about farm improvements, and an orientation toward self sufficiency. Even though they have nonfarm jobs their total income is often very low, indicating that they are limited in their potential both on and off the farm. Like farm focus traditional farmers, they most likely would require management assistance before other help could be effective, and may be clientel of general welfare programs.

Nonfarm Focus Farmers

Nonfarm focus farmers generally earned good nonfarm incomes (many earning over \$10,000 in total operator income) and did not rely on

agriculture as a source of family support. They were farming for a hobby or as a form of recreation, seldom grossing over \$2,000 from the farm. Most sustained small losses from their farm operations. Consequently, they are not likely to be the clientele of either agricultural or non-agricultural programs.

The study also summarized the distribution of limited resource farmers by their main focus and income across provinces to provide a better perspective of these farmers across Canada.

The 1971 Census indicated that in 1971 there were approximately 120,000 farm focus farmers of working age and 37,000 65 or over, 87,000 mixed focus farmers, and 52,000 nonfarm focus farmers, representing from 73 to 90% of the farmers in each province. Many of these farmers, particularly those with a farm focus, had low incomes. Among all limited resource farmers in the 1971 census, total 1970 operator incomes averaged only \$4,893 and family incomes only \$6,410. Farm focus farmers averaged only \$1,841 from agriculture and had average total operator and family incomes of only \$2,742 and \$4,621 respectively. Mixed focus farmers averaged farm incomes of \$630, total operator incomes of \$4,807, and total family incomes of \$6,767. Nonfarm focus farmers averaged \$118, \$8,661, and \$10,714, respectively. About 43% of all limited resource farmers in Canada had 1970 total family incomes below the 1970 Statistics Canada poverty standard of \$4,300 for a farm family of 4.

It is apparent from these figures that many farm focus limited resource farmers constitute a severe social problem, with low overall incomes. Mixed focus limited resource farmers tend to have higher total family incomes, but many of them are also in difficulty. Most nonfarm focus farmers, on the other hand, are quite well off and do not represent either an agricultural or

a social problem. The low level of farm income earned by both farm and mixed focus farmers indicates the pressing need for improved agricultural assistance and the challenge facing public agricultural agencies in the future. The diversity among different sub-groups of limited resource farmers identified in this study underscores the need for many different programs and approaches, each designed to meet the special needs and potential of the different kinds of farmers.

A CLASSIFICATION OF LIMITED RESOURCE FARMERS
BASED ON BEHAVIOURAL AND ECONOMIC CHARACTERISTICS

1.0 INTRODUCTION

Throughout Canada a large number of farmers consistently have earned low incomes, resulting in relatively low standards of living. Many of these farmers are small operators who have too few resources or resources of too poor a quality - land, livestock, management, or capital - to earn adequate incomes from agriculture. Some have combined farming with nonfarm work, but a large number have remained wholly dependent on agriculture. These farmers are referred to in this study as limited resource farmers. They are defined here for 1970 as those farmers who reported \$15,000 or less in gross sales in the 1971 census of agriculture. For 1975 (the year of the data used in this study), a maximum of \$25,000 gross sales is used to account for the increased value of farm products, sales volume, and costs resulting from inflation in the past five years.

The existence of limited resource farmers has been a persistent problem throughout Canada. In 1970, 295,595 or 81% of Canada's 365,355 farmers had gross sales less than \$15,000 and 278,855 or 76% earned a net agricultural income of less than \$3,000. Over half of these limited resource farmers had little or no nonfarm work. In 1970, 132,840 farm families (40%) subsisted on total family incomes of less than \$4,300, which was the 1970 poverty threshold for a family of four as determined by Statistics Canada. Since 1970, agricultural prices and incomes have improved considerably, but there are still many farmers with low earnings.

The purpose of this study is to investigate the characteristics of limited resource farmers and to develop a classification system for identifying different groups of limited resource farmers requiring different kinds of assistance. The study provides a classification of limited resource farmers in Ontario by general groups based on behavioural and economic characteristics. Data for the classification system were obtained through personal interviews of approximately 200 farmers in Grey and Renfrew Counties in Ontario.

The study is reported here in four major sections. First, the justification for the study is examined in the following section. Next, the analytical framework and procedures used in developing the classification are summarized. The main body of the report then describes the survey findings, characteristics of farmers in the different classification groups, and their possible program needs. The fourth section summarizes the distribution of limited resource farmers across provinces by their orientation to farm and nonfarm work (farm, mixed, and nonfarm focus farmers) and income levels.

In addition, a series of appendices describing data and the analysis of the survey material is provided for those desiring more detailed information.

1.1 Justification for the Study

For a number of years, Agricultural Canada, the Department of Regional and Economic Expansion, and Provincial Ministries of Agriculture and Food have provided programs to help improve the farm performance and economic well-being of limited resource farmers.

These programs have been very helpful and have enabled many farmers to improve their standard of living. However, a large number of limited resource farmers are still found in Canada, indicating that present programs are constrained in their overall effectiveness and much remains to be done. As a result, new programs may need to be developed or old programs modified to assist those limited resource farmers not helped by existing programs. As a first step to providing better assistance, specific groups of limited resource farmers requiring different kinds of assistance need to be identified. That is the purpose of this classification study. In addition, later phases of the overall project will examine how these farmers can be involved and motivated in assistance programs.

The classification in this study is pursued under the premise that limited resource farmers are not a homogeneous group, but have different needs, farming potential, interest, and willingness to participate in assistance programs. As a consequence, a wide variety of economic, behavioural, and resource characteristics are examined in an effort to group farmers according to their needs and response to different kinds of assistance.

At present, governmental agencies often differentiate limited resource farmers for program eligibility on the basis of their assets and their involvement in agriculture as their main occupation. Most existing programs for limited resource farmers accordingly have been developed to assist a) full-time farmers who can benefit by increasing the size of their farm, and b) those who plan to sell and leave agriculture. In Ontario, for example, programs tend to focus mainly

on land transfer and counselling. These programs appear to be most effective with the farmers who wish to enlarge their farms, are relatively young, and have the management ability to utilize their expanded resources. These programs, however, may not be appropriate for a large number of limited resource farmers, particularly those with limited management ability, older age, aspirations or attitudes unreceptive to such programs, or physical disabilities.

Farmers with both limited physical resources and poor management ability, for example, might be helped most by management assistance and might not be able to take advantage of programs to help them acquire land without special management counselling. Other farmers may not want more land, but could be helped by credit to improve their existing enterprises. Older farmers near retirement usually are unlikely to undertake large improvements unless a son or daughter is going to take over the farm and might benefit from special retirement programs. Farm improvement programs for security-oriented farmers are most likely to be successful if they concentrate on reducing risk from production, prices, and investments. Farmers with alternate employment opportunities off the farm might even be served best by encouraging relocation, while some with poor potential in agriculture who still want to remain in farming might require part-time nonfarm jobs to supplement their income.

Some limited resource farmers also may not be the primary responsibility of public agricultural agencies. A number of limited resource farmers earn substantial nonfarm incomes which yield a relatively high standard of living. These farmers are not likely to

be targets for agricultural programs, nor any government income support programs. Other farmers may have disabilities or handicaps which make life as difficult for them off the farm as on it. Poor management ability, negative attitudes, low aspirations, inadequate physical resources, and sometimes physical disabilities are the characteristics which distinguish these limited resource farmers from the rest. These people may be served best by some sort of general welfare assistance to help them improve on their present situation.

Present farm improvement programs often tend to help the most capable limited resource farmers such as those who are capable of implementing a land expansion program, and may provide few benefits for older or less responsive farmers. There is therefore a need to identify target groups of limited resource farmers that accurately reflect various different characteristics and problems in order to develop a broad range of programs that respond to the different needs, aspirations, attitudes, capabilities, and resources of all limited resource farmers. Not all limited resource farmers require the same types of agricultural programs, nor are all of them likely to react in the same way towards various incentives to adjustment. Improved information concerning the particular characteristics and problems of limited resource farmers will facilitate public efforts to identify and reach more of the possible clientele of farm improvement programs.

2.0 FRAMEWORK FOR ANALYSIS

2.1 Farm and Human Characteristics Analyzed in the Study

The operation of a farm involves both human and farm (physical) resources. The farm resources may be characterized as land, capital and the physical inputs (such as buildings and machinery) purchased with capital. Human resources are labour and management, and may be conditioned by personal and behavioural characteristics. Personal and behavioural characteristics may be inherited or acquired through experience and include such attributes as age, education, work experience, aspirations, attitudes, and receptivity to change. The human resources are antecedents of the farmer's actions and his decision making, while the farm resources are the production factors at his disposal. These two general classes of resource inputs interact constantly: the human resources are the resources the farmer applies to make and implement decisions concerning the allocation of the farm resources.

The types of information for analysis and classification of limited resource farmers in the study were selected following an extensive review of literature^{1/} and are listed below.

1. Family demographic characteristics
 - A. Age
 - B. Schooling
 - C. Marital
 - D. Number of dependents
 - E. Physical Disabilities

^{1/} See Michael J. Trant, A Classification of Limited Resource Farmers in Ontario Based on Behavioural and Economic Characteristics, Unpublished M.Sc. Thesis, University of Guelph, pp. 13-31.

2. Farm resources
 - A. Land acreage
 - B. Crops grown
 - C. Livestock numbers
 - D. Machinery and equipment (numbers, size, and condition)
 - E. Buildings (size and condition)
 - F. Operating capital
3. Aspirations for farm operation
4. Receptivity to change
5. Alternate employment opportunities
6. Management
7. Income
 - A. Different measures
 - B. Levels
 - C. Sources

The importance of some of these characteristics is easily recognized while it is less apparent for others. Personal characteristics such as age, health, mental capacity and physical disabilities, for example, often help determine a farmer's productivity. As farmers get older they often become more conservative and reluctant to accept risk, work fewer hours, and have fewer nonfarm employment opportunities. Many older farmers, however, have accumulated considerable farm resources, which help determine their earning potential in agriculture. Inadequate land, capital, mechanization, and production inputs can limit farm performance and lead to an inefficient and low-return farm operation.

Aspirations, attitudes, and receptivity to change are also important. Farmers with poorly formulated and mostly short-term goals often earn lower incomes than farmers who make long-term plans with clearly defined goals. Some farmers with strong attitudes of independence

may be unwilling to participate in assistance programs, while others may be very reluctant to make changes because of their aversion to risk, borrowing, or nonfarm work. Farmers desiring to make changes, on the other hand, usually are much easier to involve in assistance programs and to motivate to improve their farm performance. For some, the availability of nonfarm jobs also may be important in improving their incomes.

Management is a particularly important characteristic because it directs the operation of the farm. It is a form of human behaviour characterized by the ability to 1) think things through, 2) identify and anticipate problems, 3) make and implement decisions, and 4) organize and control a business operation. Management is used in allocating resources, determining how much of a product to produce, choosing techniques of production, and marketing the final product. In general, good managers tend to use more deliberation, planning, records, and authoritative sources of information in making decisions and other management functions than poorer managers. Some farmers may be limited by their managerial ability, while others with good management may be limited by availability of capital and physical resources.

Income measures are often used as an indicator of farm performance and the well-being of the farmer. Common measures include gross farm sales, net farm income, total operator income, and total family income. Distinctions must be made among these measures, however, since they measure different aspects of farming. Gross farm sales, for example, measure agricultural performance in terms of the

farm's sales volume, business activity, or economic size. Net farm income measures the farmer's earnings from agriculture and identifies how well he is doing in farming, but it often does not indicate by itself how well off the operator or family is. Total operator income includes income from nonfarm wages and salaries, pensions, investments, and government transfer payments, as well as income from agriculture, and shows how successful the operator is, as well as the relative importance of agriculture as an income source. Total family income includes the income earned by all family members and is the best measure of social welfare or a family's standard of living. Some farmers, for example, may be earning low income from agriculture as their primary occupation and may constitute a "farm problem," but not be a social welfare problem because their wife has a good nonfarm job.

Although net farm income is a good measure of the farmer's earnings from agriculture, it is often difficult to get an accurate statement of this figure. Most of the net farm income figures received from farmers through surveys represent net farm income calculated for tax purposes and seldom include income in kind, inventory changes, and capital gains or losses. Because of the difficulties in interpreting net farm income and its sensitive nature, gross farm sales often is used instead to measure farm performance.

2.2 Quantifying Characteristics for Analysis

In the study, indices had to be developed to quantify information on management ability, aspirations, and receptivity to change which represented qualitative or subjective data from the questionnaire.

In addition, farm acreages were adjusted to take into account the quality and agricultural capability of the soil in total acreage, so that comparisons drawn between one farm and another on the basis of land might have some meaning. The following sections summarize the procedure for developing these quantitative measures.

2.2.1 Managerial Ability

Managerial ability was evaluated in this study through a series of eight questions based on a numerical index designed to assess the farmer's ability to make decisions and manage his farm. Each question was scored according to the degree to which the farmer reflected good, rational management practices, and weighted on a scale from 0 up to 4 points. The index is modelled after a similar index constructed by Dean, Aurbach and Marsh (1958). The respondents were asked to answer questions regarding their formal education, fertilization practices, livestock production, herbicide and insecticide use, and use of financial and production records. In addition, each farmer's managerial performance was evaluated subjectively by the interviewer according to the respondent's use of credit, technology, and the operation and appearance of his farm. The sum of the weighted scores for each question then became the farmer's numerical management ability index. Finally farmers were grouped according to their numerical management ability index into four groups: 1. low management (score 1-7), 2. moderate - low management (score 8-11), 3. moderate - high management (score 12-14), and 4. high management (score 15-20). See Appendix 2 for the specific questions used to develop the management index and

the categories used to weight the farmers' responses.

2.2.2 Aspirations and Receptivity to Change

Aspirations related to the farmer's intentions towards his future activity in farming were secured in the study by asking the farmer open ended questions about his plans for his farm. Responses were simplified into four alternatives: 1. make changes to improve farm production, 2. make no changes, 3. decrease farm activity, and 4. sell the farm. These responses were used along with observations of recent farm improvements and responses to questions about willingness to make changes in farming practices, employment, and residence to indicate the farmer's receptivity to change.

2.2.3 Land Capability

Land capability was evaluated by applying Anderson's forage crop indices to equate all farm land in the survey to Class 1 land equivalents (Anderson, 1971). The soil capability classes for agriculture are an estimate of the potential capabilities of the soil based on interpretations of soil survey information and are explained in Appendix 3. Anderson's forage indices are based upon the physical capability of the soil to produce forages, but also reflect the grain production capabilities of Class 1, 2 and 3 land (Hoffman, 1972). The indices used to adjust the various land capability classes to Class 1 equivalents were 1) .80 for Class 2, 2) .66 for Class 3, 3) .58 for Class 4, 4) .53 for Class 5, 5) .44 for Class 6, and 6) .00 for Class 7 (unsuitable for agricultural use). Each farm was located on land

capability maps from the Canada Land Inventory, 1965, to determine the farm's specific land capabilities, and then adjusted by Anderson's index to derive acreage in terms of Class 1 land equivalents.

2.3 Methods of Data Collection and Analysis

The data for the study was collected by personal interview in a survey of 193 farmers, 101 from Renfrew County and 92 from Grey County. These farmers were contacted from an initial random sample of 420 farmers from the Central Farm Registry drawn to assure about 100 interviews from each county.^{1/} To protect the confidentiality of those selected, 5% of the farmers drawn from the Registry had gross sales of an unknown amount, making it impossible to identify any particular farmer as grossing under \$15,000 in 1970 from the sample. This error meant that there was a possibility that 10 farmers from each county could have earned gross sales in excess of \$15,000 in 1970, likely accounting for some of the farmers contacted in the survey who had large gross sales.

