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Forest Owner Characteristics, Attitudes and Actions in Barry County, Michigan
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RESEARCH REPORT

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Forest Owner Characteristics, Attitudes and Actions in Barry County, Michigan



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**By Michael A. Karteris and Melvin R. Koelling
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SUMMARY

The forestland which is owned by private non-industrial individuals or groups covers an area of 2,816,000 acres in the southern portion of Michigan's Lower Peninsula. Barry County, which is one of the more heavily forested areas in the southern portion of the Lower Peninsula, contains about 70,000 acres of privately owned forestland, most of it in scattered holdings distributed through the county.

This study was designed to learn more about the private non-industrial forestland owner in Barry County—who is he; what are his attitudes, opinions, actions, objectives and goals regarding the forested portion of his property? Several characteristics were assessed and much information was obtained which should be helpful to agencies, organizations and individuals interested in promoting the management of privately owned forests in Barry County. The results may also have application to other areas of the state.

Some 41 percent of the mailed questionnaires were returned indicating a relatively high interest by land-owners.

The principal categories among the private forest owners in Barry County are: "full-time farmer" and "professional-businessman" (21 percent each) "retired" (17 percent), "part-time farmer" (15 percent), "factory worker" (11 percent), "housewife or widow" (6.2 percent) and "other" (8.6 percent). More than half of the owners are over 50 years of age. Forty-seven percent earn more than \$15,000 a year, and 87 percent have graduated from high school or college. Nearly 52 percent own forestland ranging from 1-25 acres in size; very few individuals own areas larger than 100 acres.

The average length of ownership has been more than 25 years. Most individuals are the sole owner and 79 percent of the individual owners acquired their land by purchase. Furthermore, most of the owners reside on

their forestland and have no plans for selling during the next 10 years.

Concerning the past use of forest management programs, 82 percent have not followed any management program in the past and only 48 percent plan to use a plan in the future; the rest have various explanations to justify their decision. Several reasons for not following a management plan were presented. Only 21 percent have sought forest management assistance from a public agency. Among the many reasons given for not seeking assistance the most predominant was "unaware of the availability of such programs."

Of the owners who received some type of assistance, 94 percent understood the recommendations but only 64 percent followed them. Regarding use of governmental assistance programs (cost sharing or technical advice) only 32 percent responded in a positive manner. Of the individuals who consulted a public agency, 51 percent were aware of the ASCS program.

Residency was the most important primary and secondary use of forestland in the past; for the future, residency will continue to be the primary use, but the production of timber for sale will be the most important secondary use.

Less than 20 percent of all owners made investments in their forests. If an investment had been made, it was generally less than \$1,000. Most of the money was spent for planting, and timber stand improvement was second.

About one-half of the owners harvested between 1 and 35 percent of their land in the past 10 years. The most prevalent system used was the selection method, but "no specific system" was also common. The owner usually supervised the cutting operation; however, the logger supervision was relatively high (24 percent). The method of marking trees before cutting was used as a way of controlling the volume of harvest, although "other" methods were also common.

The lack of mature timber was the primary reason for not harvesting timber during the past 10 years. A lack of interest and desire to sell was also indicated. Furthermore, many owners had no plans to sell timber in the future. Only 43 percent of the owners plan to harvest their timber in the future, of which 37 percent indicated they will sell some or all of the merchantable products. No desire to sell and the occurrence of immature timber were the primary reasons for "not cutting" within the next decade.

Less than two-thirds of the owners received marketing information from any of the various agencies and/or forest-related individuals. However, about 59 percent desire to receive this type of information in the future.

The majority of the owners (83 percent) are opposed or uncertain (11 percent) about cutting their forestland and devoting it to other uses. A greater percentage (92 percent) opposed the idea of leasing their land to a wood industry.

Many owners (70 percent) agree their forestland is not fully productive, but of the high percentage (78 percent) of the owners, only 37 percent intend to spend money on their forestland.

The idea of establishing a forestland owners organization, which would coordinate overall forest actions, activities and other aspects in Barry county and to a greater extent in Southern Lower Peninsula Michigan, found the owners divided into three, nearly equal classes; those in favor, those opposed and those who are uncertain. Likewise the majority of owners opposed the idea of exchanging scattered forestlands for another parcel of the same acreage located elsewhere to consolidate holdings.

