

**1988 MANITOBA WOODLOT OWNER SURVEY:  
AN ASSESSMENT OF PRIVATE FOREST OWNERS,  
WITHIN FOREST MANAGEMENT UNITS 01, 20 AND 23**

**by**

**J. Trent Hreno**

**A Practicum Submitted  
In Partial Fulfillment of  
The Requirements For The Degree  
Master of Natural Resources Management**

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A practicum submitted to the Faculty of Graduate Studies  
of the University of Manitoba in partial fulfillment of the  
requirements of the degree of Master of Natural Resources  
Management.

MR. J. TRENT HRENO

@

1992

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## **ABSTRACT**

Development and management of private owned forests, or woodlots as they are commonly called, has significant potential in Manitoba. Woodlots can be managed on a sustainable basis for wood fibre, as well as for other commercial purposes. A host of economic and environmental opportunities including, but not limited to, soil and water conservation, recreation, wildlife habitat, and preservation of unique or endangered species and ecosystems are associated with woodlot management.

Information was collected and analyzed on the attitudes, perceptions, attributes and activities of Manitoba woodlot owners with respect to woodlot management. This information will aid Manitoba Forestry Branch and Forestry Canada in the development of a well targeted and effective provincial woodlot management program.

Private woodlot owners surveyed were distributed across all ages and education groups, and nearly 50 percent maintained joint ownership with their spouse. The majority of woodlot owners contacted were interested in woodlot management, and a diversity of woodlot management goals were listed. The majority of woodlot owners support the development of a provincial woodlot management program, and feel there should be government involvement in such a program.

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## CHAPTER I

### Introduction

#### Background

Forests are the most abundant and adaptable renewable resource found in nature. They cover a substantial portion of the earth's surface and are essential to the continuation of humanity by meeting a broad scope of economic, environmental, cultural, social and spiritual needs. Forests are the leading source of development, industrial activity and employment in many countries of the world. As economic development grows, most often an increased demand for wood products is experienced in order to meet the industrial, cultural, and social needs of society (Maini, 1991).

Forests, by their presence, minimize soil erosion, regulate the flow of water, reduce variations in temperature, improve air and water quality and provide essential habitat for animals and plants. Forests also represent an enormous gene pool, important to the evolution of species and ultimately to the welfare of humanity. Recently, the important role of forests in global carbon, oxygen, nitrogen, hydrological and climatic cycles has received heightened attention (Maini, 1991).

From a social perspective, forests may be critical to social and cultural diversity. This is especially so for residents living in and around forests. In Canada, as well as other countries, entire communities depend on forests for their continued existence (Maini, 1991).

#### Manitoba's Forests

Forests cover more than 60 percent of Manitoba's land mass, ranging from the scattered stands of the northern tundra to the extensive stands of the boreal forest. The composition and distribution of Manitoba's current forests originated approximately 12,000 years ago, when glacial ice began retreating northward. Over this time period,

forest fires, small-scale climatic changes and other environmental variations caused a number of shifts in the boundaries of the vegetational zones. The boundaries of Manitoba's present vegetational zones have basically remained constant for the past 2,000 years (Manitoba Environment, 1991).

These forested zones have been designated into five distinct physiographic regions, as follows (Figure 1):

#### **Northern Transition/Tundra Region**

This region stretches into the far north of the province and includes the shoreline of Hudson Bay. The major forest vegetation is comprised of black and white spruce, tamarack, alder, willow, lichen and moss. Tree cover is limited, generally found along the shores of lakes and rivers. Trees are stunted due to short growing seasons, cold temperatures, severe wind, frequent fires and permafrost. In the southern areas of this region, additional trees species found may include white birch, trembling aspen, balsam poplar and jackpine. Tree cover improves in the south, where sandy soils and protected depressions with permafrost-free soils occur.

There is no commercial use of the scattered forest stands within this region, however, local populations make use of the forest for shelter, fuelwood and other subsistence needs (Manitoba Environment, 1991).

#### **Northern Coniferous Forest Regions**

This, the largest physiographic region is predominately forest covered, and comprised of two distinct subsections, the Precambrian Shield and the Interlake. This region is also referred to as the boreal forest of Manitoba.

The precambrian shield covers the eastern and northern areas of the region, and tree cover is dominated by black spruce, jack pine and tamarack. Black spruce is found on thin soils on upland sites, and on poorly drained soils on lowland sites. This species is often found mixed with jack pine and tamarack. Pure stands of fire originated

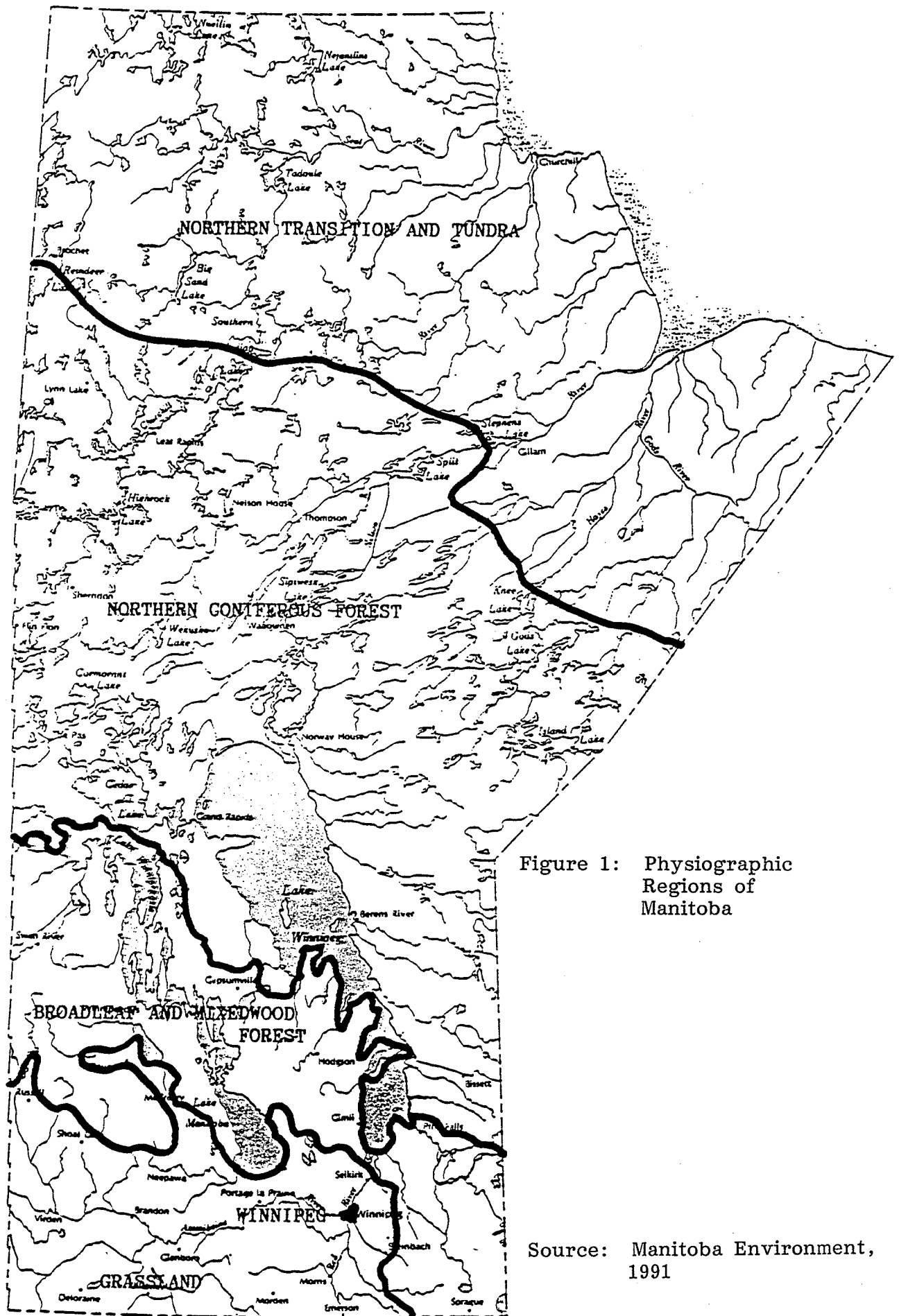


Figure 1: Physiographic Regions of Manitoba

Source: Manitoba Environment, 1991

jack pine are generally located on flats and ridges. Mixed wood stands of white spruce, white birch, balsam fir, trembling aspen and balsam poplar are found along rivers, streams, lakes and south facing slopes. In the southern edges of the precambrian shield, Manitoba maple, black and green ash and bur oak occur.

The interlake area occupies the central and southwestern portion of the region, and generally supports similar forests as the precambrian shield. The Northern Coniferous Forest Region is highly productive and accounts for 60 percent of the annual wood harvested in the province. Between 1981 and 1985 an average of 920,000 cubic metres/year were harvested in this region, representing 14 percent of the annual allowable cut for the region (Manitoba Environment, 1991).

#### **Broadleaf/Mixedwood Region**

Trembling aspen is the dominant species and is found in homogeneous stands, or mixed with white birch, balsam poplar or a variety of conifers. Homogeneous stands of conifers can be found on dry sandy soils of the southeast and central sections, as well as on elevated areas in the western part of the region. This region includes some of Manitoba's most productive sites found in the Riding, Duck and Porcupine mountains, as well as some of the least productive sites found in the central part of the region. The Broadleaf/Mixedwood Region, in particular, the southeast portion of the region, holds potential for woodlot management due to the presence of small privately owned forests scattered throughout.

This region accounts for the balance of wood harvested in Manitoba. The rate of use of commercial harvesting is higher in this region (38 percent of the annual allowable cut harvested), than in the Northern Coniferous Forest Region (14 percent of the annual allowable cut harvested). Annual allowable cuts for certain species are almost fully committed in some parts of this region, as for example, jack pine and black spruce in the southeast (Manitoba Environment, 1991).

### **Grassland Region**

Although the Grassland Region is predominately developed for agricultural purposes, it includes significant forested areas along the major river courses and two provincial forests established within the region. Trembling aspen is the dominant species found in the scattered patches of woodlands still remaining. The borders of the region act as an ecotone (to some extent, an artificial ecotone), between the boreal forest and grasslands. Along the major river courses extremely productive forests occur, comprised of balsam poplar, cottonwood, bur oak, ash, Manitoba maple and American elm. Basswood is found in the eastern edge of this region.

Use of the forest resource in this region has been minor in the recent past, but was significant in the early development of Manitoba. There are significant volumes of deciduous species, and lesser volumes of coniferous species found on private land throughout the Grassland Region. Consequently, there is a great deal of potential for woodlot management in the small privately owned forests of this region, as well (Manitoba Environment, 1991).

### **Winnipeg Region**

Natural forests in this region are similar to those of the Grassland Region, and are predominately found along the corridors of the Red and Assiniboine Rivers. Ornamental trees and shrubs make up the majority of the forest vegetation. Many of the ornamental species are native to the area, however a number of non-native species are also present. Concerns in the region include the predominance of Dutch Elm Disease, loss of forested land to urban development, and loss of forests along rivers.

The City of Winnipeg economy does receive economic benefits from the commercial use of the forests in the other regions. Trees in the Winnipeg Region are generally recognized for their aesthetic values, as well as for energy conservation, erosion protection, wildlife habitat and buffering potential (Manitoba Environment, 1991)

## **Woodlot Management in Canada**

Woodlot management is relatively common in the Atlantic provinces, Quebec and Ontario. The history of settlement in eastern Canada resulted in many forested areas close to settlements, becoming privately owned. Much of these privately owned forests, or woodlots as they came to be called, were logged to provide timber for the rapidly expanding industries of the region. Gradually, the concept of managing the harvest of trees to ensure continued adequate timber supplies became more widely accepted amongst landowners (Reed, 1988).

More recently, landowners have become aware of non-commercial management goals, and the benefits that can also be realized. At present, there are private woodlot associations and groups in all provinces in Central and Atlantic Canada, in British Columbia, as well as recently formed woodlot associations in Manitoba and Saskatchewan. These groups and associations are comprised of woodlot owners involved in woodlot management for both commercial and non-commercial goals, and are often assisted and encouraged by provincial and/or federal government woodlot programs (Reed, 1988).

The estimated total area of all private owned forests in Canada is 24 million hectares. Of this total area, 22 million hectares comprises commercial productive forest (areas capable of producing a commercial crop of trees in a reasonable time). Private woodlot area is dominated by the Atlantic provinces, and to a lesser extent, by Central Canada (Reed, 1988). Woodlot owners contribute substantially to the economy of rural communities and to the general economy. For example, in 1989 the product output of woodlots was worth \$ 4 billion to the Canadian economy (Canadian Federation of Woodlot Owners, 1989).

### **Status of Woodlot Management in Manitoba**

In Manitoba there are 334,400 km<sup>2</sup> of forested land, which ranks fifth in Canada when compared to the area of forested land in other provinces and territories (Manitoba Natural Resources, 1986). Ninety-three percent of the forested land in Manitoba is owned by the Province of Manitoba, while the bulk of the remaining 7 percent is privately owned, and located mainly in the southern portion of the province. The estimated total area of privately owned, productive forest in Manitoba is 989,000 hectares, with hardwoods comprising a preponderance of the tree species present (Manitoba Natural Resources, 1986). Commercial woodlot management in Manitoba is in its infancy, best estimates indicate that less than one percent of the annual productive forest harvest is from these privately owned forests (Middlebro', Personal Communication, 1989).

Management of woodlots for non-commercial goals is not prominent in Manitoba either, but is evident, particularly in the Grasslands and Broadleaf/Mixedwood Regions. These more southern regions both hold potential for woodlot management. Management of private woodlots in Manitoba does look promising, with the recent formation of two associations, the Woodlot Association of Manitoba Inc., and The Manitoba Christmas Tree Growers Association. Both associations are involved in promoting woodlot management programs in Manitoba. In addition, the Manitoba Forestry Association has taken the initiative to address woodlot management in Manitoba, and are in the process of developing a management program geared towards the small woodlot owner. These associations became interested and actively involved in the development of woodlot management programs, after the 1988 Private Forest Landowner Survey, and a similar 1989 subsequent survey, were conducted (Middlebro', Personal Communication, 1991). All three associations are encouraged and assisted by the provincial and federal governments, under the recent 1990 - 1995 Canada-Manitoba



Partnership Agreement In Forestry. This agreement was signed just prior to the completion of this document, and differs from the previous 1984 - 1989 Canada-Manitoba Forest Renewal Agreement, in that it includes significant funding for the development of private woodlot management programs.

It is important to note that even provinces with a small percentage of privately owned forest, as for example the prairie provinces, can realize great potential from private woodlots. This is because the majority of private woodlots in Canada are located within 100 kilometres of wood processing plants, as well as urban areas. Commercial and non-commercial woodlot management goals are enhanced because of this proximity (Reed, 1988). Small woodlot owners have the opportunity to undertake intensive, careful management that will ensure levels of productivity and the development of high quality products that cannot be matched by large-scale forestry (Canadian Federation of Woodlot Owners, 1989).