1/

Of the 227 farmers on the list who were not interviewed, 153 were ineligible because they had moved, died, sold the farm, or quit farming since 1971. Eight farmers were contacted but refused interviews, and 65 farmers could not be contacted. Of these 65 farmers 42 were traced by telephone, but no response was received from repeated telephone calls to their residences during August to October. The other 23 had no telephones and could not be located, even with local assistance. The response rate in the survey among eligible farmers was approximately 73% if all of the 65 farmers not contacted were assumed to be limited resource farmers still farming. However, since a number of the 42 individuals who could not be contacted likely were no longer farming, the response rate among active farmers may have been as high as 80 to 85%.

Grey and Renfrew Counties were selected as the sample areas for several reasons: 1. both counties reported large farm populations and a large proportion of farmers with low sales volumes in the 1971 Agricultural Census, 2) one was influenced by a large urban center and one was still essentially isolated, 3) they provided a variety of land capabilities since one lies on the Shield and one on a till plain, and 4) both were reasonably accessible from Guelph.

The survey data were analyzed by correlation, regression, and cross tabular analysis to determine for active farmers under the age of 65 (excluding hobby farmers) significant characteristics affecting agricultural performance as measured in terms of gross sales and net farm income, (see section 3.3). These characteristics were then used to group farmers into categories reflecting different farming and behavioural patterns, which subsequently formed the basis of the classification system.

Correlation coefficients were applied to the exploratory task of finding out which variables were related to gross farm sales and net agricultural income. Correlations between gross sales and net agricultural income indicated the degree or strength of relationships between these dependent variables and age, operator nonfarm income, total operator income, total family income, poverty level, the number of days of off-farm work, focus, acreage, management ability, aspirations, the probability that a son or daughter might take over the farm upon the present operator's retirement, physical disabilities, and county in which the farm was located. Once the correlation established the nature and strength of relationships between gross and

net farm income and the independent variables, regression analysis was used in an attempt to predict the value of gross farm sales and net agricultural income from the independent variables found significant in explaining them.

The regression equation used in this study was a linear function which was calculated in a series of steps to determine the relative importance of each factor in affecting farm performance. In the first step, the regression selected the most significant regressor (independent variable) and regressed gross farm sales or net agricultural income (the dependent variable) against it by itself, then selected and regressed the dependent variable against the first and second most significant regressors in the second step and so on, until the least significant regressor was included. Net and gross farm incomes were regressed against such variables as management, acreage, county where the farm was located, the probability that the farmer might change his farm operation or increase his farming activity, poverty level, physical disabilities, the farmer's age, and the number of days of off-farm work.

The tabular analysis provided a frequency distribution of limited resource farmers not yet of retirement age and was intended to identify patterns which might be used to help specify farmer groups in the classification system. The cross tabulations were based upon variables identified in the regression analysis as being significant in explaining farm performance. The variables included management, land, aspirations, age, physical disabilities, the probability that a

son or daughter might take over the farm upon the present operator's retirement, the county in which the farm was located, gross farm sales, and net agricultural income.

3.0 RESULTS OF THE SURVEY AND ANALYSIS FOR
CLASSIFYING LIMITED RESOURCE FARMERS

3.1 Survey Findings

In general the 193 farmers interviewed in the survey tended to be operating small-scale enterprises with moderate or low incomes. Many of the limited resource farmers were in their 50's and operating farms using dated technology. The farms were generally mixed in terms of crop and livestock production with the main emphasis on beef (especially cow-calf operations) and dairying (industrial can and cream producers), and included a few sheep farms. Two-thirds of the farmers were over 50 years old and 25% were over age 65. Only 11% were under age 40 and 23% were between 40 and 49 years old. Fifteen percent of the farmers under age 65 had physical disabilities. The results of the survey are summarized in Appendix 1.

The survey identified 168 limited resource farmers with gross sales of \$25,000 or less in 1975. One hundred and twenty of the farmers were of working age and 48 were retirement age over 65. An additional 25 working age farmers were found with gross sales over \$25,000. Since these 25 farmers were considered as commercial farmers, however, they were excluded from the classification system, and will not be discussed further here.^{1/} The distribution of the farmers contacted in the survey is summarized in Table 1.

^{1/}

The high proportion of farmers with gross sales in excess of \$25,000 in 1975, including one farmer grossing \$150,000, was in part a result of a 5% error introduced into the sample by Statistics Canada to protect the confidentiality of the respondents. Additionally, some of the higher gross sales operators generating low sales volumes in 1970 had improved their farms and increased their business activity to a fairly substantial level by 1975.

Table 1 Distribution of Farmers Contacted in the Survey

Age of Farmer	Number of Limited Resource Farmers*	Number of Commercial Farmers**	Total
Working Age	120	25	145
Retirement Age	48	0	48
Total	168	25	193

* \$25,000 gross sales or less in 1975.

** over \$25,000 in 1975.

Although all limited resource farmers by definition had \$25,000 gross sales or less, 65% of them had less than \$10,000. About 50% had gross sales under \$5,000, 15% between \$5,000 and \$10,000, 21% between \$10,000 and \$15,000, and only 14% grossed over \$15,000. With many farmers generating low sales volumes, it is not surprising that the earnings retained from the farm operation in terms of net farm income were low.^{1/}

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Caution should be exercised when interpreting net farm incomes here, because they often were reported by the farmer as net farm income for taxation purposes which did not include inventory changes, changes in net worth, and income in kind from the farm. Reported net farm income figures appear highly unreliable in the case of younger farmers, but more reliable for older operators. Net farm income among older operators was a relatively constant proportion of gross farm sales, (ranging from 30% to 50% of gross farm sales), while very large differences existed among younger farmers as a consequence of inventory buildups, etc. Despite their limitations in terms of assessing farm performance, net farm income figures are included in the study results because of their importance in assessing the contribution farm earnings make towards total family income and the reliance the family places on farming.

Among the 120 limited resource farmers of working age, 30% earned zero or negative net farm incomes, 35% earned between \$1 and \$3,000, 15% earned between \$3,000 and \$6,000, and 19% over \$6,000. The 48 retirement age farmers had understandably low net farm incomes, reflecting their diminishing dependence on agriculture. About 43% of the retirement age farmers had small losses, 47% earned between \$1 and \$3,000 net farm income and only 4% earned over \$3,000.

Of the total 120 limited resource farmers of working age, 56 held supplementary jobs or major nonfarm employment in addition to farming, earning from \$300 to \$15,000 from nonfarm sources. Thirty-six farmers worked off their farm at a nonfarm job in addition to actively farming, two did off-farm custom farm work, and two earned nonfarm incomes on their farms (tourist cabins and quarry work). Another 16 did a minimum of farm work with low to negative farm income, but worked full time at nonfarm jobs and were identified as hobby farmers. The sample, however, did not contain any professional people, such as doctors, lawyers, or businessmen earning very high nonfarm incomes. Most of the working age limited resource farmers in the survey (60%) either did not report any nonfarm work or worked off the farm 30 days or less.

Total family incomes of the 168 limited resource farmers typically ranged from \$2,000 to \$15,000. About 35% (42) of the farm families in which the household head was of working age showed total family incomes below the poverty threshold defined by Statistics Canada for 1975, and most of these families relied primarily on farming for their income. Thirty families with working age heads, however, had total family incomes of \$10,000 or over. These farmers were primarily hobby farmers, had nonfarm

employment themselves, or had wives working in nonfarm jobs. Twenty-eight percent of the wives of working age limited resource farmers had nonfarm jobs, contributing from \$200 to \$14,000 to family income. Retirement age families typically earned from \$3,000 to \$9,000.

Actual farm acreages varied over a wide range. Farms in the sample ranged from less than 5 acres to over 700 acres, with most farms being in the range of 100 to 150 acres. After adjusting the farm acreage to a Class 1 basis, the range for limited resource farms was from a few acres to almost 300 acres, with 70 to 100 acres the typical size. Thirty-six limited resource farms (22%) consisted of less than 50 adjusted acres, 59 (36%) had between 50 and 100 adjusted acres, 31 (19%) had between 100 and 150 adjusted acres, 20 (12%) had between 150 and 200 adjusted acres, and 18 (11%) had over 200 acres of Class 1 land equivalents. Acreage figures were unavailable for 4 farms.

Management scores also ranged from quite high to very low. Of the 120 limited resource farmers of working age, 32 (27%) scored low on management (score 1-7), 42 (36%) scored low to moderate (score 8-11), 25 (21%) scored high to moderate (12-14), 19 (16%) scored high (15-20), and 2 scores could not be calculated. Many of the farmers with the high management scores tended to be young farmers generating larger gross sales volumes in relation to the rest of the limited resource farmers.

The aspirations of the farmers indicated a mixed desire to undertake farm improvements. Thirty-three limited resource farmers (28% of the total 120 of working age) indicated plans for increasing their farm activity or improving their farm operation, 32 (27%) anticipated decreases, 39 (32%) planned no changes, and 16 (13%) were going to sell the farm. In general,

farmers who wished to improve or increase farm activity tended to be younger farmers (less than 45 years old), or older farmers who expected a son or daughter to take over the farm in the near future. Those of retirement age, near retirement age, or not expecting a son or daughter to take over the farm were the least receptive. Many of these farmers were very security conscious and adverse to risk. Retirement age farmers often were farming primarily to keep active, and most (54%) were phasing down their operations. Only 6 retirement age farmers (12%) intended to sell their farms.

The farmers in the study generally were receptive to nonfarm employment, but few were interested in full-time nonfarm jobs unless they already worked full time. Younger farmers were the most receptive. Most respondents, however, indicated a reluctance to move from their present location. Some of the younger and middle-aged farmers indicated they were content to continue farming because they enjoyed the isolation and found the farm a healthy environment in which to live and raise their children.

Comparisons between counties indicate that Renfrew County farmers were operating larger farms on an unadjusted acreage basis than Grey County farmers, but smaller farms when adjusted in terms of Class 1 land equivalents because of poorer land capabilities. Additionally, the managerial ability of farmers in Renfrew County was in general lower than that of Grey County farmers. The greater proportion of farmers with higher managerial abilities in Grey County may have resulted from the recent increase there in farm values, enabling the poorer farm managers to sell their farms and take advantage of alternative employment

opportunities. Renfrew County, on the other hand, has not been subjected to as much of this pressure for land, although such pressure is more prevalent now than it used to be. The farmers in Renfrew County also tended on average to have lower gross sales volumes and net farm incomes than their Grey County counterparts. Because of this combination of lower agricultural incomes and limited physical resources, farmers in Renfrew also relied more often on seasonal and permanent nonfarm jobs to supplement their farm earnings. The presence of seasonal industries in Renfrew County, such as logging (which provides employment in the winter months when farm labour requirements are at a minimum), also appeared to contribute to nonfarm employment among Renfrew farmers.

Information about new farmers who had moved into the counties in the past five years was not available, however, because the sample reported from the Farm Registry included only farmers who had been farming on the same farm since 1971. In addition, it was very difficult to identify the purchasers of the farms sold by operators on the sample list who had left agriculture. As a consequence the survey may not provide a statistically reliable sample of limited resource farmers for 1975. The survey also did not reveal problems requiring an in-depth analysis such as alcoholism, psychological, and marital problems, which were not apparent during the course of the interview. Despite these limitations, however, there is no evidence to suggest any other classification of limited resource farmers than that identified in the study.

3.2 Classification of Main Farmer Types

In the study, three main types of limited resource farmers were

identified according to their orientation to agriculture as an important source of income at the time of the survey. These types were classified as farmers with primarily 1) farm, 2) mixed (farm and nonfarm employment) or 3) nonfarm focus in their work. However, since some farmers may move into and out of nonfarm jobs over time, this classification represents a snapshot at a particular point in time, rather than a permanent categorization.

A large number of farm focus farmers (108) were identified in the study who had a primary orientation to agriculture and earned all or the greatest proportion of their income from agriculture, regardless of their spouse's income. A significant but smaller number of mixed focus farmers (28) were also identified as farmers with a heavy dependence on agricultural earnings, but also with substantial income from a nonfarm job. Because of their strong reliance on both farm and nonfarm employment, these farmers were found to have different needs, perspectives, and receptivity to farm improvements. In addition, 16 farmers were identified with a focus toward the nonfarm sector of the economy. These nonfarm focus farmers devoted most of their time and interests to their nonfarm jobs, and their earnings were mainly from nonfarm employment. Because they were often farming for pleasure rather than for income, their receptivity to farm improvements and their needs in terms of improvement programs appeared to be substantially different from both the farm and mixed focus groups. After analyzing data from the survey, criteria were identified that best appeared to describe farmers in the various categories, and are summarized below. Since these criteria were established from the survey examining only Ontario farmers, they may not be totally correct for other

areas of Canada. It is hoped, however, that they may provide an initial basis for classifying farmers in other regions.

3.2.1 Farm Focus Farmers

Farm focus farmers were best described by the number of days that a farmer spent per year in off-farm work, identified as the following criterion:

1. less than 30 days off the farm regardless of gross sales.

This criterion was based upon the farmers' commitment to farming as a full-time occupation (described by the farmers themselves during the interviews), and the importance of farm earnings to family support. The criterion was designed to identify all farmers who appeared in the survey to be fully committed to agriculture in terms of time and income, including those who accepted limited nonfarm work as long as it didn't compete for agricultural time. Furthermore, since focus is defined in terms of the operator's orientation, it is not affected by the spouse's farm or nonfarm work. Since this category includes all farmers fully committed to agriculture regardless of age, it includes both fully active farmers and farmers of retirement age.

3.2.2 Mixed Focus Farmers

Mixed focus farmers were best described by the following criteria:

1. a period of 31 to 149 days per year of off-farm work, combined with active farming and gross sales of \$25,000 or less (in 1975).
2. a period of 150 to 199 days per year of off-farm work

combined with gross sales in excess of \$4,000 or a loss of more than \$1,000 in net farm income if gross sales were less than \$4,000.

3. a period of 200 or more days per year of off-farm work, combined with gross sales of \$4,000 or a loss of more than \$2,000 in net farm income if gross farm sales were less than \$4,000.

The criteria were designed to identify farmers relying heavily upon agriculture for employment and income, but also supplementing farm income from nonfarm earnings. The first criterion identifies the farmer with moderate nonfarm work, while the second and third criteria are designed to distinguish between the hobby farmer and the nonfarm job holder who still actively farms for income. Farmers spending between 31 and 149 days on nonfarm work (criterion one) are not fully employed outside agriculture, and as a result are still fairly reliant on agriculture as a source of income. Farmers working over 149 days, indicating a strong commitment to nonfarm work, were found to be depending on agriculture for employment if they earned \$4,000 or more in gross sales. In the event that they were holding inventories or withholding products because of poor prices and not earning \$4,000 in gross sales, a net loss of \$1,000 to \$2,000 was also accepted as part of criterion number two or three. The lower loss figure was associated with the farmers working off the farm 150 to 199 days, since they were more likely to be devoting more of their time to agriculture than the farmers working more than 200 days off the farm (primarily at full-time nonfarm jobs). For the farmer with 200 or more days of nonfarm work the \$2,000 loss criterion appeared greater

than the losses acceptable to the hobby farmers in the survey.

3.2.3 Nonfarm Focus Farmers

Nonfarm focus farmers correspondingly were best described as those with:

1. a period of 150 to 199 days per year of off-farm work, combined with gross sales of less than \$4,000 and a loss of less than \$1,000 in net farm income.
2. a period of 200 or more days of off-farm work, combined with gross sales of less than \$4,000 and a loss of less than \$2,000 in net farm income.

3.3 Analysis of the Data

The analysis of the data was based on correlations, regressions, and cross tabulations to help group the limited resource farmers into sub-groups reflecting their different orientation to farming, farm performance potential, willingness to participate in programs, and specific assistance needs. A detailed description of the analysis is given in Appendix 4, and only a brief summary is provided here.

Initially gross sales and net farm income were correlated with a large number of independent variables to identify factors explaining farm performance. The variables with the strongest correlation were analyzed in the following regression equation:

- | | | |
|--------------------|---|--|
| 1. Gross Sales | = | f(Mgt. score (1-20); Days of nonfarm work; |
| or | | Acreage; Physical disabilities; |
| | | Aspirations to increase, decrease |
| 2. Net Farm Income | | or make no change in farm activity; |
| | | County of residence; Poverty; Focus) |

Three regressions were run for each of gross sales and net farm income for 1. both farm and mixed focus farmers together as a group, 2. farm focus farmers only, and 3. mixed focus farmers only.

The results of the regressions (summarized in Appendix Table 4.1) showed that management was by far the most significant variable in explaining farm performance in terms of either gross sales or net farm income, and therefore should be an important variable in any classification system reflecting behavioural characteristics. The regressions also indicated justification for distinguishing farmers on the basis of their focus (full or part-time farmers), their aspirations toward farm improvements, and, to some extent, their age. There was little correlation between physical disabilities and farm performance, so there would appear to be little point in separating farmers on the basis of this criterion. The county where the farm was located also was identified as a significant factor in the regression analysis, but a province-wide or national classification system designed to cross county lines should not make categories exclusively on these grounds. Surprisingly, acreage was not very significant in the regressions, indicating that behavioural characteristics were more important than the physical size of a farm in determining farm performance.

In addition to farm performance variables, participation in programs and receptivity to change indicators were analyzed for working age farmers (under 65) through six cross tabulations for each of the farm and mixed focus groups to help identify sub-groups of active limited resource farmers. The six cross tabulations are summarized in Appendix

Tables 4.3 to 4.14 and are identified as follows:

1. Management x Acreage x Gross Sales
2. Management x Acreage x Net Farm Income
3. Management x Gross Sales x Total Family Income
4. Management x Acreage x Aspirations
5. Management x Gross Sales x Aspirations
6. Age x Aspirations x Gross Sales

From the cross tabulations it was found that farmers of working age with high management scores generally had the highest gross sales, owned the most resources, and were the most receptive to farm improvement. Both farm and mixed focus high management farmers generally farmed over 100 adjusted acres, but the farm focus group had higher gross sales, higher net farm income, and lower total family income. Farm focus high management farmers tended to be young (27-32) or over 47, while the mixed focus group was between 36 and 50. The younger farmers appeared the most receptive to change, but older high management farmers generally were more receptive to farm improvements than older farmers with low managerial ability.

The moderate management ability farmers (score 8-14) of working age differed from the high management farmers in their farm performance and their receptivity to farm improvements. Moderate management farmers generally operated farms of reasonable size (often over 100 adjusted acres), but generated lower gross sales and incomes. Farm focus moderate management farmers typically earned \$2,000 - \$4,000 net farm income and mixed focus somewhat lower, but both groups earned similar family incomes (typically \$3,500 - \$7,000). Moderate management farmers were often more

security oriented and less likely to make farm improvements than higher management farmers, unless a son or daughter was expressing a desire to take over the farm. Farm focus moderate management farmers tended to be quite old (over 2/3 were 50-64) while two thirds of the mixed group was under 50.

Farmers of working age with low management ability (scores of 7 or less) were generally operating small farm acreages (many under 50 adjusted acres) and had very low gross sales (under \$7,000). As a consequence they all had low net farm incomes, and many earned family incomes below the poverty threshold. These farmers were the least receptive to making farm improvements or adjusting their operations in response to changing economic conditions. Many were very traditional in their farming practices, using very outdated technology.

The cross tabulations also indicated that age, not gross sales, appeared to affect the farmer's decision either to increase farm activity or to make farm improvements. The younger the farmer, no matter what his focus, the more likely he appeared to be receptive to making farm improvements. Farmers at or under 50 were those most likely to make changes, unless older farmers had a commitment from their sons or daughters to take over the farm. Farmers between 50 and 60 without children who showed an interest in succeeding them were unlikely to make farm changes, reflecting their reluctance to invest in an enterprise which they would be working for only another 10 years or so, but which they could not afford to ease up on because they still needed the income that the farm generated. The farmers over 60 and near retirement age were those most likely to be reducing their farm activity in anticipation of retirement. The farm focus

farmers, relying much more heavily on the farm for income than those with a mixed focus, also were more receptive to changes later in life than the mixed focus farmers.

Farmers with physical disabilities did not appear to constitute a separate group, but were dispersed among the other groups according to their managerial ability, aspirations, age and focus. The farmers with physical disabilities often appeared limited in their farm activity, but physical disabilities did not appear to determine their overall behavioural pattern.

3.4 The Overall Classification System

The overall classification system of limited resource farmers in this study is based upon the results in the correlation and regression analysis, the patterns emerging from the cross tabulations, and inferences drawn from the survey. The classification system consists of

I Farm Focus Farmers

1. Transition stage farmers
2. Potential commercial farmers
3. Market oriented farmers unreceptive to change
4. Traditional farmers
5. Retirement age farmers

II Mixed Focus Farmers

1. Transition stage farmers
2. Potential commercial farmers
3. Permanent part-time farmers, unreceptive to change, with an income derived mainly from agriculture
4. Permanent part-time farmers, unreceptive to change, with an income derived mainly from nonfarm employment
5. Traditional farmers

III Nonfarm Focus Farmers

The first three sub-groups of farm focus farmers have a strong market orientation as do the first 4 sub-groups of mixed focus farmers. The remaining sub-groups of farmers in each of the farm and mixed focus groups have a limited market orientation. The justification for accepting these hypothesized groups is discussed in the remainder of this section.

The general distribution identified in the Phase I survey of limited resource farmers intending to remain in agriculture is given for the classification system in Figure 1. This distribution excludes 16 farm and mixed focus farmers of working age planning to sell their farms because they were expected to leave agriculture. Figure 1 includes the 12 sub-groups identified in the classification system with modifications for farmers with physical disabilities and personal problems cutting across the various behavioural groups. Although it appears that physical limitations influenced the behaviour of some of the farmers and resulted in their classification into particular sub-groups, farmers with significant physical disabilities were found throughout the classification system. The total number for each sub-group identified in the survey is found at the left-hand side of the graph. Within the groups, farmers without physical disabilities are represented by the white portion of the graph, and those with physical disabilities (if there are any in the sub-group) by the shaded portion. Farm focus farmers were subdivided into 5 separate sub-groups and mixed focus into 6, with 1 fairly homogeneous sub-group of nonfarm focus operators.

DISTRIBUTION OF LIMITED RESOURCE FARMER SUBGROUPS

IN THE SURVEY

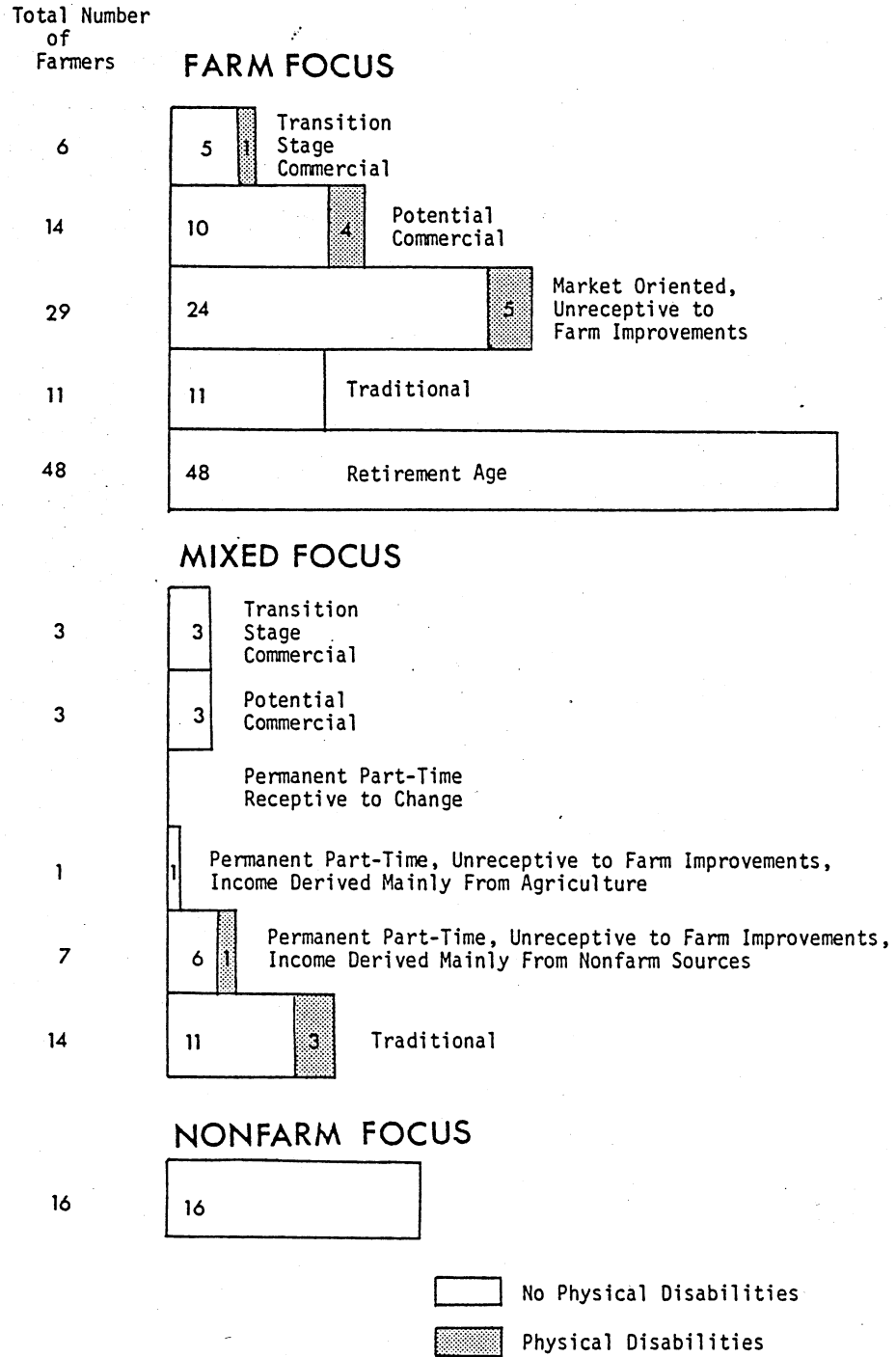


Figure 1

3.4.1 Transitional Farm Focus Farmers

The first group, transitional farm focus farmers, are represented primarily by younger farmers with aspirations to make substantial enlargements in their farm operations and present level of farm activity. This group of farmers usually displayed some of the higher managerial scores among the farmers surveyed and were either presently operating large-sized farms or had intentions of acquiring more land in the future. (This group is found predominantly in the upper left-hand corner of Appendix Table 4.3 as young farmers with high management ability and acreage, and in the upper left-hand corner of Appendix Table 4.13 as farmers under age 40 aspiring to increase their farm operations). The survey identified six farmers in this group with only one having a significant physical disability. The relative size of the group, however, is probably an underestimation of the actual distribution of these farmers in the population, since transition stage farmers tend to build up their operations quickly into large volume enterprises and "grow" themselves out of the limited resource farmer category in a few years. Consequently, many of the transition stage farmers identified in the survey were the slower adjusting transitional farmers who had been in the limited resource farmer category for at least five years. Additionally, transition stage farmers entering agriculture since 1971 could not have been included in the sample and would not show up among the farmers surveyed.

3.4.2 Transitional Mixed Focus Farmers

A similar group of transitional farmers, temporarily limited in

terms of resources, were found among mixed focus farmers. The farmers in this group were very similar to those with a farm focus with the exception that they relied upon their nonfarm job to generate capital to expand the farm, while the farm focus farmers worked full-time on their farms and ploughed their farm earnings back into their farms, often relying on their spouses to provide income for living expenses. (These farmers are identified as comprising the majority of farmers documented in the upper left-hand corner of Appendix Table 4.14 and the younger farmers in the same corner of Table 4.4). Three farmers were identified from the survey as members of this mixed focus transitional farmer group, none with significant disabilities. Like the transitional stage farmers with a farm focus, the number of these farmers probably was underestimated. The main goal of both the farm and mixed focus farmers was to operate successful commercial, full-time farm enterprises. Their farm and/or nonfarm income often was reinvested in the farm enterprise to help build it into a viable, commercial unit.

3.4.3 Potential Commercial Farm Focus Farmers

These potential commercial farm focus farmers represented a group of fairly well established, security oriented farmers operating fairly substantial acreages (over 100 acres in terms of Class 1 land equivalents), and often grossing around \$15,000 per year. They were individuals who appeared to have the managerial ability and potential to operate commercially successful farms although they were presently operating limited resource farms. (They are identified in the middle-upper left-hand section of Appendix Tables 4.3 and 4.5 as the middle-aged farmers

with moderate or better management and acreages, and \$15,000 or more in gross sales. Additionally, they are identified in Appendix Table 4.13 as the farm focus farmers over age 40, but aspiring to improve their farms). Among the survey respondents, the potentially commercial farm focus farmers comprised a group of 14 farmers, 4 of whom had significant disabilities. These farmers were mainly aged between 40 and 49 years, but some of the operators who expected a son or daughter to take over the farm in the near future were older men. They were farmers fairly receptive to the concept of making farm improvements, but were limited in their farm performance because of their reluctance to take the initiative for farm improvements without outside encouragement or incentives. Often these farmers were moderate risk avoiders.

3.4.4 Potential Commercial Mixed Focus Farmers

Three potential commercial farmers also appeared among the mixed focus operators. These farmers were well established, operating farms of fairly substantial acreages and sales, with potential for commercial success, but they also were somewhat security oriented. These mixed focus farmers appeared to differ from their farm focus counterparts only in their nonfarm employment which appeared to be a means of supplementing farm earnings. (These farmers are identified in the upper left-hand part of Appendix Table 4.4 as moderate or better managers with moderate or better acreages and who are generating fairly substantial sales volumes -- greater than \$15,000. In Appendix Table 4.10 they represent the farmers with moderate and better management and acreages who intend to increase farm activity. Additionally, in Appendix Table 4.14 they comprise the

majority of the mixed focus farmers over 40 intending to increase farm activity).