Development and management of private woodlots has significant potential for Manitoba. Woodlots can be managed on a sustainable basis for wood fibre, as well as for a variety of non-commercial goals, including, but not limited to, wildlife, soil and water conservation, recreation, and preservation of unique or endangered ecosystems. In combination with the aesthetic, environmental and economic spin-offs, societies changing attitude towards conservation of natural resources may result in increased public interest in private woodlot management (McKinney and Rounds, 1990). With a sustainable integrated resource management approach, it is possible to manage private woodlots in a manner that combines a number of goals. It is important to recognize that not all goals may be maximized simultaneously, however, over its entire life cycle a forest can meet many commercial and non-commercial management goals a woodlot owner may have.

### **Problem Statement**

Woodlots in Manitoba have, in the past, received only limited attention from the provincial and federal governments. For example, the 1984-1989 Canada-Manitoba Forest Renewal Agreement attached little emphasis on woodlot development and management. This has changed recently, with the signing of the 1990 - 1995 Canada-Manitoba Partnership Agreement In Forestry, which has targeted funds for a number of initiatives, including woodlot development and management. This agreement has also led to funding, support and encouragement for those associations interested in woodlot management in Manitoba.

The need for more information on woodlot owners, as a prerequisite to the development of a well targeted and effective provincial woodlot management program, was recognized by the Manitoba Forestry Branch, and Forestry Canada prior to the signing of the recent agreement.. With the current interest in woodlot development and management, a greater understanding of the interests of Manitoba woodlot owners is critical. The study, supported by the federal and provincial governments was designed to:

1. provide necessary information to improve knowledge of the attitudes, perceptions, attributes and activities of woodlot owners;
2. establish a data base for use in suggesting future recommendations regarding woodlot management in Manitoba.

This work was undertaken in harmony with the policies of the Manitoba Forestry Branch and the Sustainable Development Coordination Unit of the Province of Manitoba.

## **Objectives**

The major objective of this study was to identify and collect information on the attitudes, perceptions, attributes and activities of Manitoba woodlot owners, with respect to woodlot management.

Secondary objectives of this study were as follows:

1. To identify the location of mature woodlots of 40 acres or more, for each township within the designated study area;
2. To verify the Forest Geographic System (FORIST), "mature forest on patented land" maps, and the manually compiled cover type maps, for approximately 25 percent of the identified woodlots;
3. To investigate and assemble information on potential regional market contacts for woodlot products;
4. To make recommendations regarding the development of a woodlot management program for woodlot owners in Manitoba.

### **Assumptions and Limitations**

This study assumes that Manitoba Forestry Branch, and Forestry Canada will remain involved and committed to developing a policy for private woodlot management in Manitoba. It also assumes that woodlot owners will have specific views and ideas regarding woodlot management, and the development of a provincial woodlot management program.

This study was limited to woodlot owners with property in south-eastern Manitoba, within Forest Management Units 01, 20, and 23, of the Broadleaf and Mixedwood Forest Region of Manitoba. In an effort to maximize study resources and minimize expense, the study was limited to the summer field season (May-September), of 1988.

### **Definition of Terms**

Annual Allowable  
Cut (AAC):

The average volume of wood which may be harvested annually under sustained yield management. Roughly equal to the amount of new growth produced by the forest each year, including a proportion of the mature volume, less deductions, for losses due to fire, insects and disease (Forestry Canada, 1990).

Coniferous:

Cone-bearing trees have needles or scale-like leaves, usually evergreen, and producing wood known commercially as "softwoods" (Forestry Canada, 1990).

Deciduous:

Term applied to trees, commonly broadleaf, that usually shed their leaves annually. Also known commercially as "hardwoods" (Forestry Canada, 1990).

Ecosystem:

A community of interdependent organisms together with the environment they inhabit and with which they interact, and which is distinct from adjacent communities and environments (Allaby, 1989).

Ecotone:

A transitional zone between two ecosystems. Ecotones typically support species derived from the ecosystems bordering them as well as species found only in the ecotone, so they tend to be richer in species than the adjacent ecosystems (Allaby, 1989).

Forest Mgmt. Unit:	For forest management purposes in Manitoba, the Forest Zone has been subdivided into 65 Forest Management Units, which aggregate into 10 forest sections (Manitoba Natural Resources, 1986).
Forest Zone:	The Forest Zone covers 387,362 km <sup>2</sup> , and is located in the southern 65 percent of the province. This land contains all of the productive forest land, as well as Manitoba's agricultural land base (Manitoba Natural Resources, 1986).
Habitat:	The dwelling space of a species or community, providing a particular set of environmental conditions (Allaby, 1989).
Harvesting:	The cutting and removal of trees from a forested area (Forestry Canada, 1990).
Reforestation:	The natural or artificial restocking (i.e., planting, seeding), of an area with forest trees. Also called forest regeneration (Forestry Canada, 1990).

## **CHAPTER II**

### **Review of Related Literature**

#### **Survey Research Methods**

A questionnaire is a data collection instrument used in survey research. Questionnaire research is a systematic and objective method of obtaining information which can be used in decision making (Kinnear & Taylor, 1979). The design of a questionnaire must, by necessity, differ on the basis of the method of contact used. In general, there are three methods of contact that are applied; mail-out survey, telephone interview, and personal interview. Often, these three methods are incorporated in various combinations in order to successfully collect data. The selection of a particular method, or methods of contact must consider logistics, sampling constraints, response rates and overall costs. Whatever method(s) chosen, questionnaires are most often conducted for the purpose of making descriptive assertions regarding a specific population.

Questionnaires can be used to measure the following types of information (Mason et al., 1983):

1. Attitudes
2. Perceptions
3. Behaviour
4. Attributes

Attitude is described by Kinnear and Taylor (1979), as being made up of three components. They are as follows: 1) the cognitive component "which refers to the respondent's awareness of and knowledge about some object or phenomenon." 2) The affective component refers to the respondent's preference for an object or phenomenon.

3) The behavioural component "which refers to what the respondent has done or is doing."

Perception is concerned with the impression an individual has of an object or phenomenon. Schiff (1971) states that the impression an individual has is further modified by that "individual's past experience with the same or similar phenomenon in question, as well as that individual's physical, emotional, and mental state at the moment the phenomenon is viewed or considered." Schiff (1971), further states that perceptions may also be a function of the value of the phenomenon (or object), to the particular individual. Perceptions are narrower in scope, less stable, and more subject to change than attitudes. In addition, perceptions may or may not have affective and cognitive components (Schiff, 1971).

In general, behaviour refers to the respondent's actions with respect to an object or phenomenon. Although behavioural information is on occasion collected as part of an attitude measurement, it is more often collected and applied for its own value. Attributes refers to the readily definable characteristics of the respondent and include items such as age, sex, education, land holdings, etc. (Rossi, 1983).

Of the three methods of contact used, the personal interview method is the most versatile. The interviewer often maintains a greater degree of control, and can clarify questions for the respondent, increasing the likelihood of complete responses. As a result, questions in personal interviews can be complex, open-ended, and can incorporate the use of visual aids, if so desired. Further advantages of the personal interview include ease of question control and a low risk of respondents missing questions. Disadvantages include the fact that personal interviews are generally the most expensive method of contact, and have the highest degree of interviewer bias associated with them.

The cost of telephone interviews can vary considerably depending on the



duration of the interview, and whether the calls are local or long distance. Generally, telephone interviews are less expensive per response than personal interviews because the interviewer is not required to travel to the respondent's location. Telephone interviews can include open-ended questions, be highly complex, and as with personal interviews, the question sequence can be controlled. However, visual aids and ranking questions are not appropriate for telephone interviews, and as a result cannot be included.

As can be expected, the response rate of the questionnaire differs with the method of contact chosen. Yu and Cooper (1983), found that the response rates of mail-out surveys was the lowest of the three methods. These researchers found that mail-out surveys had an average response rate of 47.3 percent; telephone interviews had an average of 72.3 percent, while personal interviews had an average response rate of 81.7 percent. In contrast, Hoinville and Jowell (1978) found that quality and response rate of mail-out surveys is often as good or better than that achieved by the personal interview method.

A list of disadvantages and advantages of the mail-out survey, compiled by Wallace (1954) appears below.

#### Disadvantages of the Mail-out Survey

1. Nonreturns - response rates of mail-outs are often below 50 percent when conducted by unskilled persons. A number of follow-ups are required to increase the returns.
2. Respondents may vary significantly from the nonrespondents, thus biasing the sample. This is because relative to respondents, nonrespondents are a collection of individuals of which nothing is known, even if special efforts are made to minimize this group.

### Advantages of the Mail-out Survey

1. Allows a wider range of cover at minimal costs.
2. Can contact people who would otherwise be difficult to reach.
3. Greater coverage may prove to be more representative because of a greater sample size.
4. More accurate answers can be attained because of the extra time available to answer the questionnaire.
5. Respondent is given greater autonomy.
6. Greater uniformity in the way the questions are asked.

Dillman (1984), and Hoinville and Jowell (1978), both recommend a follow-up when using mail-out questionnaire methods as a data collection instrument. A follow-up reminds the individual sampled to return the completed questionnaire. A follow-up may also involve sending a reminder with another survey. Additionally, the individual sampled can be reminded by telephone if the expense is not too high. Regarding questionnaire length, Dillman (1984) states that mail-out questionnaires "greater than 11 pages or 125 questions can expect a significant decline in the number of responses." As well, Jackson (1984) recommends a mail-out survey should have no more than 60 questions, but suggests the shorter the survey the better. Survey methods and the criteria utilized in the selection of appropriate methods of contact for this study are provided in Chapter III.

### Woodlot Owner Surveys

Woodlot owner surveys have been undertaken by the majority of provinces in Canada. These surveys have been conducted either on a province wide basis or in a selected study area of the particular province, and were carried out to gather general information on woodlot owners. A partial list of provincial surveys undertaken include Macquarrie's (1981) work in Nova Scotia, de Marsh's (1986) and Roy's (1983) in New Brunswick, James' (1987) in Alberta, and Smyth et al. (1981) in Ontario.

Macquarrie (1981), with the assistance of the Nova Scotia Department of Lands and Forests conducted a mail-out survey to acquire information about woodland owners, the extent of their holdings and the attitudes and objectives towards woodland ownership and use. The sample size consisted of 1,862 owners, and the survey resulted in an overall response of 58 percent. Twenty two questions were asked in total.

de Marsh (1986), then President of the New Brunswick Federation of Woodlot Owners, prepared a report which reviewed the recent history of state-industry-woodlot owner relationships in New Brunswick. His discussion represented his own views and opinions, as well as those of some of the woodlot owners residing in New Brunswick. It was based on informal contact and not on mail-out questionnaire research. However, Roy (1983) conducted a province-wide mail-out questionnaire study called The Private Woodlot Resources Study, which was established by the Government of New Brunswick. The study was conducted to identify the aspirations of nonindustrial woodlot owners and to define their role in the provincial forestry sector. This was a major survey and involved a number of staff. In total, 32,022 owners were contacted, and 8,790 questionnaires were returned, for a rate of response of 27.4 percent. The questionnaire was 8 pages in length, and a total of 44 questions were asked.

James (1987) conducted a mail-out questionnaire of woodlot owners in Central Alberta. The purpose of the survey was to find out "... who the owners are, what

do the owners own, what do the owners do, and what are the motivational factors that prompt owners to act." A total of 1600 owners were contacted and 666 questionnaires were completed and returned, for a response rate of 42 percent. As a complete copy of the questionnaire used to gather the information was not included with the report, it is not known how many pages the questionnaire consisted of. However, a total of 35 questions were asked.

Smyth and Nausedas (1981) with the assistance of the Ontario Ministry of Natural Resources and the Canadian Forestry Service conducted a mail-out survey of rural landowners in Ontario, from a private land forestry perspective. The basic objective of the survey was to determine the socio-economic characteristics of the rural landowners and their general objectives and attitudes towards woodland management. This was a province wide survey, and due to the large numbers of potential respondents, a random systematic sample of rural private landowners in Ontario was drawn from the Province's Ministry of Revenue regional property tax assessment rolls. By this system, a total of 12,400 landowners were selected for the survey. The total response rate, after two follow-up reminders were sent, came to 76 percent. This was the highest response rate to a mail-out survey of this size involving woodlot owners in Canada found in the literature. The questionnaire was 10 pages in length, with 34 questions. However, a question-skipping technique was incorporated into those sections of the questionnaire which may not have applied to a particular respondent, and this may have contributed to the the higher response rate. Chapter V provides a more detailed review of these surveys, including a brief discussion of woodlot owner responses, in comparison to responses obtained from this survey.

## **CHAPTER III**

### **Methodology**

#### **Methods**

Primary data was utilized to satisfy the objectives of this study. A questionnaire was developed and administered to collect information on woodlot owners with respect to woodlot management. The questionnaire was mailed out, accompanied by a pre-paid self-addressed envelope, to approximately 75 percent (175 potential respondents), of the sample population. The remainder of the sample population (58 potential respondents), were personally contacted. Due to time and budgetary constraints, and the relatively remote population, this combination of data collection methods was considered the most appropriate. A more detailed description of the questionnaire, study area, and other methodology follow.

#### **The Questionnaire**

The questionnaire (Appendix A), addressed issues relating to set study objectives, including demographic facts, the ownership unit, and woodlot owner perceptions, attitudes, attributes and activities. The author, in conjunction with Manitoba Forestry Branch, Forestry Canada and the practicum committee developed the optimum structure and design. The questionnaire was pretested among several woodlot owners in eastern Manitoba to assess format, design, clarity of wording, and time required to complete. The results from the pretest indicated that some small revisions were required, but that the questions could be answered by the owners within an acceptable time period. The necessary revisions were made, and the questionnaires soon followed. The questionnaires were mailed to the sample population beginning in June 1988. Two more mailings followed in July and August 1988, to members of the identified sample

population who had not responded to the original mailing. Each questionnaire was accompanied by a cover letter (Appendix B) and a pre-paid envelope. The majority of the responses were received by October, 1988.

In addition, an effort was made to contact a number of woodlot owners and personally administer the questionnaire. Approximately 25 percent of the sample population received personal interviews conducted by the author. Owners selected for personal interviews received a covering letter (Appendix C), informing them that an attempt would be made to meet with them.

In summary, it was evident that the research instrument by which the required information could be most readily obtained was the questionnaire. The mail-out questionnaire was chosen for the majority of the sample group in order to reach a large, dispersed and, in some cases, remote population, with minimal costs. The personal interview method chosen for approximately 25 percent of the sample population was utilized in order to facilitate the verification of the forest cover type maps, while bringing a more personal touch to an otherwise impersonal collection of data. Respondents were chosen at random for the personal interview method, and resided throughout the study area. For each survey question, the total number of responses for each answer, including "no response" were totalled and converted to a percent.