3.4.5 Permanent Part-Time Farmers Receptive to Change

These farmers were not represented by any of the farmers contacted during the survey, but they were retained as a group in the classification system because other sources of information indicated that there was reason to acknowledge their existence.^{1/} These farmers were described as a group of mixed focus farmers, committed to both agriculture and non-farm employment on a permanent basis. Some appeared to be established, security-oriented, middle-aged farmers. Others were younger farmers who had just bought farms and moved into the rural area, farmed for income and still intended to keep their nonfarm jobs. Since the sample was drawn from the 1971 Central Farm Registry, part-time farmers entering agriculture since that date could not have been contacted in the sample. However, their relatively recent emergence in farming communities over the past five years in Grey County and possibly even more recently in Renfrew indicate the growing importance of this group.

^{1/} ARDA representatives Bob Morrison in Grey County and Cal Patrick and Will Hermans in Renfrew County indicated that permanent part-time farmers receptive to change were becoming an important group of farmers in their areas. Both areas were undergoing extensive change and values of farm land were rapidly appreciating as people from urban areas bought up farm properties. Some of the farms were being bought as hobby farms, retirement estates, or as subsistence farms (getting back to the land), but others appeared to have been bought by individuals planning to farm on a part-time basis, intending to make the farm enterprise a profitable operation. These farmers, however, were receptive to farm improvements in contrast to the rest of the farmers farming on a permanent part-time basis.

3.4.6 Market Oriented Farm Focus Farmers Unreceptive to Change

The market oriented farm focus farmers resistant to change consisted of a mixture of older farmers in their late 50's and early 60's, security-oriented operators reluctant to take risk, and farmers with physical limitations preventing them from expanding their operations (even though they were previously receptive to improvements). All generally showed moderate management ability and operated established farms of a moderate size. Most did not expect sons or daughters to take over the farm, although some indicated that their children were marginally interested. (The older farmers in this group are best depicted in Appendix Table 4.13 as the cluster of older farm focus farmers in their 50's and early 60's anticipating either decreasing farm activity or making no farm changes). The overall group of market oriented farm focus farmers unreceptive to change was by far the largest group of limited resource farmers of working age contacted in the survey. They comprised a group of 29 farmers in the survey, five of whom had significant physical disabilities. Because of their stage in the life cycle or other limitations, many had few alternatives to choose from other than farming and did not appear particularly receptive to the idea of changing jobs. Some of the older farmers in this group indicated that they had held nonfarm jobs in the past while their children were growing up, but that as demands on their incomes decreased, their farms had pretty well met their income requirements without recourse to supplementary incomes from off-farm jobs. Without sons or daughters to take over their farms, they were unwilling to invest in needed improvements. Many of them could not afford to decrease activity on their farms because

they were not yet old enough to receive old age assistance. Consequently, they were often locked into farming, earning low incomes until they reached retirement age, and could receive pensions.

3.4.7 Permanent Part-time Farmers Unreceptive to Change with an Income Derived Mainly from Agriculture

A similar group of market oriented farmers reluctant to change can be identified among farmers with a mixed focus. However, mixed focus farmers in the survey with these characteristics were few, with only one identified. Market oriented mixed focus farmers unreceptive to change with incomes derived mainly from agriculture generally are likely to be the same age as their farm focus counterparts with a similar strong security orientation. They are also likely to be established farmers with little expectation that a son or daughter would take over the farm in the future.

3.4.8 Permanent Part-time Farmers Unreceptive to Change with an Income Derived Mainly from Nonfarm Employment

Although there was only one mixed focus farmer unreceptive to change identified with an income derived mainly from agriculture, seven were identified with an income derived mainly from nonfarm sources. These farmers were also strongly security oriented, and operating established farms. They were generally in their 40's and early 50's, typically under age 55 and farming for income. A high proportion of them subsisted on total family incomes below the poverty threshold. Because of their strong bias in favour of security and against risk, they were not particularly successful in agriculture, often operating their farms as secondary enterprises to nonfarm jobs. Their heavy reliance on nonfarm income,

therefore, may make them a group difficult to motivate for farm improvements. (These farmers are identified mainly as farmers with moderate managerial ability and moderate-low acreage in Appendix Tables 4.4 and 4.8. In Table 4.14, they also comprise many of the older mixed focus farmers who reported that they intended to decrease or make no changes in their present level of farm activity).

3.4.9 Traditional Farm Focus Farmers

Traditional farm focus farmers appeared to represent a substantial group of limited resource farmers with low management and low acreage. Not only were these farmers averse to changes in their farm operations, but they also were oriented considerably towards self-sufficiency. They tended to apply farm techniques more in keeping with the technology available to their fathers 30 or 40 years ago than with modern methods. Additionally, they did not appear to be making any efforts to adjust to the commercial orientation of the economy. The traditional farm focus farmers comprised a group of 11 farmers of which only 2 had significant physical disabilities. It often appeared that their limited managerial ability was a major limitation to farm performance, placing constraints on the amount of resources that they could successfully co-ordinate and exploit. (These farmers are best identified as the low management, low acreage farmers in Appendix Tables 4.3, 4.5, 4.7 and 4.9.

3.4.10 Traditional Mixed Focus Farmers

A similar group of traditional farmers were found among the mixed focus farmers contacted in the survey. The two groups are only distinguished

one from the other in that the mixed focus group earned supplemental incomes from nonfarm jobs, which did not appear to be substantial. (Total family incomes of the two groups were very similar). The traditional mixed focus farmers also generated small sales volumes, operated small sized farms, and used outdated technologies. Fourteen of the respondents contacted in the survey are members of this group, making it the second largest group of working age limited resource farmers in the survey. Three of the 14 in the group had significant physical disabilities. (As a group, they are identified in the lower right-hand corner of Appendix Tables 4.4, 4.6, 4.8 and 4.10).

3.4.11 Retirement Age Farmers

Farmers age 65 or over were by definition retired from the nonfarm sector and as a consequence had a farm focus. Retirement age farmers often persisted in operating their farms in order to remain physically active and to preserve their sense of pride; farming was a means of supplementing their pension and investment income. Few of these farmers operated their farms as commercially oriented enterprises. Farming for these operators represented a means of preserving an accustomed life style in retirement rather than a source of income. These farmers characterized a group of less active farmers, reluctant to undertake farm improvements, particularly if it involved investment in terms of money or time. They were unlikely to be generating much in terms of gross sales and often had physical disabilities because of their age, which further limited farm activity. They are not identified in the cross tabulations because their needs differed dramatically from the needs of the younger farmers, but

they are listed in the summary of farmer characteristics (Appendix 1). The retired group (48 farmers) was the largest group of limited resource farmers contacted during the survey.

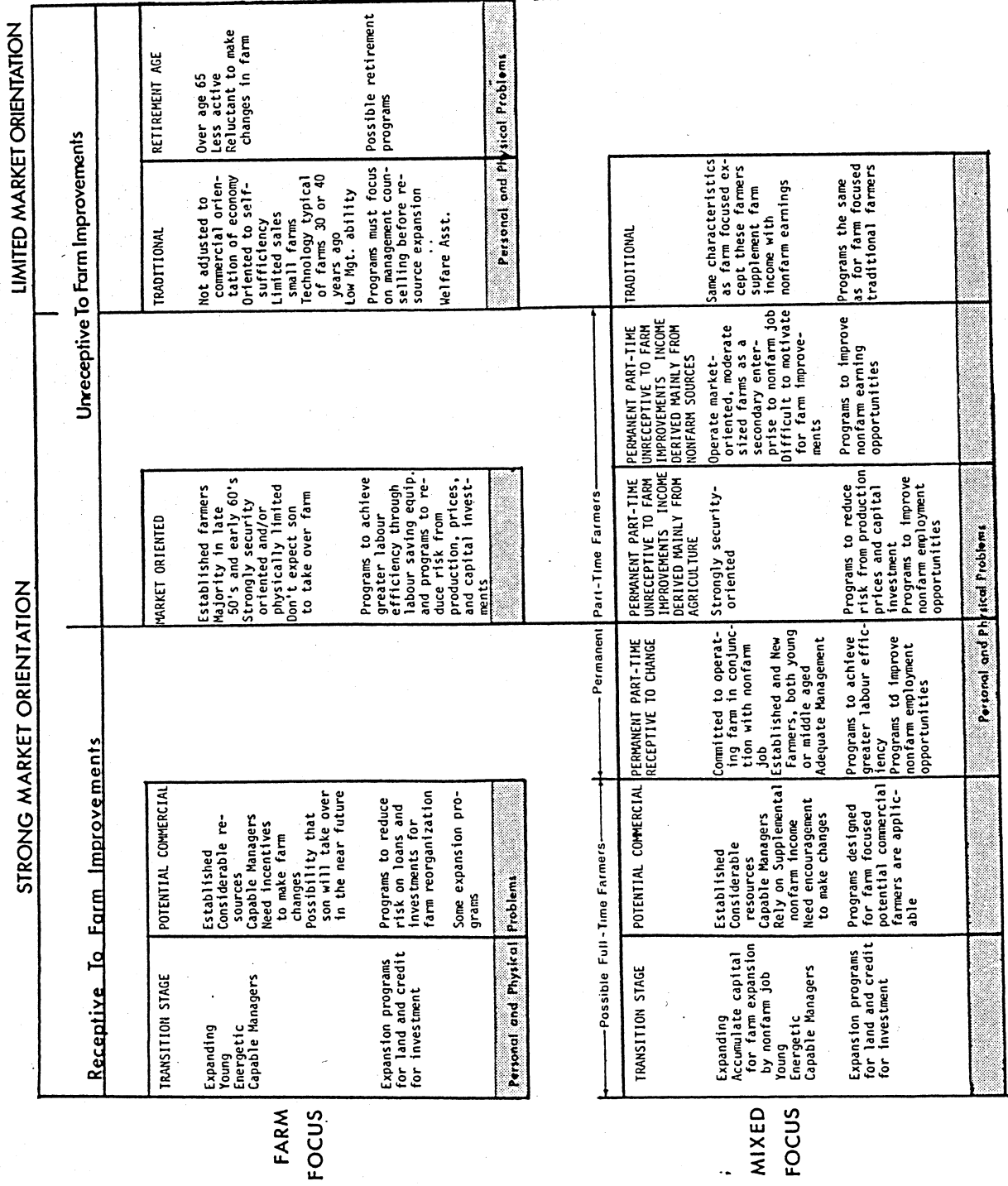
3.4.12 Nonfarm Focus Farmers

Nonfarm focus farmers generally had full-time nonfarm jobs and farmed as a hobby or as a form of recreation. The nonfarm income of working nonfarm focus farmers ranged from \$5,400 to \$15,000 and was typically \$6,000 to \$10,000. Their farm income, on the other hand, typically ranged from \$600 to \$-500, with about half reporting zero net farm earnings. Because of their low dependence on agriculture as an important source of income and their high overall income these farmers should not be considered as an agricultural income problem.

3.5 Implications of the Classification System for Developmental Programs

The 12 sub-groups of farmers identified in the classification emphasize the variety of characteristics and needs among limited resource farmers. Similar sub-groups in the farm and mixed focus categories, however, generally appeared to share many of the same characteristics and needs which could be met by the same kinds of assistance programs. For example, both farm focus and mixed focus transition stage farmers are in the process of expanding their farms and may respond to many of the same kinds of programs to help them enlarge their operations. As a consequence, many types of programs may apply equally to either the farm or mixed focus sub-group. Figure 2 provides a summary of the various sub-groups included in the classification system and identifies their characteristics and

Limited Resource Farmer Classification System



FARM FOCUS

MIXED FOCUS

NONFARM FOCUS

NONFARM FOCUS
 Moderate or high nonfarm incomes
 Farm for a hobby or form of recreation

Not likely clientele of either agricultural or non-agricultural assistance programs

Figure 2

program needs. Similar farm and mixed focus sub-groups are diagrammed above and below each other to identify them as target groups for similar types of programs. In two cases there were no farm focus counterparts for permanent part-time farmer groups, so the space above these groups was left blank. Likewise, no mixed focus retirement farmers were considered.

3.5.1 Transition Stage Farm and Mixed Focus Farmers

The transition stage farmers with both a farm and mixed focus are young, energetic, capable managers, usually short of land and capital for investment. Since they are receptive to improving their farms and usually are investing either their farm or nonfarm income in their operations, they are likely to benefit from land expansion and credit programs. Some are likely even to initiate expansion changes on their own.

3.5.2 Potential Commercial Farm and Mixed Focus Farmers

Potential commercial farmers with both a farm and mixed focus often have substantial farm resources and good management ability and are moderately receptive to farm improvements. They are less likely than the transitional stage farmers to be interested in expansion programs because most already operate moderate-sized farms and want to keep their farm at its present size. Some expecting a son or daughter to take over in the near future, however, may be interested and willing to participate in expansion programs. If they are given encouragement and assistance, the potential commercial farmers are likely to take advantage of credit and other programs to increase their efficiency by reducing costs, improving

yields and livestock production, and reducing labour requirements per unit of output. They might also participate in and benefit from programs offering managerial counselling and credit to encourage a more profitable reorganization of their farms, including new enterprise combinations.

3.5.3 Permanent Part-Time Farmers Receptive to Change

These farmers are likely to be committed to operating their farms in conjunction with their nonfarm jobs and are likely to be particularly interested in farm improvement programs which offer credit or counselling to enable them to improve their labour efficiency. Since their labour must be divided between their farm and nonfarm jobs, these farmers are likely to be interested in programs that can help them reduce their farm labour requirements so that they can manage a larger production unit. Many cannot take advantage of expansion programs or programs centered around more labour intensive enterprises because of their commitment to nonfarm jobs and the limited labour they can devote to agriculture.

3.5.4 Market Oriented Farm Focus Farmers Unreceptive to Change

These farmers are not particularly receptive to change because of age, security oriented behaviour, or physical limitations, and are not likely to exploit expansionary programs. They may, however, participate and benefit from programs that 1. allow them to install labour saving equipment to ease their work load, and 2. increase their security by reducing their risk from production, commodity prices, and capital investments. The stop loss stabilization measures of the amended Agricultural Stabilization Act, 1975, and provincial income protection plans are likely to appeal to this group. The low output per farm by these farmers,

however, would severely limit the amount of additional income that can be obtained through assistance programs based on production.

3.5.5 Permanent Part-time Farmers Unreceptive to Change with an Income Derived Mainly from Agriculture

Although these farmers have nonfarm employment, they are dependent primarily on agriculture and are likely to respond to similar programs as market oriented farm focus farmers unreceptive to change. These farmers are strongly security oriented. Programs to increase their security by reducing risk on farm production, commodity prices and capital investments also may be useful to this group. For those unwilling to improve their farming operation, their best assistance may be through programs which help them to improve their off-farm job opportunities.

3.5.6 Permanent Part-time Farmers Unreceptive to Change with an Income Derived Mainly from Nonfarm Employment

Permanent, part-time mixed focus farmers unreceptive to change who earn most of their income from nonfarm jobs generally operate their farms as a secondary enterprise to their nonfarm job. As a result, it is often difficult to motivate these individuals to make farm improvements through agricultural programs. Some of these farmers may respond to programs which help them to acquire labour saving equipment, thus freeing more of their farm labour, particularly for nonfarm work. A large share of the farmers in this group, however, may not represent an appropriate target of farm improvement programs because of their attitudes and nonfarm reliance. Consequently, income improvement may have to come from non-agricultural programs designed to improve their nonfarm earning opportunities.

3.5.7 Traditional Farm and Mixed Focus Farmers

Traditional farmers representing both a farm and a mixed focus often require greater resources, such as land, livestock, and buildings to earn sufficient incomes from agriculture, but lack the necessary management ability to cope with the improved resources. Appropriate agricultural programs to help this group, therefore, must be programs designed to improve management as a prerequisite to other assistance. Many of these farmers may be the clientele of general welfare programs and are not necessarily targets of farm improvement programs.

3.5.8 Retirement Age Farmers

Retirement age farmers are age 65 or older and are generally reluctant to make changes in their farm operations because their days of active farming are limited. Appropriate assistance for these farmers may take the form of non-agricultural programs such as pensions, or an agriculturally related program allowing them to obtain an annuity based on the equity they have built up in their farms, which in turn would be claimed against the estate only at death or at the sale of the farm.

3.5.9 Nonfarm Focus Farmers

Nonfarm focus farmers generally have good nonfarm incomes and do not rely on agriculture for a source of family support. This group of farmers is not likely to represent the clientele of either agricultural or non-agricultural assistance programs.

4.0

CANADA-WIDE PERSPECTIVE OF LIMITED
RESOURCE FARMERS

This section briefly summarizes the distribution of limited resource farmers and their income levels by provinces to provide a better perspective of the limited resource farmer throughout Canada. Table 2 identifies for 1971 the number of limited resource farmers (earning less than \$15,000 gross sales in 1970 as reported in the 1971 Census of Agriculture) and their percentage among the total population. The table also provides a rough approximation of the number of farm, mixed, and nonfarm focus farmers in each province. From this table, it can be seen that 81% of all Canadian farms grossed less than \$15,000 in 1970. The largest number of limited resource farmers (68,885) were found in Ontario, but that province had the lowest share (73%). The proportion of limited resource farmers in the Maritimes and most of the Prairies was typically 85-86%. This data, however, should be used cautiously in relating to 1975 and 1976, since prices, gross sales, and net farm incomes are now generally well above the 1970 level.

The approximate number of farm, mixed and nonfarm focus farmers are identified in Table 2 by modifying the criteria determined in the study for these groups to conform more closely to Census data. In all three categories, nonfarm employment income was included with days of off-farm work in the classification criteria because a substantial number of farmers in the Census reported nonfarm employment earnings without reporting off-farm days of work or reporting 0 days. Farm focus farmers were identified according to the study criterion of 30 or fewer days of off-farm work, but also included all limited resource farmers 65 and older. Some retirement

Table 2 Approximate Distribution of Farm, Mixed, and Nonfarm Focus Limited Resource Farmers in Canada by Province, 1971

Days of Off-farm work	Province										Total
	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland	
Total Limited Resource Farmers	15,010	48,695	65,625	29,850	68,885	52,910	4,685	5,120	3,890	905	295,600
Percent of all farmers	82	78	85	85	73	86	86	86	86	90	81
<u>Approximate Number of Farm Focus</u>											
0 - 30 days or 0-\$1500 nonfarm employment income for those reporting 0 days or not reporting off-farm days	2,659	20,761	36,446	14,778	18,147	23,142	1,304	1,090	1,530	277	120,134
under 65	2,021	5,572	7,674	3,287	11,016	4,766	686	945	608	106	36,681
over 65	4,680	26,333	44,120	18,065	29,163	27,908	1,990	2,035	2,138	383	156,815
Total	5,245	14,417	15,175	8,290	20,188	18,153	1,745	2,020	1,222	382	86,865
<u>Approximate Number of Mixed Focus</u>											
31-228 days or \$1500-\$7000 nonfarm employment income for those reporting 0 days or not reporting off-farm days											

Table 2 (continued)

Days of Off-farm work	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland	Canada
Approximate Number of Nonfarm Focus over 228 days or more than \$7000 nonfarm employment income for those reporting 0 days or not reporting off-farm days	5,075	7,940	6,330	3,495	19,525	6,855	945	1,085	535	140	51,920

Source: Special Census of Agriculture Tabulation by Statistics Canada

The numbers of farmers listed in the various categories of this table are only approximations as Census tabulations using the complete criteria for farm, mixed, and nonfarm focus farmers identified in this study were unavailable. Employment earnings were included in the criteria in this table for selected farmers to help account for inconsistencies in the census data from farmers reporting nonfarm employment income but not reporting their days of off-farm work or reporting 0 days of off-farm work.

age farmers in the Census may still have had limited nonfarm employment and could have been classified as mixed focus farmers, but this number is likely very small. Mixed and nonfarm focus farmers were differentiated only by 228 days of off-farm work, since data on the complete study criteria were unavailable. Although the study criteria were developed from analysis in Ontario and may not be perfectly applicable to other provinces, they (and the modifications in Table 2) should give a good approximation of the focus of limited resource farmers in the various provinces.

Examining limited resource farmers across Canada in 1971, there were roughly 120,134 (41%) working age farm focus farmers, 36,681 (12%) retirement age farm focus farmers, 86,865 (29%) mixed focus, and 51,920 (18%) nonfarm focus farmers. In general, the highest proportions of working age farm focus farmers were found in the Prairies, while Nova Scotia, British Columbia, and Ontario had the highest share of farm focus farmers 65 or older. The greatest number of mixed focus farmers were found in Ontario, Quebec, and Alberta (reflecting part-time employment opportunities), but the Maritimes had the highest proportion of mixed focus farmers. The greatest share of nonfarm focus farmers were found in British Columbia and Ontario.

The average operator income by major sources for limited resource farmers is given in Table 3 to show the importance of farming as a source of income among limited resource farmers and to identify the level of total operator earnings. Farm income was very low, averaging only \$1,183 for all of Canada and ranging from a low average of only \$270 for British Columbia to a high average of \$1640 for Quebec. Average earnings from wages and salaries were nearly 2½ times as great as farm income, but these

also were quite low (\$2,535 ave. for Canada). Average wage and salary earnings were highest in Ontario and British Columbia, reflecting their high proportion of mixed and nonfarm focus farmers and high nonfarm wage levels. Government transfer payments, investments, and pensions contributed \$346, \$259, and \$66 on average across Canada respectively. Total operator incomes of limited resource farmers averaged \$4,893, with the highest operator incomes found in British Columbia and Ontario and the lowest in Manitoba and Saskatchewan.

In general, farm focus limited resource farmers had the lowest operator incomes and nonfarm focus farmers the highest. Across Canada, farm focus farmers averaged \$1,841 from farming and had average operator incomes of \$2,742 (not given in Table 3). Mixed focus limited resource farmers averaged farm incomes of \$630 and total operator incomes of \$4,807, while nonfarm focus farmers averaged \$118 and \$8,661 respectively. Farm focus farmers received 67% of their income (both earned and unearned) from agriculture, mixed focus 13%, and nonfarm focus farmers only 1%.

The average total family incomes for limited resource farmers in families are given in Table 4. Farm focus farmers averaged only \$4,621, with farm focus farmers in 5 provinces (Manitoba, Saskatchewan, Newfoundland, New Brunswick, and Alberta) averaging below the \$4,300 poverty minimum set by Statistics Canada in 1970 for a farm family of 4. Mixed focus farmers did considerably better, averaging \$6,767, while nonfarm focus farmers averaged \$10,714. Very few of these latter "farmers" likely would need either much agricultural or general welfare assistance. Table 5 points out that, overall, 43% of the limited resource farmers in Canada

Table 3 Average Operator Income From Major Sources for Limited Resource Farmers in Canada by Province, 1970

Income Source	Province										
	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland	Canada
Net farm income	270	1,134	1,481	1,100	897	1,640	745	611	1,184	540	1,183
Wages and salaries	4,877	2,535	1,490	1,770	3,670	2,163	2,560	2,680	1,792	2,282	2,535
Government transfer payments	386	305	287	291	339	453	435	445	447	674	346
Investment	496	202	227	189	405	172	129	154	100	44	259
Pensions	131	47	38	42	98	73	58	67	67	49	66
Total	6,160	4,224	3,524	3,392	5,408	4,501	3,928	3,958	3,590	3,589	4,893

Source: Special Census of Agriculture Tabulation by Statistics Canada.

Table 4 Average Family Income for Farm, Mixed, and Nonfarm Limited Resource Farmers in Families for Canada by Province, 1970

Focus of Farmers*	Province										
	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland	Canada
Farm	5,148	4,168	3,973	3,756	5,541	5,568	4,109	4,658	4,652	3,892	4,621
Mixed	7,991	6,369	5,942	5,657	7,800	6,998	5,802	5,963	5,551	5,958	6,767
Nonfarm	11,522	10,771	10,066	9,539	11,172	10,692	8,715	8,477	9,547	8,571	10,714
All limited resource farmers	8,440	5,997	5,076	5,033	7,919	6,760	5,726	6,067	5,686	5,493	6,410

Source: Special Census of Agriculture Tabulation by Statistics Canada

* According to the criteria in Table 1.

Table 5 Percentage of All Limited Resource Farmers in Families with Different Family Incomes for Canada by Province, 1970

Level of Total Family Income	% -----										
	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland	Canada
4300	26	47	53	54	31	38	44	40	47	49	43
4300 - 5999	13	14	14	15	15	17	18	21	19	19	15
6000 - 10,000	31	21	20	20	26	25	25	25	23	19	23
10,000	30	18	13	12	27	20	13	14	11	13	19

Source: Special Census of Agriculture Tabulation by Statistics Canada

had total family incomes below the \$4,300 minimum poverty standard for a family of 4. The largest share of these were farm focus farmers, but some mixed focus farmers also had low total family incomes. Only 19% of all limited resource farmers earned over \$10,000 in family incomes and most of these were from the nonfarm group. The highest percentages of farmers with poverty-level incomes were found in the Praries and the Maritimes.

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APPENDIX 1

Appendix Table 1.1 Individual Human and Economic Characteristics of the Limited Resource Farmers Contacted in the Survey

GREY COUNTY

Identity Number	Phase Two	Focus	Age	Gross Farm Sales	Net Farm Income	Operator Nonfarm Income	Total Operator Income	Total Spouse Earned Income	Total Family Income	Poverty	Days Off Or Nonfarm Work	Adj. Acres	Mgt. Score	Aspirations	Physical Disabilities
G25A		F	25	30000	4000	0	4000	8000	12000		0	163	19	I	
G27A	*	F	27	150000	25000	0	25000	10000	35000		60*	427	18	I	
G27B	**	F	27	23000	-2000	0	18000	0	18250		0	232	17	I	
G29A		N	29	2000	0	12500	12500	4000	16764		250	59	12	I	
G31A		F	31	50000	15000	0	15000	0	15500		0	130	15	I	
G34A	**	M	34	13000	7500	2000	9500	0	9750		100	93	12	N	
G36A	**	M	36	18000	0	2000	3528	500	4028	P	100	248	17	I	
G39A	**	M	39	4000	1500	10000	12028	0	12028		250	32	3	N	
G39B	**	F	39	25000	-2000	0	8000	0	10025	P	0	73	13	I	
G39C		F	39	50000	3500	0	3500	0	3500		0	159	16	I	
G39D	**	F	39	21000	1000	0	1000	12000	13750		0	193	8	I	Back
G40A	*	M	40	6000	-2000	9000	7000	0	8065		250	103	4	D	
G41A	*	F	41	22000	7500	0	9000	0	9750		25*	232	13	N	
G41B	*	M	41	4000	1000	10000	11000	0	11000		250	59	15	N	
G42A	*	F	42	25000	3500	0	3500	0	3500	*P	0	272	11	I	
G42B	*	F	42	20000	NA	0	NA	0	NA		0	104	8	I	
G43A		F	43	35000	4000	0	4100	6200	11050		0	187	16	I	
G44A		M	44	50000	20000	2000	22000	0	22000		100	365	14	I	
G44B	*	F	44	0	0	0	1500	0	2500	*P	0	145	9	I	
G44C		F	44	42000	10000	0	10000	0	10500		0	325	16	I	
G45A		F	45	30000	7000	0	8056	3500	11556		0	183	15	I	
G45B		F	45	27000	10000	0	11500	0	12250		0	80	15	I	
G46A	*	M	46	6300	0	15000	15000	0	15000		250	136	17	D	Phlebitis
G46B	*	F	46	NA	NA	0	NA	0	NA		0	90	6	N	
G47A		F	47	16000	3500	0	3500	5000	9500		0	132	10	S	
G47B	*	F	47	15000	4000	0	4000	6000	10750		0	123	10	I	
G47C		M	47	7200	-1800	7000	5200	0	5200		250	56	13	S	
G48A	*	F	48	7000	2000	1000	4000	2000	7100		30	56	15	N	Migraines
G48B	*	F	48	5000	1500	0	1550	10000	11550		0	162	11	I	
G49A	*	M	49	3000	-3000	4500	1500	2000	3500	P	125	93	11	N	

Appendix Table 1.1 continued

GREY COUNTY

Identity Number	Phase Two	Focus	Age	Gross Farm Sales	Net Farm Income	Operator Nonfarm Income	Total Operator Income	Total Spouse Earned Income	Total Family Income	Poverty	Days Off Or Nonfarm Work	Adj. Acres	Mgt. Score	Aspirations	Physical Disabilities
G50A	*	F	50	4000	1500	0	1500	0	5000		0	112	5		
G50B	*	F	50	7000	3612	0	3612	0	3612	P	0	89	10		
G50C	*	F	50	10000	900	0	900	5000	6428		0	241	13		
G50D	*	F	50	17500	3000	0	3000	0	3300	P	0	53	13		Dust Allergy
G51A	*	F	51	14000	4000	0	5000	0	5000		0	140	13		
G51B	*	M	51	7000	2000	4000	6264	0	6264		90**	120	7		
G51C	*	F	51	9000	4000	0	4000	0	4750		0	88	8		Arthritis
G52A	*	F	52	40000	10000	0	10000	0	10000		0	148	12		Kidney
G523	*	F	52	4000	2000	1000	3000	1500	4500		30	90	12		
G52C	*	F	52	20000	8000	0	8000	0	8000		0	239	10		
G52D	*	F	52	15000	6000	0	6000	0	6528		0	223	11		
G53A	*	F	53	19000	7000	0	7000	0	7000		0	93	15		
G53B	*	M	53	16300	-1200	4200	3000	0	4000	P	200	120	13		
G54A	*	F	54	26000	13000	0	13000	0	13000		0	199	18		
G55A	*	F	55	20700	11000	0	11000	0	11000		0	172	15		
G56A	*	F	56	8000	1500	0	11500	0	11500		0	53	11		
G56B	*	F	56	7000	2000	0	2100	0	2100	*P	0	81	10		Back
G56C	*	F	56	20000	6500	0	7500	0	7500		25*	145	14		
G56D	*	F	56	26000	NA	0	NA	0	NA		0	348	15		
G56E	*	N	56	3000	500	7000	7500	0	7500		250	56	8		Arthritis
G57A	*	F	57	13000	3000	0	3264	11000	14264		0	185	17		
G57B	*	F	57	8000	3000	0	3000	1000	4750	P	0	83	8		
G58A	*	N	58	0	3000	8000	8000	5500	13500		250	NA	1		Emphysema
G58B	*	F	58	12000	3000	1000	4000	1500	5500		30	91	9		
G590	*	F	58	13000	NA	0	NA	NA	NA		0	123	12		
G58D	*	F	58	10000	0	0	0	NA	NA		0	236	12		
G58E	*	N	58	0	0	5400	5400	5500	10900		250	50	4		
G58F	*	F	58	10000	3000	0	3010	0	3260	P	0	187	10		
G59A	*	F	59	15000	4000	0	4000	0	4000	P	0	118	11		
G59B	*	F	59	13000	1500	0	1500	1300	3050	P	0	176	16		Stroke
G60A	*	F	60	20000	4000	0	5500	0	5500		0	112	15		Inner Ear
G61A	*	F	61	14000	3500	0	3700	0	3700		0	78	17		Polio
G62A	*	F	62	5000	1000	0	1264	6000	7464		0	156	5		
G62B	*	F	62	15000	4000	0	4250	0	4200		0	103	3		
G63A	*	F	63	13000	1100	0	1300	0	2300	P	0	264	16		
G64A	*	N	64	786	232	0	2292	0	2292	P	0	132	6		
G64B	*	F	64	22000	14000	0	14600	0	14600		0	70	13		