### **Sample Size**

The selection of an appropriate sample size is critical for any survey method. For this study, the sample size was pre-determined by the study area. All owners of mature, forested land of 40 acres or more, located within the study area were selected as members of the sample population. Forty acres was chosen as the "cut-off point" for this survey for two reasons. First, it was the sample size area chosen by authors of similar studies, which allowed for greater ease of comparison of results. Second, related literature indicated a forty acre woodlot would present the landowner with a wide range of management options. A smaller study area had the potential to bias results by possibly limiting the management options an owner might see as available according to literature (Roy, 1983; Macquarrie, 1981).

### **The Study Area**

The study area (Figure 2) was located in south-eastern Manitoba, within Forest Management Units 01, 20, and 23 (Figure 3), of the physiographic region, Broadleaf and Mixedwood Forest. This area was chosen because of the proximity of the study area to wood-using industries and markets, a diverse ownership in terms of land use, a diversity of privately owned forests within the area, and perceived interest in the study by landowners. Finally, this region is central to a future demand zone for aspen fibre. These criteria were beneficial to the survey and enhanced the probability of obtaining a high response rate from the sample population.

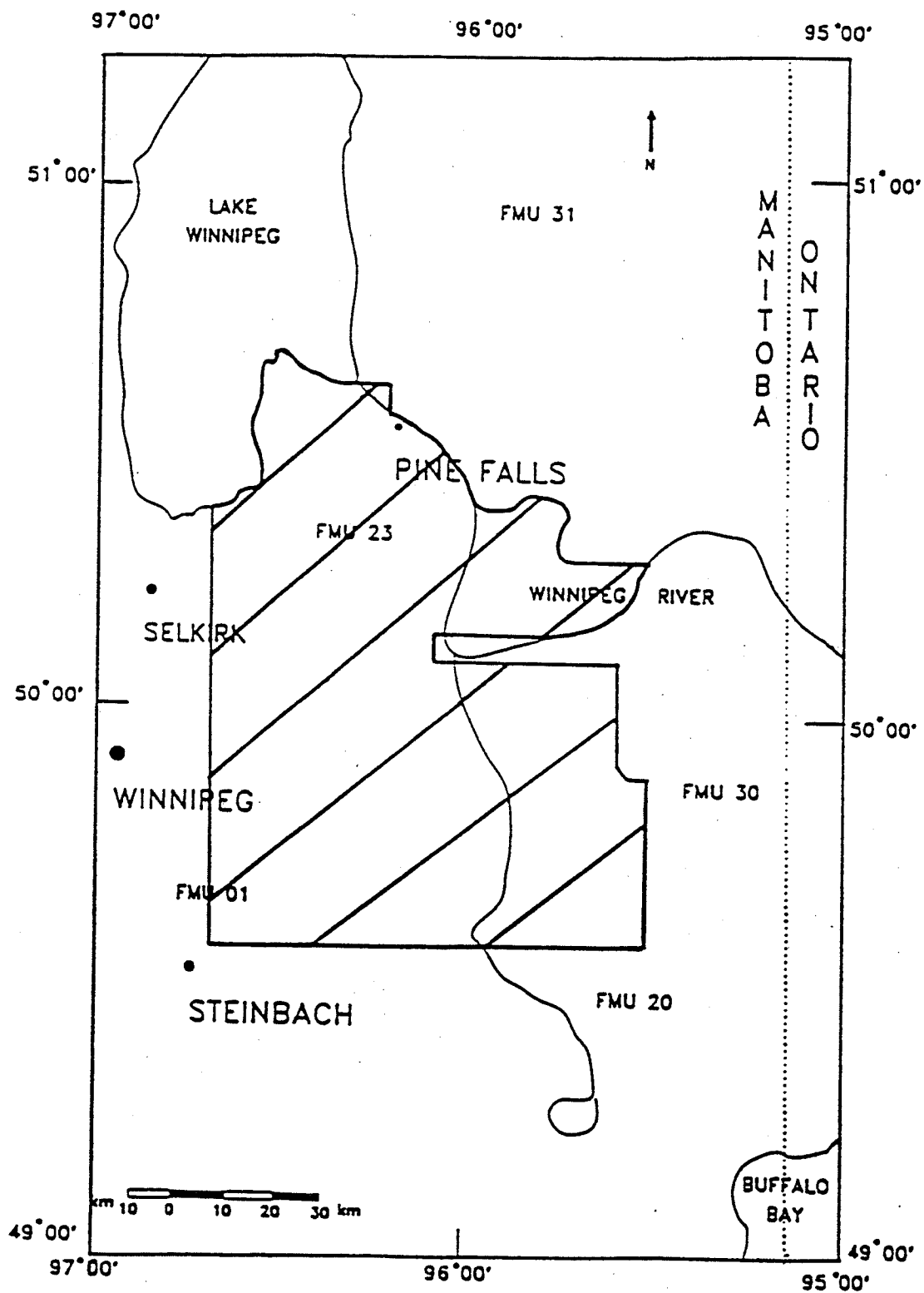
### **Woodlot Identification**

Privately owned forests of 40 acres or more, located within the study area, were primarily determined through the use of the Forest Geographic Information System, at the Manitoba Forestry Branch Head Office. A program was run to identify "mature forest on patented land" for each township in the study area (Figure 4). The computerized maps produced were analyzed and the appropriate areas of privately owned forests identified. As the data for all regions within the study area had not yet been entered into the FORIST System, manually compiled cover type maps were also utilized to identify woodlots. A legal description including township, range, and section was determined for each woodlot in the study area meeting the size criteria.

### **Woodlot Owner Identification**

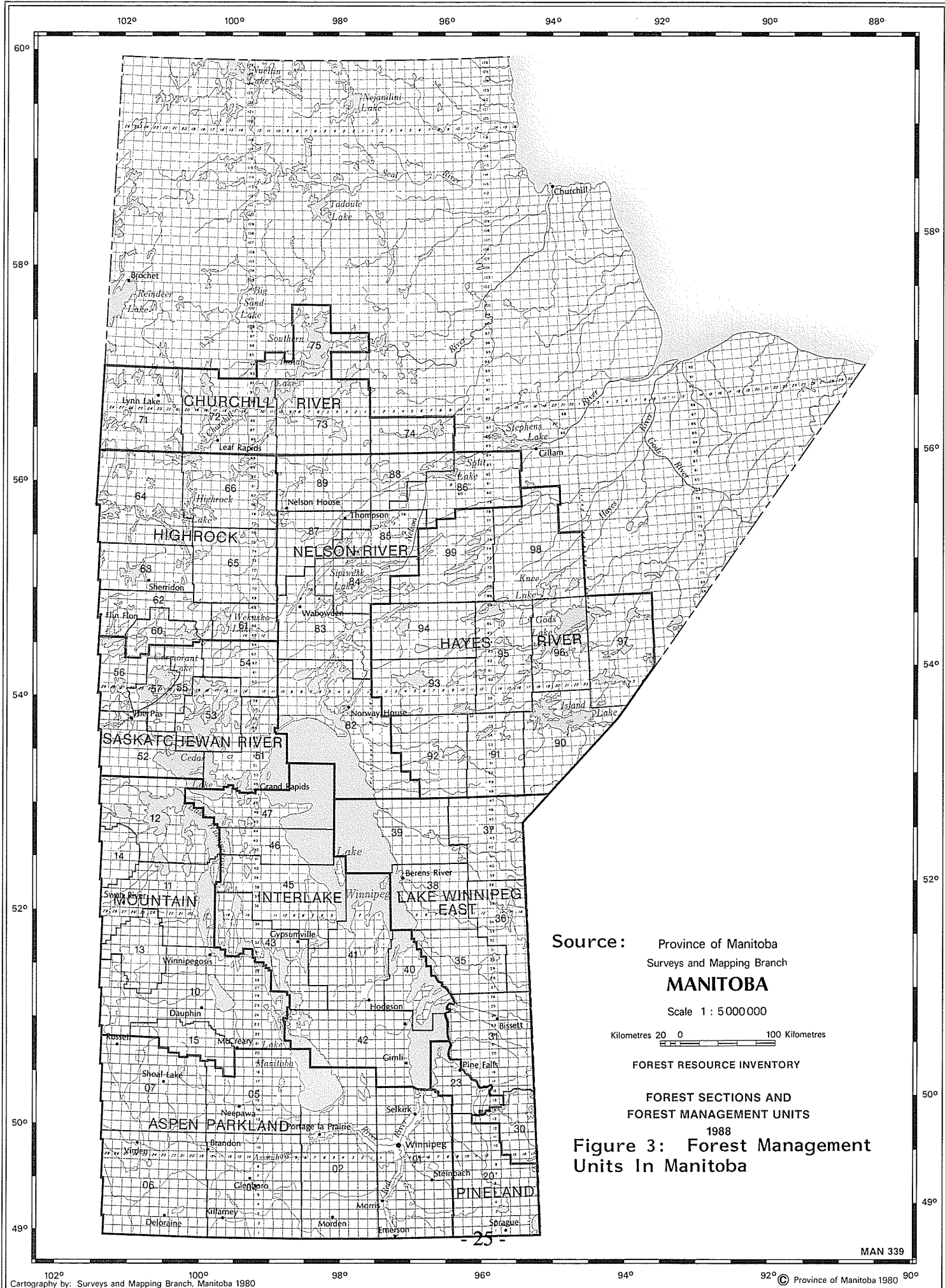
The names and addresses of owners were identified by matching the legal land description from the computerized and manually compiled cover type maps, with the respective legal land description and owner information provided by the Municipal Assessment Offices tax rolls. This was determined for each municipality within the study area. Although a tedious process, this method of pursuing government tax rolls ensured a higher degree of accuracy in owner identification.





Source: Manitoba Natural Resources, 1986

Figure 2: Location of study Area



### **Verification of Cover Type Maps**

An effort was made to compare the privately owned forests of all personally contacted owners, with the information presented in the computerized and manually compiled cover type maps. Ground truthing was carried out for verification purposes if permission was granted, and the area was relatively accessible, given time constraints. Ground truthing consisted of walking through the woodlot, ensuring the entire area was systematically covered. Species type, cutting class and observed site conditions were noted and compared to the information presented on the cover type maps (Figure 4). A map of each area was sketched with pertinent information included, to ensure ground truthing was as thorough, comprehensive and accurate as possible.

### **Market Information**

A list of potential regional market contacts for woodlot products within the study area, was assembled (Appendix D). This information was gathered primarily from the "Directory of Primary Wood-Using Industries in Manitoba-1985" (Giles and Bohning, 1985). The sources were further identified by Dealer Licence, Quota Holder and Sawmill Licence sub-headings. Additional information was gathered through personal contact with individuals in the wood-using industry. This was quite beneficial, as discussion with these individuals resulted in the list of market information being as up to date as possible.

T12R10EPM  
MATURE FOREST ON PATENTED LAND



LEGEND

SUBTYPE CLASS	WORKING GROUP	CUTTING CLASS 3 4 5
31-39, 41-49	PINE	[Pattern]
18-22, 50-52	SPRUCE, 8F	[Pattern]
30-32, 70, 72	TAMARACK	[Pattern]
36-37, 76-77	EASTERN CEDAR	[Pattern]
90-91, 99, 80-84	ASPEN	[Pattern]
82, 98	BLACK POPLAR	[Pattern]
85, 86, 87, 92 93, 94, 95, 96, 97 98, 99, 90, 91, 92	WHITE BIRCH	[Pattern]
	OTHER HARD WOOD	[Pattern]

700-704	TREED MUSKEG.....	[Pattern]
720-725	WILLOW/ALDER.....	[Pattern]
731-734	PROTECTION FOREST.....	[Pattern]
811-816	FIELDS (agriculture).....	[Pattern]
820-824	MEADOW.....	[Pattern]
830-839	MARSH -MUSKEG.....	[Pattern]
718-713, 848-859, CUT CLASS 3, 1, 2....	TREED ROCK, UNCLASSIFIED	[Pattern]
900-999	WATER.....	[Pattern]

[Symbol]	MANAGEMENT UNIT
[Symbol]	FOREST TYPE
[Symbol]	STATUS LINE
[Symbol]	OWNERSHIP LINE
[Symbol]	RAILROAD
[Symbol]	PRIMARY and SECONDARY ROAD
[Symbol]	TRANSMISSION LINES
[Symbol]	DRAINAGE DITCHES
[Symbol]	STREAMS LINES
[Symbol]	TIMBER SALE BOUNDARY

SCALE: 1 INCH TO A MILE  
PUBLICATION DATE : March 28, 1992

Source: Manitoba  
Natural Resources, 1988

Figure 4: Mature Forest on Patented Land

## CHAPTER IV

### Results

#### Distribution and Response Rate

The questionnaire was distributed by mail three times between June and August 1988. In addition, approximately 25 percent of the sample population were contacted in person. A total of two hundred and thirty-three questionnaires were distributed to potential respondents. One hundred and seventy-five potential respondents were contacted by mail. Of these, ninety-eight completed questionnaires were returned, giving a 56 percent rate of response.

The remaining fifty-eight potential respondents (i.e.,  $233 - 175 = 58$ ), were personally contacted. Thirty-four agreed to complete the questionnaire giving a 59 percent rate of response. Thus, a total of two hundred and thirty-three questionnaires were distributed, and one hundred and thirty-two completed, giving a total response rate of 57 percent (Figure 5).

#### Verification of Cover Type Maps

Thirty-six of the fifty-eight woodlot owners personally contacted agreed to allow access to their woodlots for purposes of ground verification. Thirty-three of the thirty-six forested areas corresponded to the information presented on the cover type maps. The other three areas differed only in that the actual cutting class was more advanced for each area, than was indicated on the cover type maps. This slight inaccuracy of the inventory information for the three areas, was relayed to the Forest Management Section of the Forestry Branch, for their review.