Appendix Table 1.1 continued

GREY COUNTY

Identity Number	Phase Two	Focus	Age	Gross Farm Sales	Net Farm Income	Operator Nonfarm Earned Income	Total Operator Income	Total Spouse Earned Income	Total Family Income	Poverty 3 Days Or Nonfarm Work	4 Days Off Acres	Adj. Mgt. Score	Aspirations	Physical Disabilities
G65A *	F	F	65	0	0	0	NA	0	NA	0	20			S
G65B	F	F	65	12000	6000	0	8800	0	9700	0	62			S
G65C	N	N	65	0	0	15000	15000	0	15000	250	19			S
G65D	F	F	65	25000	9000	0	9000	0	9000	0	238			D
G66A *	F	F	66	9000	3000	0	7500	0	7500	0	75			D
G66B *	F	F	66	10000	3000	3300	8900	2330	11230	50	40			D
G67A	F	F	67	8000	-1500	0	0	11000	11000	0	181			D
G68A	F	F	68	4834	2000	0	4505	0	4505	0	76			D
G70A *	F	F	70	5000	-700	0	3300	0	3300	0	50			D
G70B *	F	F	70	10000	2500	0	7200	0	7200	0	170			D
G71A.	F	F	71	2297	-31	0	1469	0	3989	0	131			D
G71B	F	F	71	7000	2000	0	2264	11000	13264	0	88			D
G72A	F	F	72	2000	0	0	3500	0	5000	0	185			D
G73A	F	F	73	11000	0	0	3000	0	3000	0	135			D
G73B	F	F	73	4184	3000	0	5750	0	5750	0	85			D
G73C	F	F	73	500	200	0	1700	0	1700	0	123			N
G73D *	F	F	73	15200	7300	0	8050	0	8050	0	160			I
G73E	F	F	73	6000	2500	0	6000	0	9500	0	13			D
G74A	F	F	74	NA	NA	NA	NA	NA	NA	NA	NA			NA
G75A	F	F	75	2800	1200	0	7800	0	8200	0	287			N
G77A	F	F	77	10000	1000	0	4500	0	4500	0	69			N
G79A	F	F	79	0	0	0	4000	0	7500	0	NA			D
G80A	F	F	80	4000	0	0	3000	0	6000	0	115			D
G80B	F	F	80	2500	0	0	2500	0	4600	0	77			D
G80C	F	F	80	1600	0	0	2500	0	2500	0	44			D

Appendix Table I.1 continued

RENFREW COUNTY

Identity Number	Phase Two	Focus ²	Age	Gross Farm Sales	Net Farm Income	Operator Nonfarm Earned Income	Total Operator Income	Total Spouse Earned Income	Total Family Income	Poverty ³	Days ⁴ Of Off Or Nonfarm Work	Adj. Acres	Mgt. Score	Aspirations	Physical Disabilities
R28A	*	F	28	38000	2500	0	2500	3000	5750	P	0	215	17	I	
R28B	**	F	28	14000	3700	0	3700	0	4200		0	116	9	I	
R30A	*	F	30	42000	NA	0	NA	0	NA		0	172	13	I	
R30B	**	F	30	11000	0	0	0	3680	5000		0	281	15	I	
R30C	**	M	30	15000	1000	10000	11000	8000	19000		250	167	10	I	
R31A	*	F	31	45000	8500	0	8550	0	8800		0	132	16	I	
R32A	*	F	32	18000	1000	0	1000	0	2000	P	0	132	16	I	
R32B	*	N	32	4000	-12000	13000	1000	0	2000	P	250	152	14	I	
R35A	*	F	35	2200	-4400	0	2300	0	2300	*P	25*	29	5	I	
R37A	*	M	37	800	-3000	8000	10000	1664	12414	*P	60	41	9	N	
R38A	*	M	38	1085	-2300	2550	250	0	250		60	40	4	I	
R39A	*	F	39	38000	6000	0	6034	10500	16534		0	188	15	I	
R40A	*	F	40	27000	5000	0	5050	0	5800	P	0	80	16	I	
R40B	*	N	40	0	-500	4200	3700	0	5950	P	150	8	3	N	
R40C	*	M	40	800	-500	6000	5500	1000	7500	P	60	24	5	N	
R40D	*	M	40	6000	2000	5900	8000	0	8500		130	82	11	N	
R42A	*	F	42	12000	3000	0	4500	0	5250	P	0	80	8	D	
R43A	*	M	43	2500	-5178	5500	2822	0	4500	*P	60	63	4	I	
R43B	*	F	43	50000	9250	0	9250	0	10000		0	110	19	I	
R43C	*	F	43	5000	1000	0	1050	10500	13050		0	173	12	I	
R45A	*	F	45	50000	10000	0	10000	0	10250		0	160	16	D	
R45B	*	N	45	0	0	10000	10000	12000	22000	*P	250	29	9	D	
R45C	*	F	45	6000	1000	0	4000	0	4500		0	116	3	D	
R45D	*	M	45	8000	2500	12000	14500	0	18130		250	46	2	D	
R46A	*	N	46	300	-200	7000	6800	0	6800		250	2	12	I	
R47A	*	M	47	29000	3500	2500	6000	0	7000		100	170	17	D	
R47B	*	F	47	8000	3000	0	3000	0	3000	P	0	112	15	I	
R47C	*	M	47	0	-2000	3000	1000	0	1000	P	0	44	4	I	
R48A	*	M	48	13000	-5000	7000	2055	1000	8000	P	120	110	9	D	
R49A	*	M	49	2360	0	1900	3438	0	3438		40	128	13	N	
R49B	*	N	49	1000	0	8000	9272	0	9272		210	33	8	I	
R49C	*	F	49	22000	7000	0	7000	10000	17750		0	155	14	N	
R49D	*	F	49	30000	5000	0	10000	0	10000		0	242	14	I	
R49E	*	F	49	27000	7000	0	7000	1300	9050		0	76	14	I	
R49F	*	N	49	3000	600	6000	6700	0	7200		250	46	7	I	

Losing Sight (Diabetic)

Diabetic

Appendix Table 1.1 continued

RENFREW COUNTY

Identity Number	Phase Two	Focus	Age	Gross Farm Sales	Net Farm Income	Operator Nonfarm Income	Total Operator Income	Total Spouse Earned Income	Total Family Income	Poverty	Days Off Or Nonfarm Work	Adj. Acres	Mgt. Score	Aspirations	Physical Disabilities
R50A*	*	F	50	18000	Loss NA	0	NA	1000	NA		0	257	9	D	
R50B	*	M	50	3000	1000	4000	5000	0	5000	P	140	79	9	D	
R50C	*	M	50	20000	5000	8000	13000	0	13750	P	250	142	17	I	
R51A	*	M	51	3500	-1000	3000	2000	0	2250	P	120	253	12	D	Gall Bladder
R51B	*	N	51	1000	-150	10000	9850	8000	17850	P	250	26	9	D	
R51C	*	M	51	589	-150	2000	1850	0	2850	P	40	14	7	N	Arthritis
R51D	*	M	51	10000	3300	2300	5600	3500	9350	P	250	89	10	S	Intestines Back
R51E	*	F	51	36000	3500	0	3500	0	3750	P	0	147	15	I	
R53A	*	N	53	3000	500	9000	26500	0	26750		250	80	8	I	
R54A	*	F	54	9000	3000	0	3000	11000	14000	P	0	82	13	I	
R54B	*	F	54	9107	3310	0	3474	0	3474		0	118	9	I	
R55A	*	M	55	10000	2500	3000	5500	0	6000		250	65	7	S	
R55B	*	F	55	1500	0	0	3600	0	6200	P	0	44	7	I	
R55C	*	F	55	4500	1800	0	2175	200	2375		0	57	6	S	
R55D	*	M	55	5000	1000	8500	9500	0	9500		250	150	5	I	
R55E	*	F	55	28000	7000	0	7300	0	7300		0	118	14	D	
R56A	*	F	56	9000	Loss NA	0	NA	0	NA		0	264	11	I	
R56B	*	F	56	15000	4000	0	8000	0	8500	P	0	66	11	N	
R57A	*	F	57	1000	0	0	3500	0	3500		0	65	7	N	
R57B	*	N	57	2500	200	7000	7200	0	7200	P	220	23	10	N	
R57C*	*	M	57	4945	2267	3000	5267	0	5767	P	100	81	5	I	
R57D*	*	F	57	6000	-250	0	6000	6000	6000	P	0	84	10	N	
R58A	*	M	58	3900	1300	2400	12000	0	12000		100	196	14	S	Back
R58B	*	F	58	25000	4000	0	4000	0	4000		0	82	17	S	Heart
R58C	*	N	58	2000	0	6000	6000	0	6000		200	69	8	N	
R59A	*	F	59	10000	4000	0	4000	0	4000		0	103	12	N	
R60A	*	F	60	10000	6000	0	6000	0	6000		0	1	NA	I	
R60B	*	M	60	17000	9060	877	10652	0	13652		50	192	12	N	
R60C	*	F	60	60000	12500	0	12500	0	12500		0	280	17	I	
R60D*	*	F	60	5000	1000	0	1000	0	1000	P	0	125	7	I	
R60E	*	F	60	3000	NA	0	NA	0	NA	P	0	61	6	D	
R60F	*	F	60	1000	100	0	3600	0	5100		0	59	7	N	
R61A	*	F	61	5000	1500	0	1500	0	1500	P	0	50	10	I	
R61B	*	F	61	3000	1000	600	4600	0	4600		20	35	6	D	
R61C	*	M	61	7000	3500	2275	8275	0	8275		100	64	6	S	
R62A	*	F	62	8000	2500	0	2600	0	2600	P	0	181	11	D	
R62B	*	M	62	0	-1000	3500	2700	0	2700	P	150	178	7	D	
R63A	*	N	63	0	0	8000	19000	0	19000		150	50	NA	S	Deaf
R63B*	*	M	63	2400	-1346	2400	1054	0	1304	P	60	38	11	D	
R63C	*	F	63	NA	-1000	0	-1000	13000	12250		0	46	9	D	
R63D	*	F	63	12000	4000	0	4000	7000	11000		0	43	15	D	Heart
R64A*	*	F	64	12000	-1000	2000	1804	0	4804		30	215	15	D	
R64B	*	F	64	2500	600	0	600	0	600	P	0	32	13	N	Heart

RENFREW COUNTY

Identity Number	Phase Two	Focus	Age	Gross Farm Sales	Net Farm Income	Operator Nonfarm Earned Income	Total Operator Income	Total Spouse Earned Income	Total Family Income	Poverty ³	Days ⁴ Of Off Or Nonfarm Work	Adj. Acres	Mgt. Score	Aspir- ⁵ Physical Disabilities
R65A	M		65	3000	1000	1200	5700	0	9200		40	284	I	
R67A	F		67	900	300	0	3760	0	3760		0	13	D	
R67B	F		67	3000	1000	0	3100	0	3100	* P	0	52	S	
R67C	F		67	1000	100	0	4600	0	8100		0	58	S	
R68A	F		68	13000	5000	0	6500	0	6500		0	95	N	
R69A	F		69	2500	1000	0	4800	0	4500		0	55	S	
R69B	F		69	6000	1500	0	3000	0	3000	P	0	52	N	
R70A	F		70	350	0	0	3360	0	3360		0	26	D	
R70B	F		70	7000	0	0	1500	0	3000	P	0	6	N	
R70C	F		70	0	159	0	3159	0	4099	P	0	136	D	
R71A	F		71	8600	2600	0	1500	0	15500		0	34	N	
R71B	F		71	3600	2600	0	4823	0	4823		0	66	D	
R71C	F		71	0	1000	0	3510	7500	6010		0	60	N	
R72A	F		72	800	0	0	1500	0	9000		0	66	N	
R72B	F		72	600	200	0	2700	600	5200		0	35	D	
R73A	F		73	0	0	0	1500	0	3600		0	75	N	
R73B	F		73	0	0	0	3500	0	7000	P	0	26	N	
R73C	F		73	2500	-500	0	8000	0	9500		0	35	D	
R73D	F		73	3000	600	900	4200	0	6700		10	59	D	
R73E	F		73	3000	1000	0	3500	0	5000		0	51	N	
R74A	F		74	400	1000	0	4734	0	5834		0	49	D	
R75A	F		75	0	0	0	4500	0	7000		0	13	N	
R85A	F		85	0	0	0	3500	0	7000		0	61	D	

1 * Farmer is about to pass farm on to a younger family member.
 ** Farmer has just recently inherited the farm from father.

2 F Farm focus farmer
 M Mixed focus farmer
 N Nonfarm focus farmer

3 P Poverty defined by Statistics Canada for the minimum income level to meet basic needs in 1975 adjusted for family size.

*P Identifies those farmers who are defined as being in poverty by Statistics Canada and are, in terms of the interviewer's appraisal and opinion, not able to supply themselves with basic needs from the income they earn.

4 No * means off farm nonfarm work.
 Off farm farm work
 ** On farm nonfarm work

5 I Increase farm activity or make improvements in the farm operation.
 N Make no farm improvements or changes in the present level of farm activity.
 D Decrease the level of farm activity.
 S Intend to sell the farm.

APPENDIX 2

CALCULATION OF MANAGEMENT SCORES

Formal Education

- 0 Not completed Elementary School
- 1 Elementary School completed and some or all of Secondary School
- 2 Post Secondary Education

Crop Practices - Fertilization

- 0 No soil test, no manure or other fertilizer applications
- 1 No soil test but manure spread on a sporadic basis
- 2 No soil test, manure spread in conjunction with commercial fertilizers which are applied to some but not all of the crops on a sporadic basis.
3. No soil test but fertilizers (manure and commercial) are spread on a fairly comprehensive basis in what appears to be in accordance with accepted practices.
- 4 Soil test done and farmer applies fertilizer to all his crops in accordance with accepted practices subject only to other overriding considerations such as fertilizer costs or expected crop prices which may affect his final decision.

Crop Practices - Herbicide Insecticide Use

- 0 Not used although needed and no alternative controls utilized
- 1 Never use herbicide/insecticide but follows some alternative control technique.
- 2 Used this year, or not used this year but used when required.

Livestock Practices - Stock Selection

- 0 Don't know, don't bother to select, just let them breed, no effort made to be selective.
- 1 Try to breed the best stock on hand without having to resort to buying a special stud animal.
- 2 Select according to some general knowledge or experience such as the practice of always buying a pure bred animal because it will always produce better stock.
- 3 Select according to careful observation in trial and error like procedures of a fairly scientific nature, but with no written production records.
- 4 Select according to careful observation in trial and error like procedures of a fairly scientific nature but with particular attention paid to recorded production records.

Financial Records - How Are They Kept?