Thus, the degree of accuracy of the cover type maps used for the survey, was determined to be approximately 92 percent. In total, approximately 15 percent of

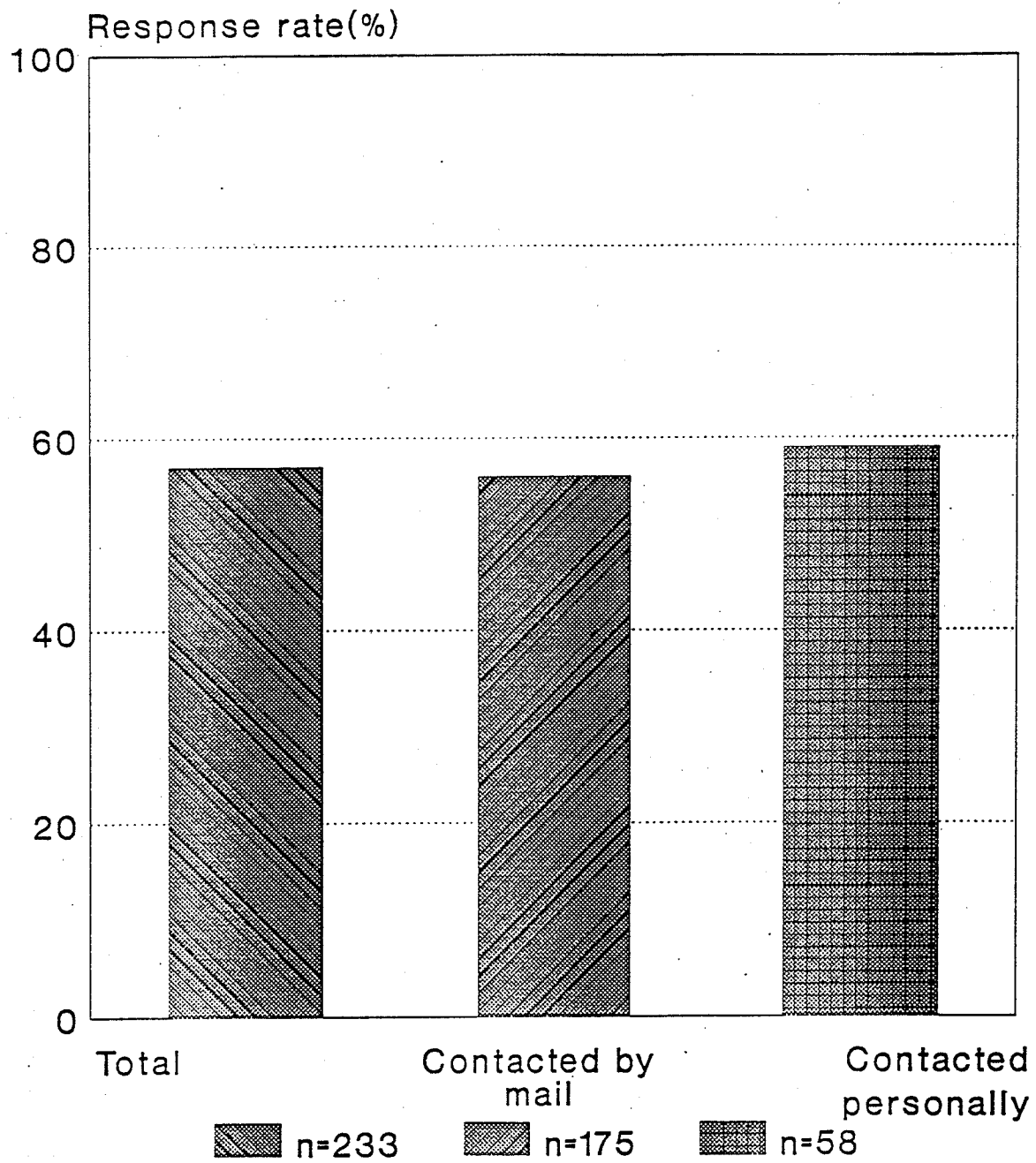


Figure 5: Questionnaire Rate of Response

the identified woodlots were ground truthed. Unfortunately, the target goal of ground truthing 25 percent of the identified woodlots was not attained.

### **Woodlot Owner Profile**

In some cases, a few respondents opted not to respond or were unable to respond to specific questions. Appendix E shows the percentage response to each question individually.

The age of respondents was quite evenly dispersed (Table 1). For example, 29.3 percent were between the ages of 30 and 39, while 24.4 percent were between the ages of 40 and 49. The 50 to 59 age category has similar figures, with 23.2 percent of the respondents in this category. In addition, a significant number of woodlot owners, 19.5 percent, were 60 years of age or older.

Over half, or 61 percent of respondents had completed high school, while 34.2 percent had university or college education (Table 2). The occupations of woodlot owners varied considerably (Figure 6). Skilled trade at 23.7 percent, and professional at 22.1 percent, were the two most common occupations listed by respondents. Understandably, farming at 19.1 percent was frequently listed as an occupation, given the rural implications of woodlot ownership. An identical percentage (19.1 percent), of respondents indicated they were retired.

The main reason for owning forested land, chosen by all respondents, also varied considerably. The responses provided are as follows (Table 3): Heritage for the future 21.7 percent, shelter 18.3 percent, fuelwood supply 15.7 percent, "other" reasons 10.4 percent, aesthetic reasons 9.6 percent, profit from sale of forest products 7.8 percent, wildlife habitat or hunting 6.9 percent, recreational use 6.1 percent and soil and water conservation at 3.5 percent. From an analysis of the comments section included in this question, the majority of respondents who indicated "other" reasons indicated their land was bought as an investment or inherited.

Table 1: Percentage of Woodlot Owners by Age Category

Age	% of Owners
<30	2.4
30-39	29.3
40-49	24.4
50-59	23.2
>60	19.5

No response 1.2%



Table 2: Percentage of Woodlot Owners by Education

Education	% of Owners
<12	36.6
Grade 12	26.8
University or college	34.2

No response 2.4%

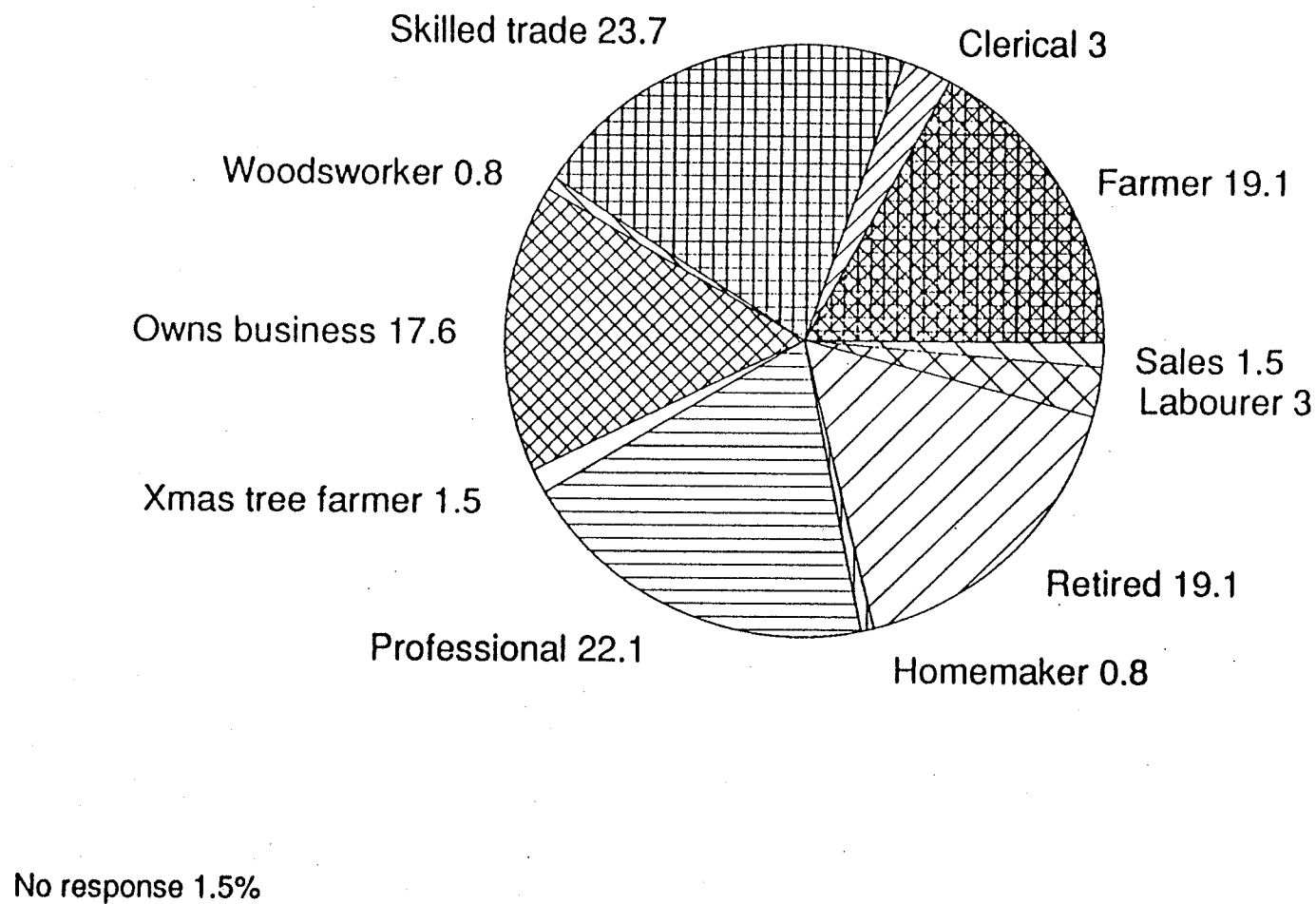


Figure 6: Occupations of Woodlot Owners

Table 3: Main Reason for Owning Forested Land

Reason	% of Owners
Heritage	21.7
Shelter	18.3
Fuelwood	15.7
Other	10.4
Aesthetic	9.6
Profit	7.8
Wildlife	6.9
Recreation	6.1
Soil and water	3.5

The vast majority of respondents, 90.2 percent, indicated they were generally aware of the type of trees, their condition, and the extent of forested land on their property. Although all respondents completed this particular question, approximately half did not indicate the acreage of their forested land in the comments section provided. About two thirds, or 66.2 percent, of respondents indicated they would like to learn more about their woodlot.

Approximately forty percent of woodlot owners indicated they produce products from their woodlot, contrasted with 57.1 percent who indicated they do not produce products (Appendix E, Question 7). These figures correspond closely to the percentage of woodlot owners who indicated they were aware of marketing opportunities for woodlot products in their area, 42.0 percent, and those who indicated they were not aware of marketing opportunities, 57.3 percent (Appendix E, Question 8). From the comments section included in the former question, the majority of respondents who did produce products from their woodlot were involved in fuelwood production, either for personal consumption, to sell, or a combination of the two.

Table 4 provides a comparison of producers and non-producers regarding the main reason indicated for owning forested land. It was apparent that although the majority of the woodlot product producers did harvest for fuelwood, this use was selected as the main reason for owning forested land by only 26.1 percent of those respondents. Shelter 15.2 percent, wildlife 13.0 percent, and heritage for the future 10.9 percent, were also selected by producers as main reasons for owning forested land. Only 8.7 percent of producers chose profit as their main reason for owning forested land, which was an indication that these producers utilize the majority of their firewood for personal consumption, rather than for private sale.

The majority of respondents who indicated they did not produce products from their woodlot, chose heritage for the future 29.8 percent as their main reason for

Table 4: Main Reason for Owning Land: Woodlot Product Producers vs. Non-Producers

PRODUCERS		NON-PRODUCERS	
Reason	% of Owners	Reason	% of Owners
Fuelwood	26.1	Heritage	29.8
Shelter	15.2	Shelter	17.9
Wildlife	13.0	Other	13.4
Heritage	10.9	Aesthetic	10.4
Aesthetic	8.7	Profit	9.0
Other	8.7	Recreation	6.0
Profit	8.7	Fuelwood	6.0
Recreation	6.5	Wildlife	4.5
Soil and water	2.2	Soil and water	3.0

owning forested land. In contrast, only 10.9 percent of producers chose heritage for the future as their main reason for owning forested land. Shelter 17.9%, other reasons 13.4% and aesthetic reasons, 10.4%, followed as the main reason for owning forested land chosen by non-producers. Profit from sale of woodlot products was chosen by 9 percent of non-producers, and fuelwood supply by 6 percent of non-producers as their main reason for owning forested land. Of the respondents who indicated they produced products from their woodlots, only 8.7 percent chose profit from the sale of these woodlot products as their main reason for owning the land.

Table 5 provides another comparison of producers of woodlot products versus non-producers. Of those respondents who indicated they produced woodlot products, 81.0 percent expressed an interest in woodlot management, while 17.4 percent indicated they were not interested personally in woodlot management. A large number of non-producers, 74 percent indicated they were interested in becoming involved in woodlot management, while 20.5 percent indicated they were not interested. Only 4.1 percent of non-producers were undecided, the majority of respondents in this group indicated their decision to become involved in woodlot management was dependent on the implementation of a provincial woodlot management program that would meet their requirements.

In total, of all respondents, including both producers of woodlot products and non-producers, 77.1 percent expressed an interest in managing their woodlot, while 19.1 percent did not. A total of 2.3 percent were undecided, while an identical percentage of respondents did not answer the question (Appendix E, Question 10). From an analysis of the comments respondents included, the benefits they were interested in seeing increase through the management of their woodlots ranged from financial to various non-financial benefits. For example, profit from the sale of woodlot products; aesthetic improvements through planting of trees; wildlife/recreational enhancement; and

**Table 5: Interest in Personal Woodlot Management: Producers vs. Non-Producers**

	<b>% of Producers</b>	<b>% of Non-producers</b>
<b>Interested in personal woodlot management</b>	<b>81.0</b>	<b>74.0</b>
<b>Not interested in personal woodlot management</b>	<b>17.4</b>	<b>20.5</b>
<b>Undecided</b>	<b>0</b>	<b>4.1</b>
<b>No response</b>	<b>1.6</b>	<b>1.4</b>

soil and water conservation improvement, were mentioned by respondents as benefits they would like to see realized.

Table 6 provides a somewhat different aspect to the topic of interest in woodlot management. Of those owners who expressed an interest in managing their woodlot so as to augment the benefits of owning forested land, an overwhelming majority, 92.4 percent, indicated they felt a provincial woodlot management program should be developed. In comparison, only 5.7 percent did not feel there is a need for a provincial woodlot program. Those undecided comprised 1.9 percent of the total responses for this group. This is contrasted with those respondents who did not express an interest in becoming involved in woodlot management. For this group, 30.8 percent of respondents still felt there was a need for a provincial woodlot management program. The remainder of those owners not personally interested in woodlot management, 61.6 percent, indicated they did not feel a woodlot program should be developed to meet the objectives of woodlot owners. A total of 3.8 percent of respondents in this group did not respond to the question.

Overall, 78.0 percent indicated of all respondents surveyed felt a woodlot management program should be developed in Manitoba in order to increase the benefits associated with owning forested land. A total of 16 percent of all respondents were not in favour of such a program, while 4.5 percent were undecided. A small number of respondents, 1.5 percent did not answer this question (Appendix E, Question 11).

Respondents were asked to rank in order of priority, potential types of assistance they would desire from a provincial woodlot management program. Figure 7 graphically illustrates their majority choices, ranked first, second and third. Woodlot information/education was ranked as the first priority by 60.6 percent of respondents. Technical assistance and financial assistance shared, almost equally (approximately 20 percent each), the remainder of respondents first priority choices. Technical assistance



Table 6: Interest in Personal Woodlot Management vs. Interest in Development of Provincial Woodlot Program

	% Owners interested in management	% Owners not interested in management
Interested in provincial program	92.4	30.8
Not interested in provincial program	5.7	61.6
Undecided	1.9	0
No response	0	3.8

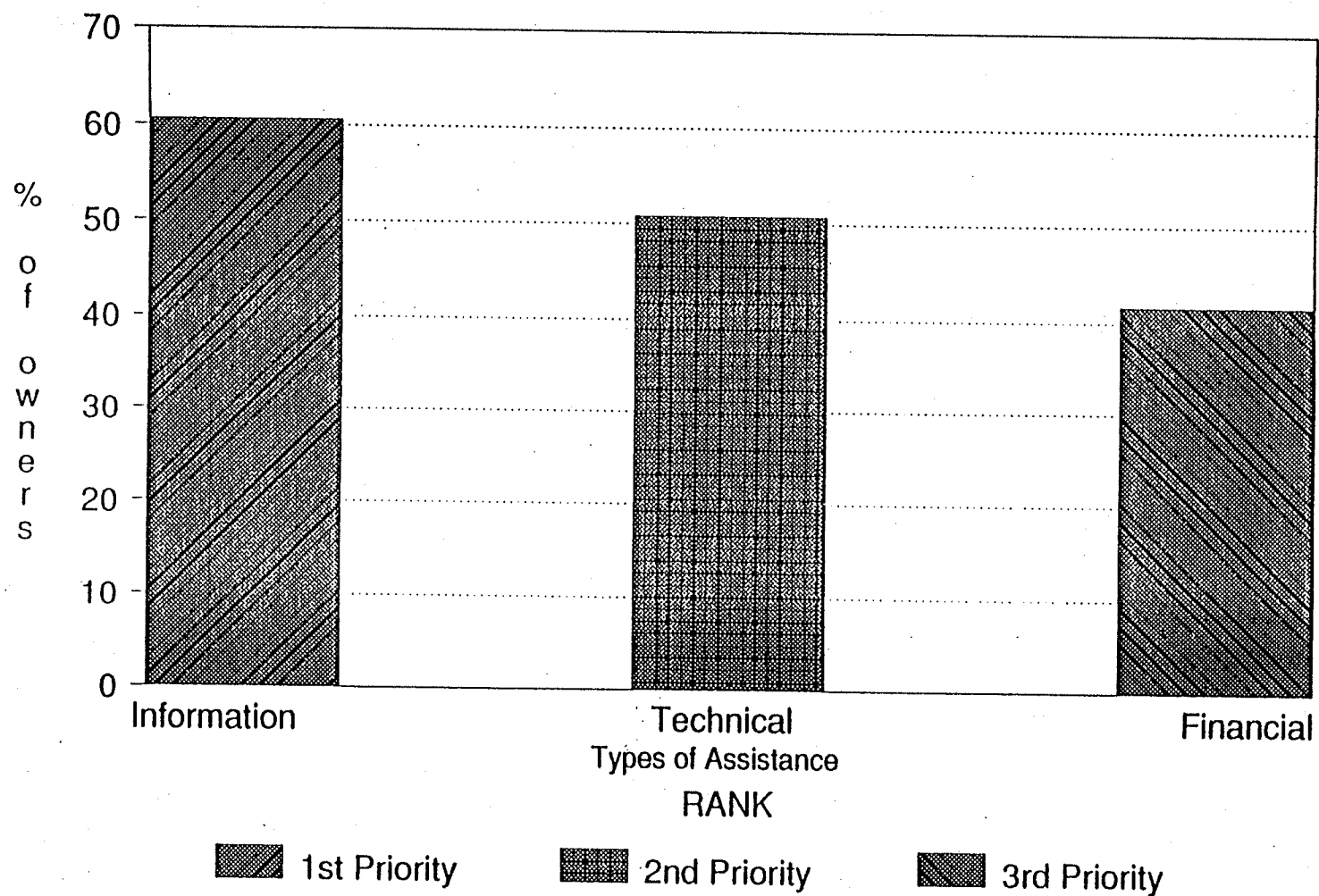


Figure 7: Woodlot Owner Ranking of Assistance Desired From a Provincial Woodlot Program; Majority Choices In Order Of Priority

was ranked as the second priority by 50.8 percent of respondents. Of the remainder of second priority choices, more respondents chose financial assistance (approximately 38 percent), than information/education (approximately 11 percent).

Financial assistance was ranked as the third priority by 41.7 percent of respondents. Of the remainder of third priority choices, information/education and technical assistance were almost equally split (approximately 29 percent each), by respondents.

Figure 8 provides a graphic illustration of woodlot owners' preference for the originator of a provincial woodlot management program. When asked who should develop a woodlot management program, 56.7 percent of respondents (Appendix E, Question 13), indicated it should be developed by both government and private sources. Slightly over one quarter, or 25.4 percent of respondents indicated that a woodlot management program should be developed strictly by private sources. Only 6.9 percent of respondents indicated that they felt a woodlot management program should be developed solely by the government. Overall, 63.6 percent of respondents were in favour of a woodlot management program in Manitoba being developed with government involvement. The vast majority of this group desired a program developed jointly by both government and private sources. A total of 8.4 percent did not respond to this question, while 3.0 percent were undecided.

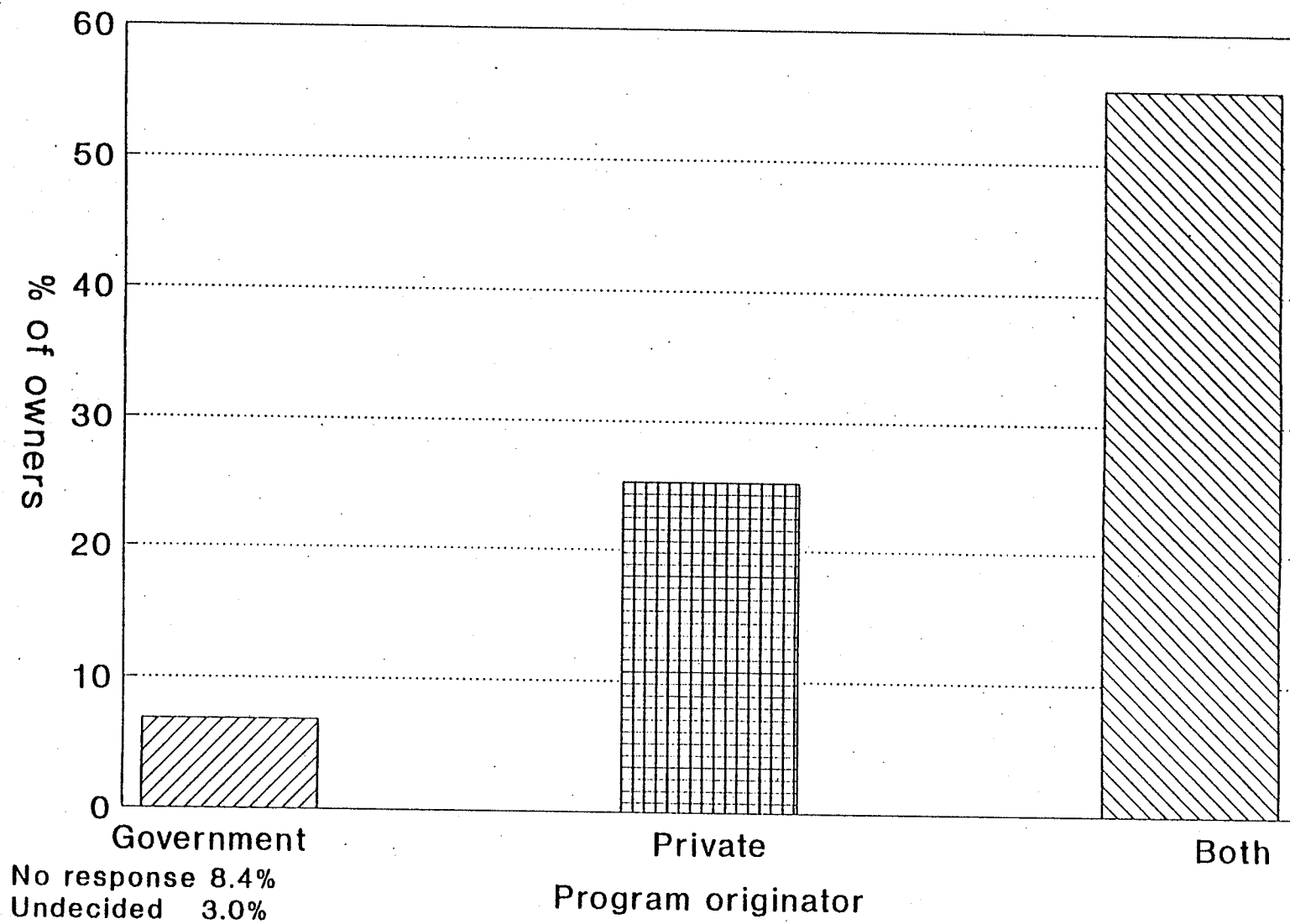


Figure 8: Woodlot Owner Reference for Originator of a Provincial Woodlot Program

## Summary

A total of two hundred and thirty three questionnaires were distributed to potential respondents. One hundred and thirty two completed questionnaires were returned, giving a total rate of response of 57 percent. More specifically, thirty four of the fifty eight woodlot owners personally contacted agreed to complete the questionnaire, for a 59 percent rate of response. Ninety eight of the one hundred and seventy five potential respondents contacted by mail returned completed questionnaires, for a response rate of 56 percent. Ground truthing of forest cover type maps was conducted on approximately 15 percent of the identified woodlots. The degree of accuracy was found to be approximately 92 percent.

A partial list of the results obtained by the study follows:

- 29.3 percent of the respondents were between the ages of 30 and 39, while 24.4 percent were between the ages of 40 and 49. 23.2 percent were between the ages of 50 and 59, while 19.5 percent were 60 years of age or older.
- 81.0 percent of woodlot product producers expressed an interest in woodlot management.
- 74.0 percent of non-producers also expressed an interest in woodlot management.
- 77.1 percent of all respondents, including producers and non-producers expressed an interest in woodlot management.
- 92.4 percent of the respondents interested in woodlot management indicated they felt a provincial woodlot management program should be developed.

- 78.0 percent of all respondents indicated their belief that a provincial woodlot management program should be developed.
- In response to a question asking the woodlot owner to rank preferred types of assistance, 60.6 percent of respondents ranked woodlot information and education as the most important. 50.8 percent ranked technical assistance as the second most important, and 41.7 percent ranked financial assistance last.
- 56.7 percent of respondents felt a provincial woodlot management program should be developed by both government and private sources (associations, groups, etc.) combined.
- 25.4 percent of respondents indicated they felt a provincial woodlot management program should be developed strictly by private sources.
- 6.9 percent of respondents indicated that a woodlot management program should be originated solely by the government.
- In total, 63.6 percent of all respondents were in favour of a woodlot management program in Manitoba being developed with government involvement.

## CHAPTER V

### Discussion

#### Response Rates

This study yielded a personal interview survey response rate of 59 percent, closely matching the mail-out survey response rate of 57 percent. These results tend to support the findings of Hoinville and Jowell (1978), regarding the equity of response rates of the personal interview and mail-out survey methods. In contrast, Yu and Cooper (1983), found that average response rates of the two methods differed significantly. Their findings indicated that average mail-out response rates were 47.3 percent, and average personal interview response rates were higher, at 87.1 percent.

The mail-out survey response rate of this study, 57 percent, is marginally higher than Yu's and Cooper's average response rate for this method. There is, however, a substantial difference in the personal interview survey response rate of this study, only 59 percent, compared to Yu's and Cooper's average response rate of 87.1 percent. Possible reasons for this difference in personal interview response rates can be attributed to the untimely scheduling of the interview process. For example, many of the potential respondents unable to participate in the interview process, indicated they were too "busy" to participate due to seasonal work, such as equipment maintenance and farming practices.

Other potential respondents indicated they were not inclined to participate without the input of their spouse. In hindsight, the scheduling of appointments with potential respondents prior to the interviewing process, may have led to a higher personal interview response rate.

### **Personal Characteristics**

The majority of respondents were male, or maintained property in joint ownership with their spouse. Although the sex of respondents, and the ownership of the land was not asked on the questionnaire, from an analysis of tax assessment roles, these characteristics were determined. More specifically, 26.4 percent of respondents were male and maintained individual ownership of their land, while 49.3 percent of respondents owned land jointly with their spouse. For women, only 13.3 percent were recorded as having individual ownership of land. The remaining 11.1 percent of respondents were mainly comprised of people that owned land in conjunction with more than one other person. Typically, this involved an inheritance where the offspring of the deceased shared ownership of the land.

The fact that almost half of the questionnaires were returned by respondents who held the land in joint ownership with their spouse, was not surprising. It corresponds very closely with the total number of woodlot owners, 42.4 percent, that indicated joint ownership with their spouse.

With respect to the gender factor in individual ownership of land, there appeared to be a much lower incidence of female ownership, than of male ownership. This can be partially accounted for by the fact that traditionally, females do not usually own woodlots (Curtis, 1987). It may also be a reflection of the reluctance of women to live alone on their rural property, after their spouse has died. The incentive to sell the property and move in with family, or move to an urban environment, may be very strong in a recently widowed rural woman. Perhaps this is a stronger incentive for women, than for men. One can only speculate, however, past and present cultural factors influencing gender behavior is no doubt reflected in these findings.

Further indication of the predominance of male interest in private woodlot management is evidenced by the fact that male partners completed 76.0 percent of the



questionnaires returned by joint ownership respondents. Women personally responded to only 24.0 percent of the questionnaire addressed to both spouses. The gender gap in woodlot ownership may become equitable as socio-demographic and cultural factors become more balanced in the future.

The majority of all respondents, 82 percent live on, or near their woodlots. Owners with residences more than thirty kilometres from their woodlots are considered "absentee woodlot owners". This figure (30 kilometres), was chosen somewhat arbitrarily, but was meant to give at least some indication of the likelihood of woodlot owner interaction with, and awareness of, his or her forested land. Again, the percentage of absentee ownership was determined through an analysis of the tax assessment roles of respondents. It might be speculated that, generally, the higher the rate of on-site woodlot owners, the more likely the incidence and degree of interest in private woodlot management. When one considers the logistical problems involved in managing a woodlot that exists a considerable distance from an owner's place of residence, this suggestion seems plausible.

Over half, or 53.7 percent of respondents were between the ages of 30 and 49. A total of 23.2 percent were between the ages of 50 and 59, while 19.5 percent are 60 years of age or older. These figures correspond clearly with those obtained by Smyth and Nausedas (1981), in their survey of over 12,000 Ontario residents.

Although there was a difference in breakdown of age class categories, a number of similarities in the findings of Smyth and Nausedas (1981), and this study were evident. For example, their study indicated that 22.3 percent of respondents were between the ages of 40 and 49, contrasted with 24.4 percent between these ages in this study. In addition, their figure of 27.6 percent between the ages of 50 and 59 corresponds fairly closely to this study's figure of 23.2 percent for this age group.

Smyth and Nausedas (1981), also found that 14.8 percent and 30.9 percent

were between the ages of 30 and 39, and 60 years of age or older, respectively. This, however, differed somewhat from the results of this survey, where the 30 to 39 age group had higher numbers, 29.3 percent, and the 60 years and older category had lower numbers, 19.5 percent. Similar results (less than 5 percent) were obtained for the under 30 age category (Table 1). It was difficult to infer very much from the discrepancies between the two studies, with respect to the 30-39, and over 60 age categories. This was because the 1981 study by Smyth and Nauseda was for the entire province of Ontario, while this study was concentrated on a much smaller area in eastern Manitoba. It may be possible that Manitoba has more younger woodlot owners than Ontario, which would explain the difference in results of the age classes between these two studies. This cannot be verified, however, until a complete survey of woodlot owners in Manitoba has been conducted.