- 0 None kept.
- 1 Bills/receipts in box or folders
- 2 Record book, ledgers or Canfarm

Financial Records - Use

- 0 Not used at all, don't know.
- 1 Used to determine income tax, payment to Canada Pension Plan.
- 2 Used to estimate farm profit or loss, aid in improving farm practices, to analyze specific segments of the farm operation (eg. profit from a major crop or livestock enterprise on the farm).

Written Production Records - Use

- 0 None kept
- 1 Records kept on some aspects of the enterprise but not used or seldom used in aiding evaluation of farm or particular enterprise production.
- 2 Records kept on some aspects of the enterprise and used in aiding evaluation of farm or particular enterprise performance.

Subjective Measure of Management by Interviewer

- 2 Poor management, using profit restricting techniques and not particularly willing to change.
- 1 Poor to adequate management, less than optimal management but not really poor.
- 0 No particular comment by the interviewer concerning the farmer's management ability.
- 1 Generally a good manager, seems to be doing well but has some peculiar reservations about for example, using credit, specializing farm. Reasonable manager.
- 2 Excellent manager, knows what to do and what farming is all about, appears progressive and commercially oriented.

APPENDIX 3

SOIL CAPABILITY CLASSIFICATION FOR AGRICULTURE

- Class 1 Soils in this class have no significant limitations in use for crops.
- Class 2 Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices.
- Class 3 Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices.
- Class 4 Soils in this class have severe limitations that restrict the range of crops or require special conservation practices or both.
- Class 5 Soils in this class have very severe limitations that restrict their capability to produce perennial forage crops, but improvement practices are feasible.
- Class 6 Soils in this class are capable only of producing perennial forage crops, and improvement practices are not feasible.
- Class 7 Soils in this class have no capability for arable culture or permanent pasture.

Source: The Canada Land Inventory,
Report No.2, 1965.

APPENDIX 4
ANALYSIS OF SURVEY DATA

This Appendix on data analysis examines the results of correlations, regressions and cross tabulations which were employed to identify behavioural and economic characteristics distinguishing different sub-groups of farmers. The analysis covered 60 farm focus and 28 mixed focus limited resource farmers who were intending to remain in agriculture and were of working age. Consequently, those farmers (16) leaving agriculture were excluded. In addition, those of retirement age were examined separately because of their different needs and aspirations.

Correlation and Regression Analysis

Initially gross sales and net farm income were correlated with a large number of independent variables to identify factors explaining farm performance. Independent variables with an r value of .4 or better, indicating a moderately strong correlation with the dependent variables, included management (overall 1 - 20 score, low 1-7 score, moderate 8-14 score, and high 15-20 score); acreage; days of nonfarm work; physical disabilities; age; aspirations for increasing, decreasing, or making no changes in the farm operation; county where the farm was located; poverty level; farmer focus. Independent variables not found significantly related to the farm performance proxies were: 1. the possibility that a son or daughter might be interested in taking over the farm in the near future, 2. the operator's nonfarm earned income, 3. the operator's total income, 4. the spouse's total income, and 5. the family's total income.

A step-wise multiple regression analysis was applied to explain and predict gross sales and net farm income from a number of independent variables which were seen as important factors in the correlation analysis.

The step-wise regression procedure identified and regressed the most significant independent variable first by itself, and then included the second most significant independent variable with the first in a second regression equation. Additional regressions were calculated until all the variables were included. The overall regression equation is summarized below:

1. Gross Sales or
 2. Net Farm Income
- = f(Mgt. score (1-20); Days of nonfarm work; Acreage; Physical disabilities; Aspirations to increase, decrease, or make no change in farm activity; County of residence; Poverty; Focus)

Three regressions were run for each of gross sales and net farm income for 1. both farm and mixed focus farmers together as a group, 2. farm focus farmers only, and 3. mixed focus farmers only. The gross sales regressions are summarized in Appendix Table 4.1 and net farm income regressions in Appendix Table 4.2. In these tables, the independent variables are listed in order of importance in explaining the dependent variables.

The most important variable in the gross sales regression was management. For every point on the management score, the farm focus operator may generate an additional \$1,050 in gross sales and the mixed focus farmer \$635 more in gross sales. The second most important variable appeared to be the county in which the farm was located. Farmers in Grey County generally tended to earn between \$3,200 and \$3,900 gross sales more than the farmers in Renfrew because of their geographical location, with farm focus farmers earning a slightly higher differential than mixed focus farmers.

Other significant variables were farm acreage, aspirations to increase farm activity, physical disabilities, age, and days of nonfarm work. Acreages proved important in the combined farm and mixed focus regression but not in the regressions for these groups separately. When

Appendix Table 4.1 Regression Analysis Results, Gross Sales the Dependent Variable

ALL FARMERS ($r^2 = .52$)			FARM FOCUS ONLY ($r^2 = .52$)			MIXED FOCUS ONLY ($r^2 = .61$)		
B	t	sig.	B	t	sig.	B	t	sig.
Constant	2303		Constant	11012		Constant	-1500	
Mgt.	861	4.73	Mgt.	1050	4.7	Mgt.	635	2.9
Grey	3195	2.72	Age	-247	-3.3	Asp 1	5756	2.7
Days Off	-18	-2.28	Grey	3922	2.78	Grey	3420	1.7
Acres	19	1.94	Phys.Dis.	-2733	-1.49	Asp 2**	-2145	-1.08
Phys.Dis.	-2678	-1.78	Days Off	-70	-1.08			
Asp 1*	2214	1.69						
Age	-99	-1.39						

Df = 75

Df = 50

Df = 22

Appendix Table 4.2 Regression Analysis Results, Net Farm Income the Dependent Variable

ALL FARMERS ($r^2 = .26$)			FARM FOCUS ONLY ($r^2 = .28$)			MIXED FOCUS ONLY ($r^2 = .28$)		
B	t	sig.	B	t	sig.	B	t	sig.
Constant	-5921		Constant	-789		Constant	5473	
Mgt.	229	2.4	Mgt.	240	2.3	Asp 1	3045	2.1
Age	73	1.9	Grey	1171	1.8	Grey	1486	1.04
Grey	1060	1.7	Asp 1	-970	-1.09	Mgt.	155	1.02
Asp 2**	1257	1.66	Days Off	-24	-1.02	Age	65	.94
Asp 1*	1107	1.29	Asp 2	802	.90			
Days Off	-4	-1.09						
Acres	3	.65						

Df = 75

Df = 50

Df = 22

* Aspirations to increase farm activity
 ** Aspirations to make no change in farm activity

both farm and mixed focus farmers were analyzed together in the regression equation, each acre (Class 1 land equivalents) raised gross sales by \$19. Aspirations related to an increase in farm activity appeared significant when farm and mixed focus farmers were treated as a single group and when mixed focus farmers were analyzed separately. Aspirations related to an increase in activity could be expected to increase gross sales by \$2,200 for farm and mixed focus farmers together, but mixed farmers with this same aspiration taken alone could expect to earn an additional \$5,800. Physical disabilities, age, and days of nonfarm work were significant at the 70% level or higher for the combined focus and farm focus regression, but not for the mixed focus farmer. Physical disabilities could be expected to reduce gross sales by about \$2,700 for either the combined farm and mixed focus farmers treated together or farm focus groups, and age could be expected to reduce gross sales of farm focus farmers by approximately \$250 per age year. Days of nonfarm work reduced gross sales of the combined farm and mixed focus group by \$18 per day and \$70 for the farm focus farmers.

The net farm income regressions showed a similar pattern to the gross sales regressions, although the much lower r^2 indicated that the regressions were less reliable.^{1/} In these regressions, management and county of location again appeared as the first and second most important variable (Appendix Table 4.2). Each point on the managerial score increased net farm income by \$150 to \$250 for the various groups. Grey County farmers

^{1/} The poor predictive ability of the net farm income equations may be the result of inaccurate farm income figures as well as difficulties in identifying all of the relevant variables affecting net farm income. Reliable net farm income estimates were difficult to obtain, and the concept of net farm income may have had a different meaning to the various farmers in the study, even though an attempt was made to gain comparable information.

could be expected to earn \$1,100 to \$1,500 more in net farm income than Renfrew farmers, depending on their focus.

Aspirations related to an increase in farm activity was a significant variable in all three net farm income regressions, but of prime importance in the mixed focus regression. There it contributed up to \$3,045 in net farm income. In the farm focus net income regression aspirations for increases in farm activity reduced net farm income by \$970, in part reflecting limited farm earnings from farmers who had not yet made changes or investments in the farm to acquire enough resources to generate substantial earnings.

Aspirations of the farmers which related to little or no change in present farm activity were only significant when all farmers were evaluated together. Age and days of nonfarm work were also of some significance in one or more of the net farm regressions. Age appeared important when all farmers were included together, but was not very significant in the separate focus regressions. For the combined focus group, each year of age increased net farm income by approximately \$70. Days of nonfarm work were of marginal significance in all three equations, being less important when farmers were separated according to focus but reducing net farm income by about \$24 per day. Finally, acreage was surprisingly insignificant as an independent variable in all three net farm income regressions.

In addition to regressions examining gross farm sales and net farm income, an acreage regression was also examined to determine factors affecting the farm's physical size. It was anticipated that farmers with high management ability and strong aspirations towards farm improvements would be correlated with comparatively large farm acreages. The regression, however, did not indicate that any of the variables regressed against farm acreage were significant in explaining farm size. Consequently, it may be

that farm acreage is more closely related to historical accident through inherited property or particularly unique opportunities to obtain farm land, than a result of deliberate planning initiated by the farmer.

Cross Tabulations

Six cross tabulations were also examined separately for farm and mixed focus farmers to help group farmers according to their farm performance characteristics, potential participation in programs, and receptivity to change. The six cross tabulations are:

1. Management x Acreage x Gross Sales
2. Management x Acreage x Net Farm Income
3. Management x Gross Sales x Total Family Income
4. Management x Acreage x Aspirations
5. Management x Gross Sales x Aspirations
6. Age x Aspirations x Gross Sales

Management was examined in five of the cross tabulations because of its importance in explaining and predicting farm performance.

The cross tabulations are summarized in appendix tables 4.3 to 4.14. Data for each farmer is coded and listed separately in each table. For each entry (G*57B, for example) the first letter of G or R refers to Grey or Renfrew as the county of location. The asterisk indicates that the farm has a son or daughter to take over the farm. The number (57 in the example) refers to the farmer's age. The final letter (A, B, C, D, E, or F) indicates whether the farmer is the first, second, third, etc., farmer in that county of that age, as listed in Appendix Table 1.1. Farmers with physical disabilities are listed in italics. Because of the complexity of the data coded into each cross tabulation, chi square or variance analysis was not employed to test the significance of the relationships. As a

consequence, the results of the cross classifications are presented here in a descriptive discussion of the farmer's characteristics and behaviour patterns, grouped according to the farmer's management and his focus.

High management score farmers (score of 15-20), in general earned the highest gross sales, owned the most resources and were the most receptive to farm improvements. In the survey the high management farm focus farmers were evenly distributed between Grey and Renfrew Counties. From Tables 4.3 it can be seen that most high management farm focus farmers generated over \$10,000 gross sales and operated moderate or larger sized farms. Excluding the three high management farmers with physical disabilities, six of the seven remaining farmers operated farms of 100 adjusted acres or more. The three farmers with physical disabilities, however, appeared to have had their farming activity limited somewhat as all three operated farms under 78 adjusted acres. Of the two farmers grossing less than \$10,000, one was disabled and the other was building inventories.

High management farm focus farmers also tended to fall within two age groups. Three individuals were between 27 and 32 years old, and the rest between 47 and 64 years. Although the farmers tended to generate high gross sales, Table 4.5 shows a mixture of high and low net farm incomes. In general the young farmers had low to negative net farm incomes while the older farmers appeared to retain between 30% and 50% of gross sales as income. Family income (Table 4.7) appeared to be fairly low especially among the older farmers; 5 of the 10 farmers reported total family incomes of less than \$6,000 per year. Younger high management farmers (under 40 years old) often were the most likely to increase farm activity of all the limited resource farmers studied (Table 4.13), as most of them had just recently taken control of the farm from their fathers or grandfathers.

Table 4.3 Farm Focus Farmers Cross Tabulations by Management, Acreage and Gross Farm Sales

	HIGH ACREAGE		MODERATE ACREAGE		MODERATE-LOW ACREAGE		LOW ACREAGE						
	15000-25000	10000-14999	5000-9999	0-4999	15000-25000	10000-14999	5000-9999	0-4999	15000-25000	10000-14999	5000-9999	0-4999	
MGT.	G55A G27B	R30B R*64A	G50C R56A	R49C G41A G*42A G52D	R32A	R*47B	G53A G67A G48A	G53A G67A G48A	G53A G67A G48A	G53A G67A G48A	G53A G67A G48A	G53A G67A G48A	R63D
HIGH													
MODERATE UPPER	R49C G41A G*42A G52D	G50C R56A	R49C G51A G58C	R59A R43C	G*59A G*56C	R59A R43C	G39B G50D	G39B G50D	G39B G50D	G39B G50D	G39B G50D	G39B G50D	R54A G56A R64B
MODERATE LOWER	R*50A G39D	G*58F	R47B G42B	R28B R54B G44B	G47B G42B	R56B	R*42A G56B G50B G57B G51C	R56B	R56B	R56B	R56B	R56B	R61A
LOW													R60E R60F R55C R57A R35A R55B R61B

Italics indicate farmers with physical disabilities.

* Son to take over farm

Table 4.4 Mixed Focus Farmers Cross Tabulations by Management, Acreage and Gross Farm Sales

	HIGH ACREAGE		MODERATE ACREAGE		MODERATE-LOW ACREAGE		LOW ACREAGE	
	15000-25000	10000-14999	5000-9999	0-4999	15000-25000	10000-14999	5000-9999	0-4999
MGT. HIGH	G36A	R*60B	R51A	R30C	R50C	G*46A	R49A	R45D
MODERATE UPPER					G53B	R48A	G34A R40D	R45D
MODERATE LOWER								
LOW								

Italics indicate farmers with physical disabilities.

* Son to take over farm

1 03 1
R*63B
R*37A

G39A
R38A
R47C
R51C
R40C

R43A
R50B
R*57C

G51B
G40A
R55D

Older high management farmers, however, were generally more receptive to farm improvements than older farmers with low managerial ability.

High management, mixed focus farmers were a very small group consisting of 4 farmers. They generally operated similar sized farms as their farm focus counterparts (3 of 4 farms were over 100 acres on an adjusted basis), but they generated lower sales volumes and net farm incomes. Two of the high management mixed focus farmers generated over \$15,000 in gross sales, 1 earned between \$5,000 and \$9,999, and one earned less than \$5,000 in gross sales (Table 4.4). Three of the four farmers earned less than \$2,000 in net farm income (Table 4.6). Despite low agricultural sales and incomes, however, total family incomes were fairly substantial, as three of the four earned family incomes of over \$10,000 (Table 4.8). The fourth showed a low family income because of the large loss incurred by the farm operation. All four farmers were between 36 and 50 years old. Two of the farmers wanted to become full-time farmers and indicated a receptivity to making farm improvements, one intended to make no changes, and one anticipated decreasing his farming activity (Table 3.10).