As with age, the education an individual receives can affect his/her attitudes and actions with respect to the level of land management that is undertaken. Furthermore, educational achievement usually correlates highly with income. Well over half, or 61.0 percent of respondents in the study area had continued their education at least as far as high school. A total of 34.2 percent of respondents had continued their education by taking college or university courses after high school graduation. A total of 36.6 percent of respondents had not completed grade twelve (Table 2). This last figure at first glance, does seem a little high. One has to consider, however, that a significant percentage of respondents are older people with a rural background and would have had less opportunity to complete their secondary education while growing up "on the farm". Smyth and Nausedas (1981) recorded a similar figure of 31.2 percent for Ontario respondents who indicated they did not complete grade twelve.

An individual's employment may influence how that person uses his/her land. To provide some insight into the type of employment respondents undertake, the

following eleven occupational classes were considered: skilled trade, woodworker, owns business, Christmas tree farmer, professional, homemaker, sales, labourer, clerical, farmer and retired (Figure 6). The results of the survey indicate that the occupations of respondents are quite diverse. For example, skilled trade at 23.7 percent, and professional at 22.1 percent were the two most common occupations listed by respondents (Figure 6). This was surprising given the rural residences of many of the respondents. Farming at 19.1 percent, was tied for the third most common occupation listed. The remaining eight occupations listed in descending order were; retired at 19.1 percent, owns business at 17.6 percent, labourer at 3 percent, clerical at 3 percent, sales at 1.5 percent, Christmas tree farmer at 1.5 percent, woodworker at .8 percent, and homemaker at .8 percent.

The trend towards increased commuting seemed to be reflected in these results. For example, a total of 45.8 percent of respondents indicated their occupation as either skilled trade or profession, employment that most often occurs in an urban environment. Farming, with its rural implications was only tied for third, at 19.1 percent, amongst the listed occupations. It was possible, however, that a significant component of owners that indicated they were retired, were at one time engaged in farming. Given that 82 percent of respondents live on or near their property, it is clear that there must be a certain amount of commuting from the place of residence, to the work location.

An overwhelming majority of respondents, 90.2 percent, indicated that they were generally aware of the "types" of trees on their property, and the extent of forested land on their property. As presented in Chapter IV, approximately half of all respondents did not indicate the average acreage of their woodlot. It is apparent that this question was poorly worded (See Appendix A, Question 5), as a major intent of this question was to ascertain from the respondent what size acreage they considered to be forested. Based

on the results obtained by those respondents who did indicate their forest acreages, areas claimed ranged from 40 to 640 acres, with an average size estimated at approximately 80 acres. The number of respondents aware and knowledgeable of their forested land was heartening, and suggested that even absentee owners, commuters, and owners with occupations not related to farming or other areas of resource management were still "in tune", and interested in their woodlots. Moreover, a further 66.2 percent indicated they would like to learn more about their forested land.

### **Producer Vs. Non-Producer Responses**

Producer and non-producer responses were compared for a number of key questions in an attempt to investigate shared, and differing characteristics. The responses of these two groups are examined in detail, and should provide further insight into Manitoba's woodlot owners. Recommendations based on the discussion of this, and other results, follow in Chapter VI. Slightly over 40 percent of respondents indicated they produce products from their woodlots, compared to 57.1 percent who indicated they do not produce products (Appendix E, Question 7). These figures correspond closely to the percentage of respondents who indicated they were aware of marketing opportunities for woodlots, 42.0 percent, and to those that indicated they were not aware (Appendix E, Question 8).

All woodlot owners were asked their main reason for owning forested land (Table 4). In almost 30 percent of the cases, non-producer respondents stated their main reason for owning forested land is for heritage for the future. Although the term heritage for the future was not defined, it is apparent from the comments that most often respondents thought of this as ownership of forested land which would provide a good investment for themselves and their children. A substantial number of respondents felt that the investment potential of their woodlot was not simply financial, but that there were other advantages, such as the opportunity for their children "to own natural land", and to have a place "to observe wildlife in a natural environment".

Financial investment considerations are probably more accurately reflected in the percentage of non-producer respondents who indicated profit, 9.0 percent, as their main reason for owning forested land. This, as well as the further 6.0 percent of non-producer respondents who indicated fuelwood capability as their main reason for owning forested land indicates that perhaps a portion of the non-producer group may be interested in future commercial production. As this group has indicated they do not

produce products at present, future commercial production may be likely, and would help explain why non-producers would indicate profit or fuelwood as their main reason for ownership. Recreation, at 6.0 percent, and wildlife, at 4.5 percent, were surprisingly low as the main reason for owning forested land. Indeed, these values were ranked lower than those ranked by producers.

Contrasted with the results of the producer respondents there are a number of significant differences. In more than one quarter of the cases producer respondents indicated fuelwood capability as their main reason for owning forested land. Heritage for the future was rated first by only 10.9 percent of producer respondents. Wildlife was rated quite high at 13.0 percent, while recreation was listed as the main reason by 6.5 percent of producer respondents. The recreation value was slightly more important to producers than non-producers, while wildlife values were much more important to producers, at 13.0 percent, than non-producers, 4.5 percent. Although questionnaire results and comments suggest that a large number of producers are interested in fuelwood production, only 8.7 percent of this group chose profit as their main reason for owning forested land. The profit value for producers was rated even lower than that for non-producers. Soil and water conservation was the least chosen main reason for both groups, while comments by respondents who chose "other", ranged widely and were indicative of the very specific personal interests these individuals had.

As referred to briefly in Chapter IV, there may be a reason for this apparent contradiction of producer and non-producer profit value rankings. The fact that only 8.7 percent of producers chose profit as their main reason is an indication that, at present, these producers utilize the majority of their firewood for personal consumption, rather than for private sale. Comments from this group tend to support this conclusion. As well, comments provided by both non-producer and producer respondents suggest a more active interest in production of woodlot products from their land might be forthcoming

with the advent of a provincial woodlot management program.

As further evidence of non-producer interest in woodlot management, 74.0 percent of this group indicated they were interested in becoming involved in woodlot management, while 81.0 percent of producers expressed an interest in woodlot management (Table 5). From an analysis of the comments, the benefits that producers and non-producers were interested in seeing increase through woodlot management, ranged from financial to various non-financial benefits. A partial list includes profit from sale of forest products such as fuelwood, roundwood, fenceposts, etc. Aesthetic improvements through tree planting, wildlife and recreational enhancement, and soil and water conservation were other benefits respondents listed as interested in seeing increase. Both financial and non-financial benefits were listed by producers and non-producers, which is indicative of a diversity of interests in woodlot management amongst all respondents.

Of those owners who have expressed an interest in managing their woodlot so as to augment the benefits of owning forested land, 92.4 percent indicated they felt a provincial woodlot management program should be developed. Surprisingly, a total of 30.8 percent of the respondents who did not express an interest in woodlot management still indicated there was a need for a provincial woodlot program (Table 6). Although at first glance, this seems contradictory, comments provided suggest that this group, in general, felt that a provincial program would be beneficial to other woodlot owners, but not necessarily to themselves. Reasons given for this decision include such factors as ill health, old age, not enough time, not enough trees, and insufficient spousal support for such an undertaking.

In total, of all respondents including both producers of forest products and non-producers, 77.1 percent expressed interest in managing their woodlot, while 19.1 percent did not. A total of 2.3 percent were undecided, while an identical percentage of

respondents did not answer the question. Similarly, 78.0 percent of all respondents indicated they felt a woodlot program should be developed in Manitoba in order to increase the benefits associated with owning forested land. A total of 16 percent of all respondents were not in favour of such a program, while 4.5 percent were undecided. Slightly over one percent did not answer this question (Appendix E, Questions 10 and 11).



### **Overall Responses to Management Questions**

In response to Question 12 (Appendix E), asking respondents to rank preferred types of assistance, indicated a wide range of opinion. Although woodlot information/education was ranked as the first priority by over half of the respondents, there really was no clear consensus as to the second and third priority. For example, technical assistance was ranked as the second priority (50.8 percent) by only thirteen percent more than financial assistance (approximately 38 percent) received. Further, the ranking of financial assistance as the third priority (41.7 percent), was again, only about thirteen percent more than woodlot information/education and technical assistance received (approximately 29 percent each). The results do indicate, however, that all three types of assistance were important to respondents.

The three types of assistance offered as choices were selected as they represent the range of government support which has traditionally been provided to woodlot owners in Eastern Canada. Overall, this question received the highest response rate, as 100 percent of respondents answered the question. In addition, many respondents provided specific examples of the types of assistance that would interest them.

From an analysis of the comments, many respondents who chose information and education as their first priority were interested in the following:

- how, when, and what to plant;
- how, when, and what to harvest;
- who to sell to, and at what price;
- how to encourage wildlife to visit woodlot;
- where to purchase equipment such as sprayers, tree planting equipment, etc.;
- how to develop recreation trails in woodlot;
- how to get involved with Christmas tree production;

- how to improve appearance of woodlot, and what to do with dead and dying trees;
- how to deal with harmful insects in woodlot.

Comments regarding technical assistance included the following:

- need for trained professionals to assess woodlots, demonstrate how to plant, how to harvest, and how to manage a woodlot for any goals landowners may have in mind;
- professionals to demonstrate how to prune trees;
- instruction in building attractive wildlife habitat areas;
- instruction in building deer feeders.

There were fewer comments regarding financial assistance, however, the general consensus among respondents providing comments was, that a woodlot management program for woodlot owners will have to involve some sort of financial assistance to be successful. A minority opinion was that a woodlot management program should not be a public expenditure, but should be financed solely by woodlot owners.

Other comments included the following:

- tax breaks for woodlot owners who manage their woodlots to the approval of the Forestry Branch;
- government should provide free trees and professional expertise to woodlot owners who want to plant trees;
- government should provide payment to landowners when they convert poor agricultural land to forested land.

The final question (Appendix E, Question 13), provided some interesting results as well. Overall, 63.6 percent of all respondents were in favour of a woodlot management program in Manitoba being developed with government involvement (Figure 8). Over half of the respondents, however, felt that government involvement in the development of a woodlot management program should be in conjunction with private sources. Comments to this issue included that individual woodlot owners should work directly with government officials so that a specific woodlot plan for every interested owner can be personally developed, rather than just a "blanket" woodlot management program for all woodlot owners. One respondent suggested that woodlot owners should create an association or group, which would work together with government officials in planning a provincial woodlot management program for Manitobans. This individual referred to the work being done in Saskatchewan by provincial and federal forestry officials in the development of woodlot management programs.

Slightly over one quarter, or 25.4 percent of respondents indicated that a woodlot management program should be developed solely by private sources. Comments provided suggest these respondents were concerned with the government "gaining control" of their land, and that individuals should manage their woodlots on their own, without government assistance. There might be some confusion as to what degree of government involvement this group was opposed to. For example, many of these respondents indicated that the government should provide more information and education to landowners, while others ostensibly opposed to government involvement suggested that the government should be providing free trees, as well as tax breaks to woodlot owners. It would appear that this group was not interested in the assistance of government officials in designing individual management plans for woodlot owners, but would take advantage of information and financial assistance.

Only 6.9 percent of respondents indicated a woodlot management program in Manitoba should be originated solely by the government. Comments suggested that this group felt that the government needs to provide leadership in woodlot management in order for the public to benefit. It was also suggested by a number of respondents that the government should become solely involved in this endeavour as they have the responsibility for ensuring all resources are managed in a sustainable manner. Still others felt there was a need for sole government involvement in private woodlot management, as they were concerned that woodlot owners were clearing too much forested land for marginal agriculture production. Without supervision of the government, and incentives for farmers to discontinue these clearing practices, they were concerned the problem would grow.

No distinction was provided in the questionnaire as to what level of government (i.e., federal, provincial, municipal, etc.), would potentially be involved in a woodlot management program. In hindsight, perhaps this distinction should have been made so that a more clear idea of the interests of woodlot owners in this matter could be provided. Comments however, suggested that the assumption was made by many respondents that any potential government involvement would be at the provincial level. This is understandable given the fact that the questionnaire was sent out accompanied by a letter explaining the interests of Manitoba Forestry Branch in the response of woodlot owners.

### **Verification of Cover Type Maps**

As presented in Chapter IV, approximately 15 percent of the identified woodlots were ground truthed in order to ascertain the level of accuracy of the computer generated FORIST, and manually compiled cover type maps. Using the ground truthing method, the degree of accuracy of the cover type maps for the study area was determined to be approximately 92 percent.

No valid conclusions could be drawn as to the degree of accuracy of cover type maps for the rest of Manitoba, based on these results, nor was this the intent. Rather, the intent was simply to ensure that all information gathered for this study was as accurate as possible, including the detailed information on woodlots. The 92 percent level of accuracy of these maps, after ground truthing, was considered within acceptable limits by the Provincial Forestry Branch (Peterson, Personal Communication, 1989). Originally, the intent was to examine the properties of all fifty eight personally contacted woodlot owners, which would have comprised 25 percent of the identified woodlots. These owners were well dispersed over the study area, and their forests presented a variety of stand types that could be ground truthed. This would have ensured the study objective was achieved. The eight percent error was attributable only to the fact that the actual cutting class was more advanced for three of the areas, than was indicated on the cover type maps.

In total, only thirty-four of the fifty-eight woodlot owners personally contacted allowed the author access to their woodlots at the time of contact. The remaining twenty-four owners in general, were not against the idea of their property being ground truthed. In fact, many owners were very interested in the idea. In most cases the problem was simply that the owner wanted to accompany the author during ground truthing, but could not spare the time to do so when first contacted. Future appointments were then tentatively set up, and the questionnaire was left to the next appointment when

the owner would have more time to complete it.

In hindsight, ground truthing 25 percent of the identified woodlots within the study area was overly ambitious. Ultimately, only 15 percent of the identified woodlots were ground truthed. This was the result of a lack of time, manpower and resources.

### **Market Information**

Another objective of this study was to investigate and assemble information on potential regional market contacts for woodlot products. The information gathered should be of interest to woodlot owners within the study area, wishing to become involved in management of their forest for commercial woodlot production purposes.

All potential market contacts were close to, or within the study area. Contacts were further identified by Dealer Licence, Quota Holder, Sawmill Licence. Complete addresses were included where available. It is apparent from the list that there is ample opportunity for owners to find a potential market contact for their woodlot product. With forty five dealer and fifty nine sawmill licences within, or near the study area, owners interested in commercial production should be able to locate a suitable market for their product.

It is possible that markets for woodlot products may expand in Manitoba if timber supplies from crown lands cannot meet a potential increase in demand for wood fibre. With the increasing utilization of poplar species in Manitoba, owners with woodlots close to wood processing plants and industrial areas may soon have a ready demand for their product. At present, 56 percent of the aspen Annual Allowable Cut is located on private land, within a 150 kilometre radius of Winnipeg (Middlebro', Personal Communication, 1989). If this expected increase in demand does occur, the necessity of managing woodlots on a sustainable basis will become even more important to woodlot owners.