The moderate management ability farmers (score 8-14) differed from the high management farmers in their farm performance and receptivity to improvements. In general, they were slightly older and included more farmers approaching retirement age. The moderate management farmers were also often more security oriented and less likely to make farm improvements unless their son or daughter was expressing an interest in operating the farm. Moderate management farmers were generally operating farms of reasonable acreages, but generating lower (but reasonable) gross sales and incomes than farmers with higher managerial ability.

Moderate management farm focus farmers were mainly from Grey County; only 41% of the group were from Renfrew. Twenty-five of the 37 moderate

Table 4.5 Farm Focus Farmers Cross Tabulation by Management, Acreage and Net Farm Income

MGT.	HIGH ACREAGE		MODERATE ACREAGE		MODERATE LOW ACREAGE		LOW ACREAGE	
	>7000 4000- 6999	2000- 0- 1999	>7000 4000- 6999	2000- 0- 1999	>7000 4000- 6999	2000- 0- 1999	>7000 4000- 6999	2000- 0- 1999
HIGH	G55A	R30B G27B R*64A	R*47B R32A	G53A	G48A G61A	R63D		
MOD. UPPER	R49C G52D G41A	G*42A G50C R56A R62A G48B	R43C	G47B G*59A R59A G51A G*56C	G50D R54A G*52B	G56A G39B	R64B	
MOD. LOWER	G*58F	G39D R*50A	R54B G44B R28B	R56B G51C	G50B G56B G57B R*42A G58B	R57D	R61A	
LOW			R45C R*60D G50A	R60F R60E R55C R57A		R61B R35A R55B		

Italics indicate farmers with physical disabilities.

* Son to take over farm

Table 4.6 Mixed Focus Farmers Cross Tabulations by Management, Acreage, and Net Farm Income

	HIGH ACREAGE		MODERATE ACREAGE		MODERATE LOW ACREAGE		LOW ACREAGE	
	>7000 4000- 6999	2000- 0- 1999	>7000 4000- 6999	2000- 0- 1999	>7000 4000- 6999	2000- 0- 1999	>7000 4000- 6999	2000- 0- 1999
MGT. HIGH	R*60B	G36A	R50C	G*46A	G34A	G41B	R45D	
MOD. UPPER		R51A	R49A	G53B	R40D	G49A		
MOD. LOWER		R30C		R48A				R*63B R*37A
LOW		R62B	G51B R55D	G40A	R*57C	R50B	R43A	R38A G39A R51C R47C R40C

Italics indicate farmers with physical disabilities.

* Son to take over farm

Table 4.7 Farm Focus Farmers Cross Tabulations by Management, Gross Farm Sales and Total Family Income

MGT.	15000-25000 GROSS SALES		10000-14999 GROSS SALES		5000-9999 GROSS SALES		0-4999 GROSS SALES	
	TOTAL FAMILY INCOME		TOTAL FAMILY INCOME		TOTAL FAMILY INCOME		TOTAL FAMILY INCOME	
	>10000	6000-9999	3000-5999	0-2999	>10000	6000-9999	3000-5999	0-2999
HIGH	G27B G55A	G53A	R32A		R63D	R30B G67A R*64A	G48A R*47B	
UPPER MODERATE	G39B R49C	G41A G52D G*56C	G*42A G50D G*59A		G50C	R59A G57A	R62A	G*52B R64B
LOWER MODERATE	G39D G47B	R56B				R*42A G58B R28B G*58F	R*57D G51C G50B G57B R54B	G44B
LOW							R45C R*60D	R55B R57A R60F G50A R61B

Italics indicate farmers with physical disabilities

* Son to take over farm

Table 4.8 Mixed Focus Farmers Cross Tabulations by Management, Gross Farm Sales and Total Family Income

MGT.	15000-25000 GROSS SALES		10000-14999 GROSS SALES		5000-9999 GROSS SALES		0-4999 GROSS SALES	
	TOTAL FAMILY INCOME		TOTAL FAMILY INCOME		TOTAL FAMILY INCOME		TOTAL FAMILY INCOME	
	>10000	3000-9999	6000-9999	3000-5999	6000-9999	3000-5999	6000-9999	3000-5999
HIGH	R50C	G36A			G*46A		G41B	
UPPER MODERATE	R60B	G53B	G34A		R45D R40D		G49A R57A R49A	
LOWER MODERATE	R30C		R48A				R*37A	R*G3B
LOW							G39A R40C	R*37C R50B R43A R47C R*G3B

Italics indicate farmers with physical disabilities.

* Son to take over farm

management farmers were in their 50's and early 60's, 11 of them were between 39 and 49 years old, and one was 28 years old (Table 3.7). Thirteen of the 37 farmers grossed over \$15,000, 8 between \$10,000 and \$15,000 and 16 grossed under \$10,000 (Table 4.3). The majority of farmers in this group earned reasonable net farm income (usually reported as income for taxation purposes), and 22 farmed over 100 acres of land (Table 4.3). Eleven earned less than \$2,000 in net farm income, 14 earned between \$2,000 and \$4,000 in net farm income, and the remaining 11 earned over \$4,000 in net farm income (Table 4.5). Forty % of the 20 farmers with moderate upper management ability, earned over \$4,000 in net farm income, while only 18% of the 17 farmers with lower managerial ability had net farm earnings over \$4,000. Family incomes for moderate managers were lower than those of the farmers with greater managerial ability, as 58% earned less than \$6,000 in total family income (Table 4.7). Twenty-three of the 37 farm focus moderate managers indicated that they intended to decrease or make no change in farm activity (Table 4.9). The 12 farmers under age 50 were the most receptive to the idea of making farm changes, but older farmers who had commitments from sons or daughters to take over the farm in the near future were also often receptive.

The moderate management mixed focus farmer group generally had similar total family incomes as the farm focus group, but were much younger and depended less on farm income, as judged by their low gross sales and net farm incomes. Furthermore, most of the mixed focus moderate management farmers were from Renfrew County (75%), while the farm focus farmers were mainly from Grey County (Table 4.4). Seven of the 12 moderate management mixed focus farmers grossed below \$10,000 per year from agriculture (Table 4.4), and most farmed smaller acreages than their farm focus counterparts (50% working less than 100 adjusted acres, Table 4.4). The moderate

Table 4.9 Farm Focus Farmers Cross Tabulations by Management, Acreage, and Aspirations

MGT.	HIGH ACRES			HIGH-MOD. ACRES			LOW-MOD. ACRES			LOW ACRES		
	I	N	D	I	N	D	I	N	D	I	N	D
HIGH	G27B R30B	G55A R*64A		R32A R*47B			G53A G48A	G61A				R63D
MODERATE UPPER	G*42A	R49C G41A G52D	R62A	G*56C R59A G57A G58C	G*59A R43C		G39B G50D R54A G*52B	G56A			R64B	
MODERATE LOWER	G48B	G50C R56A		G42B R28B G44B G47B	R54B		R*42A G50B	G56B R57D G57B R56B		R61A		
LOW				R*60D	G50A	R45C	R60F R55C R57A	R60E		R55B R35A		R61B

I Increase farm activity or make farm improvements
 N Make no changes in present level of farming
 D Decrease level of farm activity
 Italics indicate farmers with physical disabilities
 * Son to take over farm

Table 4.10 Mixed Focus Farmers Cross Tabulations by Management, Acreage and Aspirations

MGT.	HIGH ACRES			HIGH-MOD. ACRES			LOW-MOD. ACRES			LOW ACRES		
	I	N	D	I	N	D	I	N	D	I	N	D
HIGH	G36A			R50C	G*46A		G41B					
MODERATE UPPER	R60B	F51A		R49A	G53B		G34A	G49A	R40D	R45D		
MODERATE LOWER	R30C				R48A						R*37A	R*63B
LOW		R62B		R55D	G40A		R*57C	R43A	R50B		G39A	R47C
					G51B						R38A	R51C
					R55D							R40C

I Increase farm activity or make farm improvements

N Make no changes in present level of farming

D Decrease level of farm activity

Italics indicate farmers with physical disabilities.

* Son to take over farm

management mixed focus managers were fairly young, mainly in their 30's and 40's. Only 4 of the 12 were over age 50 (Table 4.6). Net farm incomes for the group were generally quite low with two-thirds earning less than \$2,000. Two of the farmers earned between \$2,000 and \$4,000 and 2 earned over \$7,000 (Table 4.6). Total family incomes were fairly substantial, despite low agricultural earnings, because of nonfarm employment. Seven of 12 earned over \$6,000 per year, and 4 earned between \$3,000 and \$6,000. Only one farmer who was physically disabled and 63 years old had low family incomes (Table 4.8). Only three of the moderate management mixed focus managers indicated intentions of making farm improvements, however. These farmers may have been quite receptive because of their comparative youth and possibly because their operations required substantial improvements (Table 4.10).

Farmers with limited managerial ability (scores of 7 or less) were generally operating farms with low gross sales, low net farm incomes, small farm acreages, and were more traditional in their production techniques than other farmers. They were farmers least receptive to making farm improvements or adjusting their operations in response to changing economic conditions, and many of them earned family incomes below the poverty threshold.

Farm focus farmers with low management ability comprised a group of farmers whose gross sales are recorded in Table 4.3 in the lower, right-hand corner. They were typically generating low sales volumes, with only 2 of 10 grossing as much as \$5,000 to \$6,000 per year (Table 4.3 and 4.11). Their farms were typically between 40 and 70 acres on an adjusted basis with the largest being 125 acres (Table 4.3). Furthermore, 9 of the 10 were from Renfrew County and were mainly middle aged (most 50-60). Net farm incomes for the group were low, all 10 earning less than \$2,000 per year from the farm (Table 4.5). Total family incomes (Table 4.7) were also low. Only

Table 4.11 Farm Focus Farmers Cross Tabulations by Gross Sales, Management and Aspirations

GROSS SALES	HIGH MGT.			UPPER MOD. MGT.			LOWER MOD. MGT.			LOW MGT.		
	I	N	D	I	N	D	I	N	D	I	N	D
15000- 25000	G27B R32A	G55A G53A		G*42A G39B G50D	R49C G41A G52D G*56C	G*59A	G39D G42B G47B	G56B R*50A				
10000- 14999	R30B	R*64A G61A R63D		G50C R59A G51A G58C			R*42A R28B G58B					
5000- 9999	R*47B	G48A		R54A G48B	R56A R43C R62A G56A		R*60D	G57B R54B R57D				R45C
0- 4999				G*52B	R64B		G44B					R55B R35A R57A R60E R60F R61B R55C G50A

Italics indicate farmers with physical disabilities
 * Son to take over Farm
 I Increase farm activity or make farm improvements
 N Make no changes in present level of farming
 D Decrease level of farm activity

Table 4.12 Mixed Focus Farmers Cross Tabulations by Gross Sales, Management and Aspirations

GROSS SALES	HIGH MGT.			UPPER MOD. MGT.			LOWER MOD. MGT.			LOW MGT.		
	I	N	D	I	N	D	I	N	D	I	N	D
15000- 25000	R50C G36A			R60B G53B			R30C					
10000- 14999				G34A				R48A				
5000- 9999			G*46A	R45D		R40D						G51B G40A R55D
0- 4999	G41B			G49A R49A R51A			R*37A R*63B			R40C R62B R38A R51C R47C R*57C G39A R50B R43A		

Italics indicate farmers with physical disabilities.

- * Son to take over farm
- I Increase farm activity or make farm improvements
- N Make no changes in present level of farming
- D Decrease level of farm activity

one family earned more than \$6,000 per year, and four earned less than the poverty minimum. Despite their present performance, the aspirations of this group for improving their farms were also low, with only 3 of 10 intending to increase farm activity or improve their farm operations (Table 4.9).

Mixed focus farmers with low management ability displayed a pattern similar to their farm focus counterparts. They are found at the bottom of Table 4.4. Generating low sales volumes and operating small sized farms and mainly from Renfrew County, they represent slightly younger farmers than the low management farm focus farmers (most in their 40's or early 50's; only 2 of 12 were over age 55). They also had low net farm incomes, with 9 of 12 earning less than \$2,000 from the farm (Table 4.6). Total family incomes, however, appeared a little higher, but 7 of 12 still earned less than \$6,000 in total family income (Table 4.8). Six of the 12 earned less than the poverty minimum, approximately the same proportion of farmers as farm focus low management operators. Only 2 low management farmers with a mixed focus intended to increase their farm activity or make farm improvements (Table 4.10).

Further investigation into the relationship between age and aspirations also provided some particularly interesting inferences (Table 4.14). Age, not gross sales volumes, appeared to affect the farmer's decision either to increase farm activity or to make farm improvements. The younger the farmer, no matter what his focus, the more likely he appeared to be receptive to making farm improvements. Farmers at or under 50 were those most likely to make changes, unless older farmers had a commitment from their sons or daughters to take over the farm. Farmers between 50 and 60 without children who showed an interest in succeeding them were unlikely to make farm changes, reflecting their reluctance to invest in an enterprise

Table 4.13 Farm Focus Farmers Cross Tabulations by Age, Aspirations, and Gross Farm Sales

AGE	INCREASE			NO CHANGE			DECREASE		
	15000- 25000	10000- 14999	5000- 9999	15000- 25000	10000- 14999	5000- 9999	15000- 25000	10000- 14999	5000- 9999
<40	G27B R32A G39B G39D	R30B R28B	R35A	R49C G41A					
40- 49	G*42A G42B G47B	R*42A R*47B G48B	G*44B		G48A				R43C R45C
50- 54	G50D	R54A G50B	G*52B	G52D G53A	G50C G51A		R*50A		G51C
55- 59			R55B	G55A G*56C R56B	G58C G*58F G58B R59A	R*57D G57B R56A		G*59A	G56A G56B
60- 65	R60A	R*60D R61A			R*64A	R64B R60F			G61A R62A R63D R60E R61B

Italics indicate farmers with physical disabilities
 * Son to take over farm

Table 4.14 Mixed Focus Farmers Cross Tabulations by Age, Aspirations, and Gross Farm Sales

AGE	INCREASE		NO CHANGE		DECREASE			
	15000- 25000	10000- 14999	5000- 9999	0- 4999	15000- 25000	10000- 14999	5000- 9999	0- 4999
<40	R30C G36A	G34A	R38A	R*37A G39A				
40- 49		R45D		G41B R49A G49A R40C R43A,	R48A	G*46A G40A R40D	R51A R50B	R47C
50- 54	R50C			R57C	G53B	G51B	R51A R50B	
55- 59			R*57C			R55D		
60- 65				R60B.				R*63B R62B

Italics indicate farmers with physical disabilities.

* Son to take over Farm

which they would be working for only another 10 years or so, but which they could not afford to ease up on because they still needed the income that the farm generated. The farmers over 60 and near retirement age were those most likely to be reducing their farm activity in anticipation of retirement.

The farm focus farmers, relying much more heavily on the farm for income than those with a mixed focus, also were more receptive to changes later in life than the mixed focus farmers. Many mixed focus farmers appeared to become reluctant to make farm changes almost 10 years earlier than the farm focus operators (at around age 40 among the mixed focus group), possibly because they did not rely so heavily on agriculture for income. In the case of 2 mixed focus farmers under the age of 40, a heavy nonfarm reliance had made them reluctant to make farm improvements despite their relative youth. Again, farmers with physical disabilities did not appear to constitute a separate group, but were dispersed among the other groups according to their managerial ability, aspirations, age and focus. The farmers with physical disabilities often appeared limited in their farm activity, but physical disabilities did not appear to determine their overall behavioural pattern.