## CHAPTER VI

### Conclusions and Recommendations

#### Conclusions

This research fulfills the study objectives set out in Chapter I. An assessment of woodlot owners within Forest Management Units 01, 20 and 23 of the physiographic region Broadleaf and Mixedwood Forest, was undertaken through the analysis of data collected by a mail-out questionnaire, as well as through the personal interview method.

Analysis and subsequent discussion of this research will provide Manitoba Forestry Branch, and Forestry Canada with a more detailed understanding of the woodlot owners in this region, and their interests, attitudes, activities and attributes with respect to private woodlot management. A total of 15 percent of the identified woodlots were ground truthed, and the level of accuracy was found to be 92 percent. In addition, a list of potential market sources for woodlot products within the study area was developed (located in Appendix D).

This information was important in establishing a data base for use in the development of recommendations for the implementation of a provincial woodlot management program. This data base is particularly important, in light of the recent signing of the 1990 - 1995 Canada-Manitoba Partnership Agreement In Forestry, and the commitment of funding for private woodlot management development in Manitoba.

There are a number of major conclusions can be drawn from this study including that:

An overwhelming majority (92.4 percent), of respondents personally interested in woodlot management indicated they felt a provincial woodlot management program should be developed.



More than three out of four, of all respondents (78.0 percent), indicated their belief that a provincial woodlot management program should be developed.

Respondents own forested land for a wide variety of reasons, nearly all of them complimentary to woodlot management. Shelter, heritage for the future, and firewood comprised over half (55.7 percent), of respondents choices as the main reason for owning forested land.

Respondents were interested in increasing a wide variety of financial and non-financial benefits that were complimentary to woodlot management.

Two thirds (66.2 percent), of respondents would like to learn more about their forested land.

In total, more than six in ten (63.6 percent), of respondents were in favour of a woodlot management program in Manitoba developed with combined government and private involvement.

Although woodlot information/education was ranked first by the majority of respondents, both technical assistance and financial assistance are considered important to respondents interested in woodlot management.

## **Recommendations**

Based on the results of this survey and personal experience, the following recommendations were made to encourage Manitoba Forestry Branch and Forestry Canada, to develop a provincial private woodlot management program for Manitoba:

This survey of woodlot owners should be expanded to include other areas of Manitoba. More definitive answers as to the needs and interests of all Manitoba woodlot owners must be ascertained.

In conjunction with an expanded survey, an economic analysis should be conducted to identify new and existing markets for woodlot products in all applicable areas of Manitoba. Balanced markets are a prerequisite for achieving managed commercial woodlots, and hold the potential to have a significant impact on owners' attitudes to their woodlot (Taviss, 1987). Estimations of the potential income from management of previously unmanaged stands should be developed. These economic benefits should be illustrated to woodlot owners, and rural communities.

The inventory of privately owned forests in Manitoba should be updated and entered onto the Geographic Information System (G.I.S.), maps at Forestry Branch headquarters.

The formation of self-governing woodlot owner associations and groups should be encouraged and promoted. These associations could provide a significant contribution in the development of a provincial woodlot management program.

Demonstration woodlots should be developed in various areas of Manitoba. Each demonstration woodlot should be managed for different objectives, i.e. commercial production, wildlife habitat, enhancement, soil and water conservation, etc. Small forested areas adjacent to the woodlots should be left unmanaged, for comparison purposes. These areas should be open to members of the public to observe and learn.

Manitoba Natural Resources, Forestry Branch, and Forestry Canada should extend forest management planning directly to the private woodlot sector. Woodlot management, however, should not serve only to facilitate the commercial exploitation of the forest. It must be kept in mind that private woodlot owners have diverse backgrounds, ownerships and forest management objectives.

To address the diversity of woodlot management objectives, individual woodlot management plans should be developed for each interested owner. Resource management objectives such as commercial production, recreation, soil and water conservation, wildlife habitat enhancement, aesthetics, personal fuelwood production, etc., can and should be integrated within individual woodlot management plans.

Manitoba's private woodlot management program should include three steps, i) information and education, ii) technical assistance, and iii) financial assistance.

**Information** should be provided in the form of publications and videos, explaining how owners can manage their woodlots to meet individual objectives. A publication should be produced outlining the objectives, goals and requirements of Manitoba's private woodlot management program. This should be made available to as many private owners as possible. Local media should be utilized to publicize the provincial woodlot program.

**Technical assistance** should include the development of detailed woodlot management plans by staff, based on the objectives and goals of each interested owner. This would involve an intensive survey of individual woodlots. Demonstrations of proper methods of planting, harvesting, pruning, thinning, and other activities required for owners to achieve their woodlot management goals should be provided, where applicable.

**Financial assistance** should involve a shared funding approach between the federal, provincial, and private woodlot owner, for all active management programs. Provision should be made to include newly formed woodlot associations and groups into points i, ii, and iii, indicated earlier. This would appease probable minority concerns of government involvement in this program. Moreover, this would also provide managed woodlot owners with a unified "voice" in all aspects of a provincial woodlot management program.

Long term commitment by the woodlot owner, as well as government agencies is a requirement for a provincial woodlot management program to be successful. To ensure commitment, woodlot management contracts should be developed, be legally binding, and signed by all parties. Any finances expended on active management programs must be recoverable, if an owner reneges on the terms of the contract.

The benefits of a provincial woodlot management program are numerous, and include, but are not limited to: rural stability and job creation; increased productive timber supply in Manitoba; enhanced wildlife habitat; increased recreation potential for all Manitobans; and soil and water conservation. The results of this study indicated there was a definite interest amongst woodlot owners in the development of a provincial woodlot management program. The recommendations towards achieving this goal are flexible, however the interests and concerns of all woodlot owners must be carefully considered when implementing a provincial woodlot management program.

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### Personal Communication

Middlebro', Wm. G. A., 1989, 1991. Personal Communication with Wm. G. A. Middlebro' on numerous occasions between May, 1988 and February, 1991.

Peterson, G. 1988. Personal Communication with G. Peterson on several occasions between May, 1988 and December, 1989.

**Appendix A**  
**QUESTIONNAIRE**

1988 PRIVATE FOREST LANDOWNER SURVEY

NAME: \_\_\_\_\_

WOODLOT LOCATION: Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ Rge. \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/TOWN/BOX NO.: \_\_\_\_\_

PROVINCE: \_\_\_\_\_ POSTAL CODE: \_\_\_\_\_

1. What is your main reason for owning forested land?

Soil and water conservation \_\_\_\_\_ Recreational use \_\_\_\_\_

Shelter \_\_\_\_\_ Fuelwood supply \_\_\_\_\_

Wildlife, habitat/hunting \_\_\_\_\_ Aesthetic reasons \_\_\_\_\_

Heritage for the future \_\_\_\_\_ Other reasons \_\_\_\_\_

Profit from sale of Forest Products \_\_\_\_\_

COMMENTS: \_\_\_\_\_

2. Please indicate age category to which you belong.

Less than 30 \_\_\_\_\_ 30-39 \_\_\_\_\_ 40-49 \_\_\_\_\_ 50-59 \_\_\_\_\_

over 60 \_\_\_\_\_

3. Please indicate level of education attained.

Less than grade 12 \_\_\_\_\_ Completed grade 12 \_\_\_\_\_

Have completed University or College courses after high  
school graduation \_\_\_\_\_

4. What is your occupation? \_\_\_\_\_

5. Generally, are you aware of the types of trees, their  
condition, and the extent of forested land on your  
property?

Yes \_\_\_\_\_ No \_\_\_\_\_ Acreage \_\_\_\_\_

COMMENTS: \_\_\_\_\_

6. Would you like to learn more about your woodlot?

Yes\_\_\_\_ No\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Do you presently produce any products from your woodlot?

Yes\_\_\_\_ No\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. Are you aware of any marketing opportunities available  
for woodlot products in your area?

Yes\_\_\_\_ No\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. Do you feel that there is enough information on woodlot  
opportunities available to landowners?

Yes\_\_\_\_ No\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Would you be interested in managing your woodlot so as to increase the benefits from your forested land?

Yes\_\_\_\_ No\_\_\_\_

What benefits, if any, would you be interested in seeing increase?\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. Do you feel a Provincial woodlot management program should be developed in order to increase benefits associated with ownership of forested land?

Yes\_\_\_\_ No\_\_\_\_

COMMENTS:\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Rank in order of priority, the following potential types of assistance that you would desire from a provincial woodlot management program.

Woodlot Information and Education \_\_\_\_\_

Technical Assistance Available to the Landowner \_\_\_\_\_

Financial Assistance \_\_\_\_\_

COMMENTS:\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. If in favour of a woodlot management program who do you feel should develop it?

Privately\_\_\_\_ by Government\_\_\_\_ or by both\_\_\_\_ Other\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Appendix B**  
**MAIL-OUT COVER LETTER**





## Natural Resources

Forest Management  
300-530 Kenaston Blvd.  
Winnipeg, Manitoba  
R3N 1Z4

May 31, 1988

Dear Forest Land Owner:

As you may be aware, woodlots provide a variety of benefits to the land owner. These benefits include recreational use, wildlife habitat, soil and water conservation, farm shelter, fuelwood supply and economic returns through the sale of a variety of forest products. With this in mind, the Forestry Branch of Manitoba Natural Resources will be investigating the level of interest in woodlots for a selected area in eastern Manitoba, during the summer of 1988.

The initial phase of this program involves identifying the locations and owners of private forested land. Your land lies within this area of study and does include some forested acreages. As a result, you have been selected to receive a questionnaire on the topic of woodlots. Your time in answering this short questionnaire and returning it to us will be greatly appreciated, and may be instrumental in determining the future of a woodlot management program for Manitoba. A self addressed, stamped envelope is enclosed for your convenience.

May I thank you in advance for your assistance and cooperation with respect to this survey.

Sincerely,

J. Trent Hreno  
Woodlot Project Leader

JTH/im

Enclosures

**Appendix C**  
**PERSONAL INTERVIEW COVER LETTER**



## Natural Resources

Forest Management  
300-530 Kenaston Blvd.  
Winnipeg, Manitoba  
R3N 1Z4

May 27, 1988

Dear Forest Land Owner:

As you may be aware, woodlots provide a variety of benefits to the land owner. These benefits include recreational use, wildlife habitat, soil and water conservation, farm shelter, fuelwood supply and economic returns through the sale of a variety of forest products. With this in mind, the Forestry Branch of the Department of Natural Resources will be investigating the level of interest in woodlots for a selected area in eastern Manitoba, during the summer of 1988.

The initial phase of this program involves identifying the locations and owners of private forested land. This will be followed by an interview with a cross section of owners to determine their reasons for owning forested land, and interest in managing their woodlots to maximize returns. In the event you are contacted by myself during the course of this survey, any comments and/or suggestions you may have will be greatly appreciated.

May I thank you in advance for your assistance and co-operation with respect to this survey.

Sincerely,

JTH/pfh

J. Trent Hreno  
Woodlot Project Leader

**Appendix D**  
**MARKET INFORMATION**

NAME		LOCATION		DEALER LICENCE	QUOTA HOLDER	SAMMILL LICENCE
ABITIBI-PRICE INC.		PINE FALLS	ROE 1M0	*	*	
AGASSIZ LOG BUILDERS LTD.	BOX 276	LAC DU BONNET	ROE 1A0	*		
AGNEW, MAURICE	3 DAMPSEY CRESENT	WINNIPEG	R2K 3L7	*		
ANDERSON, CLIFFORD		GREAT FALLS	ROE 0V0		*	*
ANDERSON, WILFRED		GRAND MARAIS	ROE 1M0		*	
ANDRUSIAK, JOHN		SUNDOWN	ROA 2C0			*
ANDRUSIAK, MRS. FRANCES	101 ELM PARK RD.	WINNIPEG	R2M 0W3		*	
APOLONY, KURT		EAST BRAINTREE	ROE 0L0		*	
BARILSKI, DARREN	BOX 6, GROUP 35, RR 1-8	WINNIPEG	R3C 4A1	*		
BEAR RIVER TIMBER CO. LTD.	BOX 681	POWERVIEW	ROE 1P0			*
BEAUDRY, JOSEPH		SOUTH JUNCTION	ROA 1Y0		*	
BEAVER LUMBER COMPANY LTD.	7303 WARDEN AVE.	MARKHAM, ONT.	L3R 5Y6	*		
BERGEN, LEN AND JAKE NEUFELD		STEINBACH	ROA 2A0			*
BETKER CONSTRUCTION LTD.	BOX 637	LAC DU BONNET	ROE 1A0		*	
BLAHEY, STEVE	BOX 652	ARBORG	ROC 0A0			*
BLIXT, RONALD W.		SRAGUE	ROA 1Z0		*	
BOILEAU, DAVID		VASSAR	ROA 2J0		*	
BOISE CASCADE CANADA LTD.	BOX 5000	KENORA, ONT.	P9M 3X9	*		
BONWICH, DONALD & DENNIS BAUCH	BOX 39	MOOSEHORN	ROC 2E0			*
BORDUN, JOHN		SUNDOWN	ROA 2C0		*	
BOUTANG ENTERPRISES LTD.	213 STERLING AVE.	WINNIPEG	R2M 2R8	*	*	
BOYCHUK, MIKE		JANOW	ROE 0Z0		*	
BRUCHANSKI, GRANT		LAC DU BONNET	ROE 1A0		*	
BRUCHANSKI, MORT & ALAN	BOX 728	LAC DU BONNET	ROE 1A0		*	
CARRIERE, AMEE	RR 2	STE. ANNE	ROA 1R0		*	
CARRIERE, AMEE & SONS LTD.	BOX 21, RR 2	STE. ANNE	ROA 1R0	*	*	
CHARNEY, JOHN		MENISINO	ROA 1A0		*	
CHATEL, MARCEL		WOODRIDGE	ROA 2N0			*
CHEVERFELS FARMS LTD.	BOX 470	PINE FALLS	ROE 1M0			*
CHOBOTAR, JOHN		SUNDOWN	ROA 2C0		*	
CHOBOTER, NICK		MIDDLEBRO	ROA 1B0		*	
COTE, DENIS		VASSAR	ROA 2J0		*	
COTE, MARGUERITE		VASSAR	ROA 2J0		*	
COURCHENE ENTERPRISES LTD.	BOX 567	PINE FALLS	ROA 2J0		*	
CROCKETT, HUGH		WOODLANDS	ROC 3H0			*
CHRISTIE, CRAIG		WEST HAWK LAKE	ROE 2H0	*		
CULLETON, RICHARD		VASSAR	ROA 2J0		*	
CURE FOREST PRODUCTS LTD.	BOX 622	PINE FALLS	ROE 1M0	*		
DOMTAR CONSTRUCTION MATERIALS	2 POINT DOUGLAS ROAD	WINNIPEG	R3B 0C7	*		
DORVAULT, ALBERT		WOODRIDGE	ROA 2N0		*	
DRUZYK, JOHN		WOODRIDGE	ROA 2N0		*	
DUPRES, GEORGE	769 McMEANS EAST	WINNIPEG	R2K 1Z3	*		
DMYTROW FOREST PRODUCTS		PRANDA	ROE 0X0	*		*
DMYTROW, JAMES		HADASHVILLE	ROE 0X0	*	*	
EASTMAN FOREST PRODUCTS		ANOLA	ROE 0H0			*
ECKERT, FREDERICK		SPRAGUE	ROA 1Z0		*	
EDBOM, PHILIP		PINEY	ROA 1K0		*	*
EIDE, CHRISTOPHER		OAKBANK	ROE 1J0	*		
EL'DAD RANCH	BOX 9, GROUP 3, RR 1	STEINBACH	ROA 2A0	*		
ELIUK FOREST PRODUCTS LTD.		WOODRIDGE	ROA 2N0		*	
EMES, MRS. ERMA		ANOLA	ROA 0A0		*	
EMES, JOSEPH		SPRAGUE	ROA 1Z0	*	*	*
ENDLER, JULIUS		WHITEMOUTH	ROE 2G0		*	

EVANKEVICH, THOMAS		BEAUSEJOUR	ROE 0C0	*	*
FENK, THEODORE		ANOLA	ROE 0H0	*	
FIELBERG, CARL		EAST BRAINTREE	ROE 0L0	*	
FIELBERG, LAWRENCE		RENNIE	ROE 1R0	*	
FINMAC LUMBER LTD.	BOX 105	WINNIPEG	R3C 2G1	*	*
FOSTY, LARRY	216 NEWDALE AVE.	WINNIPEG	R3T 3P0		*
FRAIK, GARY		ELMA	ROA 2G0		*
FRIESEN, JOHN M.		STEINBACH	ROA 2A0		*
FRIESEN, JAKE M.	BOX 227	GRUNTHAL	ROA 0R0	*	
FUNK, ED		BISSET	ROE 0J0		*
GAGAWCHUK, JOHN		EAST BRAINTREE	ROE 0L0	*	
GEMESI, JOHN JR.		SPRAGUE	ROA 1Z0	*	
GIGOLYK, WALTER		SANDILANDS	ROA 1W0	*	
GOBEIL, ANDRE		SOUTH JUNCTION	ROA 2Y0	*	*
GOBEIL, PAUL		SOUTH JUNCTION	ROA 2Y0	*	
GOBEIL, ROGER T.		SOUTH JUNCTION	ROA 2Y0	*	
GODARD, JULES		RICHER	ROE 1S0	*	*
GOODMAN, STAN		PINEY	ROA 1K0		*
GOTTMALD & SONS LTD.		SOUTH JUNCTION	ROA 1Y0	*	*
GUIMOND, MARC	BOX 245	POWERSVIEW	ROE 1P0		*
GULOWATY, ARNOLD	BOX 19, GROUP 65, SS 1	WINNIPEG	R3C 2E8	*	*
HAYWOOD, GEORGE	BOX 54, RR 2	STE. ANNE	ROA 1R0	*	
HADALLER, WALTER	BOX 8, GROUP 4	DUGALD	ROE 0K0	*	
HAL ENTERPRISES & PAUL ALBERT	RR 1	ANOLA	ROE 0K0	*	
HOLDEN, JOSEPH E. JR.		EAST BRAINTREE	ROE 0L0		*
HOLMGREN, E. & SONS LTD.		SPRAGUE	ROA 1Z0	*	*
HORNICK, GERALD		MARCHAND	ROA 0Z0		*
HOURLIE, GORDON ANDREW		BEACONIA	ROE 0B0		*
HOVORKA, DORIS	BOX 60	SPRAGUE	ROA 1Z0	*	*
HOVORKA, J. & SONS LTD.	BOX 60	SPRAGUE	ROA 1Z0	*	*
HUDSON, ROBERT	BOX 791	STEINBACH	ROA 2A0	*	
HUZEL, KENNETH		HADASHVILLE	ROE 0X0		*
IGNATENKO, PAUL		HADASHVILLE	ROE 0X0		*
IMRIE, MURRAY AND MARY		FALCON LAKE	ROE 0N0	*	
KACHKOWSKI, ARNOLD	GROUP 15, RR 1	ANOLA	ROE 0A0	*	
KISCHUK, OSTOP S.		ZHODA	ROA 2P0		*
KOROSCIL, VICTOR		OAKBANK	ROE 1J0	*	
KOKOMO FUELWOOD COMPANY	BOX 159	STEINBACH	ROA 2A0	*	
KOLBA, THOMAS	19 MONTEREY ST.	WINNIPEG	R2J 1W9	*	
KRAHN, PAUL J.	BOX 28	SOUTH JUNCTION	ROA 1Y0		*
KRYSKO, HENRY		FALCON LAKE	ROE 0N0		*
KULCYZCKI, CHESLEY		HADASHVILLE	ROE 0X0		*
KUMHYR, ALLAN		EAST BRAINTREE	ROE 0L0		*
KUPIAK, NICK		MCNUNN	ROE 0Z0		*
KURIAN CONSTRUCTION LTD.	BOX 41	ELMA	ROE 0Z0		*
KURIAN, WILLIAM	BOX 41	ELMA	ROE 0Z0	*	*
KUZ, NICK		HADASHVILLE	ROE 0X0	*	*
LABBEE, RAYMOND A.	BOX 74	LEWIS	ROE 0Z0		*
LABBEE, WILFRED		LEWIS	ROE 1B0		*
LABNO, DOUG	BOX 421, 1012 PARK AVE E.	BEAUSEJOUR	ROE 0C0	*	
LA BROQUERIE LUMBER LTD.	BOX 184	LA BROQUERIE	ROA 0W0	*	*
LAMAGA, MYRON		HADASHVILLE	ROE 0X0		*
LETEXIER, ROBERT		FISHER BRANCH	ROC 0Z0		*
LETKEMAN, JACK & SON	BOX 1813	STEINBACH	ROA 2A0	*	
LORD, CLAUDE	BOX 189	LA BROQUERIE	ROA 0W0	*	
MACHEJ, CARL		SPRAGUE	ROA 1Z0		*

MACHEJ, MURRAY		SPRAGUE	ROA 1Z0	*	
MANCHULENKO, MICHAEL		FALCON BEACH	ROE 0N0	*	
MARDYNALKA, JOHN		HADASHVILLE	ROE 0X0	*	*
MARDYNALKA, MIKE	BOX 3011	STEINBACH	ROA 2A0	*	
MARTEL, PHILIP		MIDDLEBRO	ROA 1B0		*
MASLOW, NICK		LAC DU BONNET	ROE 1A0	*	
MCCLINTON, WAYNE		ARBORG	ROC 0A0		*
MCDONALD, RONALD		ANOLA	ROE 0H0		*
MERCIER, ROGER	RR 1	ANOLA	ROE 0H0	*	
MERCIER, ARSENE		JANOW	ROE 0Z0	*	
MIKULA, ANDREW		MULVINHILL	ROC 2G0		*
MYDANIUK, SOPHIE		SUNDOWN	ROA 2C0		*
NAKKA, NORMAN		MCMUNN	ROE 0L0	*	
NAKKA, NORMAN & SONS FOR.PROD.LTD.		MCMUNN	ROE 0L0	*	
NAULT, HENRY RALPH		RICHER	ROE 1S0	*	
OBODZINSKI, EDMUND		HADASHVILLE	ROE 0X0	*	
PENNER, A.K. & SONS LTD.		BLUMENORT	ROA 0C0	*	
PERCHUK, WILLIAM	BOX 127	KENORA, ONT.	P9N 3X1	*	
PERIMETER LUMBER	BOX 105	WINNIPEG	R3C 2G1		*
PITURA, ALBIN		HADASHVILLE	ROE 0X0	*	
POELL, JOSEPH		MIDDLEBRO	ROA 1B0	*	
POIRON, LUCIEN		WOODRIDGE	ROA 2N0		*
POIRON, LUCIEN		ST. LABRE	ROA 2N0	*	
POTTER, LESLIE		HILBRE	ROC 1L0		*
PREVOST, MARIE		SOUTH JUNCTION	ROA 1Y0	*	
PREVOST, PHILIP		SOUTH JUNCTION	ROA 1Y0	*	
PRICE, GRAHAM & VICTOR		ASHERN	ROC 0E0		*
PROCEVIAT, BRIAN		ELMA	ROE 2G0	*	
PROCEVIAT, WALTER		JANOW	ROE 0Z0	*	
PROCIW, MORRIS		SANDILANDS	ROA 1W0	*	
PROCIW, MYRNA		SANDILANDS	ROA 1W0	*	
P & T ENTERPRISES		ILE DES CHENES	ROA 1T0		*
RECKSIEDLER, CURTIS DANIEL		GRAND MARIAS	ROE 0T0	*	
RECKSIEDLER, WILLIAM		GRAND MARIAS	ROE 0T0	*	
REIMER, ARTHUR		STEINBACH	ROA 2A0		*
ROZSA, ANDY		SPRAGUE	ROA 1Z0	*	
ROZSA, JOHN		SPRAGUE	ROA 1Z0	*	
RYBACK, PETER		JANOW	ROE 0Z0		*
SAARELA, ARVID		ELMA	ROE 2G0	*	
SACHVIE, JACOB	BOX 9, GRP 30	BEAUSEJOUR	ROE 0C0		*
SANDILANDS FOREST PRODUCTS LTD.		SPRAGUE	ROA 1Z0	*	*
SANSREGRET, LUCIEN		RICHER	ROE 1S0		*
SENCHEK, MICHAEL		EAST BRAINTREE	ROE 0L0	*	
SIXORA, DON		LAC DU BONNET	ROE 1A0	*	
SIMARO, LARRY/MANITOGAN DEV.CORP.		MANITOGAN	ROE 1E0		*
SMITH, L.G.		HIGH BLUFF	ROH 0X0	*	
SOUTHEAST FOREST PRODUCTS		BLUMENORT	ROA 0C0	*	*
SPICER, LYLE	BOX 4	VASSAR	ROA 2J0	*	
SPRUCE PRODUCTS LTD.	824-240 GRAHAM AVE.	WINNIPEG	R3C 0J7	*	*
STEFANIUK, HARRY		BEAUSEJOUR	ROE 0C0	*	
STYVE, MELVIN		WOODRIDGE	ROA 2N0	*	
TANCHUCK, MORRIS	BOX 185	FISHER BRANCH	ROC 0Z0		*
THORVALDSON, ALBERT		PINEY	ROA 1K0	*	
TOUPIN, HENRI J.	353 KILBRIDE AVE.	WINNIPEG	R2V 1A4	*	
TOURAND, GEORGE		SANDILANDS	ROA 1W0	*	
TURCHYN, MIKE P.		HADASHVILLE	ROE 0X0	*	*

TURCHYN, ROBERT	BOX 42	HADASHVILLE	ROE 0X0	*	
TURCHYN, SALLY		PRANDA	ROE 0X0	*	
UNGER, BEN	BOX 233	STEINBACH	ROE 2A0		*
WANKE, FRED		MENISINO	ROA 1A0		*
WELCLAD INDUSTRIES CANADA	515 MUNROE AVE.	WINNIPEG	R2K 1H7	*	*
WESLAK, FRANK		HADASHVILLE	ROE 0X0	*	*
WESLAK, STANLEY		HADASHVILLE	ROE 0X0	*	*
WIEBE, JOHN	115 SPRINGWOOD DRIVE	WINNIPEG	R2N 1B8		*
WIENS, EARL		STEINBACH	ROA 2A0		*
WINNICKY, JOHN		PINEY	ROA 1K0	*	
WIRGAU BROTHERS LTD.		WOODRIDGE	ROA 2N0	*	*
WITTENBERG, L.	BOX 17, GROUP 14, SS 1	WINNIPEG	R3C 2E8	*	*
WINCHAR, MORRIS		PINEY	ROA 1K0	*	
ZAWADA, MYRON		JANOW	ROE 0Z0	*	
ZINK, LAWRENCE		RIVER HILLS	ROE 1T0	*	
ZIRK, WALDEMAR & LEANDER		STEAD	ROE 1Z0	*	*
ZULAK ENTERPRISES LTD.	BOX 934	STEINBACH	ROA 2N0		*



**Appendix E**  
**PERCENTAGE RESPONSE TO INDIVIDUAL QUESTIONS**

### QUESTION 1

What is your main reason for owning land?

Reason -----	% of Owners -----
Heritage	21.7
Shelter	18.3
Fuelwood	15.7
Other	10.4
Aesthetic	9.6
Profit	7.8
Wildlife	6.9
Recreation	6.1
Soil and water	3.5

### QUESTION 2

To which age category do you belong?

Age -----	% of Owners -----
<30	2.4
30-39	29.3
40-49	24.4
50-59	23.2
>60	19.5

No response 1.2%

### QUESTION 3

What level of education have you attained?

Education	% of Owners
-----	-----
<12	36.6
Grade 12	26.8
University or college	34.2

No response 2.4%

### QUESTION 4

What is your occupation?

Occupation	% of Owners
-----	-----
Farmer	19.1
Christmas tree farmer	1.5
Woodworker	0.8
Labourer	3.0
Clerical	3.0
Skilled trade	23.7
Owns business	17.6
Professional	22.1
Homemaker	0.8
Retired	19.1
Sales	3.0

No response 1.5%

#### QUESTION 5

Are you aware of the tree types, their condition and extent of forested land on your property?

Response	% of Owners
-----	-----
YES	90.2
NO	9.8

#### QUESTION 6

Would you like to learn more about your woodlot?

Response	% of Owners
-----	-----
YES	66.2
NO	29.3

No response 4.5%

#### QUESTION 7

Do you presently produce any products  
from your woodlot?

Response	% of Owners
-----	-----
YES	40.6
NO	57.1

No response 2.3%

#### QUESTION 8

Are you aware of marketing opportunities  
for woodlot products in your area?

Response	% of Owners
-----	-----
YES	42.0
NO	57.3

No response 0.7%

### QUESTION 9

Is there enough information on woodlot opportunities for land owners?

Response	% of Owners
-----	-----
Yes	22.7
No	61.4
Undecided	12.9

No response 3.0%

### QUESTION 10

Are you interested in managing your woodlot to increase benefits from your forested land?

Response	% of Owners
-----	-----
Yes	77.1
No	19.1
Undecided	2.3

No response 2.3%

### QUESTION 11

Do you feel a woodlot program should be developed to meet this objective?

Response	% of Owners
-----	-----
Yes	78.0
No	16.0
Undecided	4.5

No response 1.5%

### QUESTION 12

Rank, in order of priority, the following potential types of assistance that you would desire from a provincial woodlot management program.

Types of Assistance	% of Owners	Rank
-----	-----	-----
Woodlot Information and Education	60.6	1
Technical Assistance Available to the Land Owner	50.8	2
Financial Assistance	41.7	3

### QUESTION 13

If in favour of a woodlot management program, who should develop it?

Response	% of Owners
-----	-----
Government	6.9
Private	25.4
Both	56.7
Undecided	3.0

No response 8.5%