Thus, a very general profile of the forestland owner, his actions and attitudes toward forestland in Barry County is as follows:

Many of them are older farmers or professionals who live on their forestland. They have relatively good incomes, are not active in many social organizations, but they have obtained a good education. Their property, which was purchased several years ago, is small. They are not fully aware of its characteristics and they don't plan to sell it in the near future.

They have not sought or used forest management programs or public assistance in the past. Very few have invested money in forestry and that which has been spent was really for planting. In the past they have cut some of the forests, using marked trees and the selection method to determine the volume removed. A professional forester has not usually been involved. Instead, many supervised their own cutting activities. Many do not plan to cut in the future because of immature timber and no desire to sell. Very few have received marketing information, however, more are interested in receiving this type of information in the future.

Most owners do not want to clearcut their forestland and convert it to another type of land use, lease it to

forest industry for long periods of time, or become members of a private forest owners' association. They do not wish to exchange their scattered lands for other land of the same acreage, nor do they wish to spend money to improve the land productivity which they agree is less than what it could be.

INTRODUCTION

The forest survey of Michigan conducted in 1966 (3), indicated 54 percent of the 19 million acres of forest land in the state is owned by farmers and other small private non-industrial owners. The size of these individual holdings ranges from a few acres to more than 5,000 acres.

In the southern Lower Peninsula, forest lands cover about 2,816 thousand acres, or 15% of the total. Most of these are in the form of small scattered holdings, ranging from a few acres to more than 200 acres, with 92 percent owned by private non-industrial owners.

Demand projections forecast that an expanding population with a desire for an increasingly higher standard of living will look more intensively to forest land for additional wood products and other uses and services.

To meet the anticipated increase in demand for the many products and values which forests can provide, an improved and intensified forest management program must be developed and applied. Under such a program, special consideration must be given to the privately owned forest. These lands can have a major impact on the availability of forest products and services, and will make an important contribution to the local economy in many areas of the state.

However, before such programs are developed a primary concern which should be taken into consideration is the attitude of the forest landowner. Due to a lack of information on owners objectives, plans and attitudes, foresters confront major difficulties and risk possible error in developing future management and use plans. Information regarding landowner characteristics and attitudes towards forest land, their views on forest management, cooperative programs, role of public agencies, and attitudes concerning timber harvesting should be helpful in making recommendations.

This study was conducted to provide a better understanding of the private forest landowner and specifically his attitudes toward practicing forestry on his own land.

DESCRIPTION OF THE STUDY AREA

The study area was Barry County, located in the southwest part of Michigan (Fig. 1). It is considered one of the more heavily forested counties in Southern Michigan, with approximately 94,000 acres (3) or 26.7

percent of the total area covered by forests distributed throughout the county (Fig. 2). Examples of nearly all of the major forest types in Michigan are present.

Oak-hickory is the predominant type occupying some 41,000 acres. Other important types include lowland hardwoods, northern hardwoods, aspen and pine. Total growing stock for all species is estimated at 64 million cubic feet. The volume of sawtimber is about 188 million board feet. Nearly two-thirds of all forest land in the county is in private ownership. The 23,000 acres owned by the state are managed primarily for wildlife and recreational uses.

The terrain of the county varies from nearly level to gently to moderately rolling. The average elevation of the county is 850 feet above sea level (250 feet above the level of Lake Michigan). There are several scattered lakes and swampy areas throughout the county, however, most soils are well-drained. A good public transportation system exists within the county.

A county forestry committee has been in existence for approximately six years. This group attempts to increase the contribution of forests to the county's economy by seeking ways to increase forest productivity and by expanding local markets for forest products.

METHODS AND PROCEDURES

Development of the Questionnaire

To obtain information in the study, a questionnaire was developed designed to be sent by mail and completed and returned by the respondent.

Several questions were included pertaining to owner characteristics and knowledge and understanding of forest management practices and programs. Other questions related to available public assistance, and what type of forest management practices had been undertaken with the past 10 years. Most of the questions could be answered by checking an appropriate response. The required time for the completion of the questionnaire was estimated to be 15 minutes.

Data Collection

Due to the large number of private forest landowners in the study areas, a representative random sample of owners was selected in two stages to whom questionnaires were sent. In the first stage, six of the 16 townships of the county were randomly selected. In the second stage, each selected township was randomly sub-

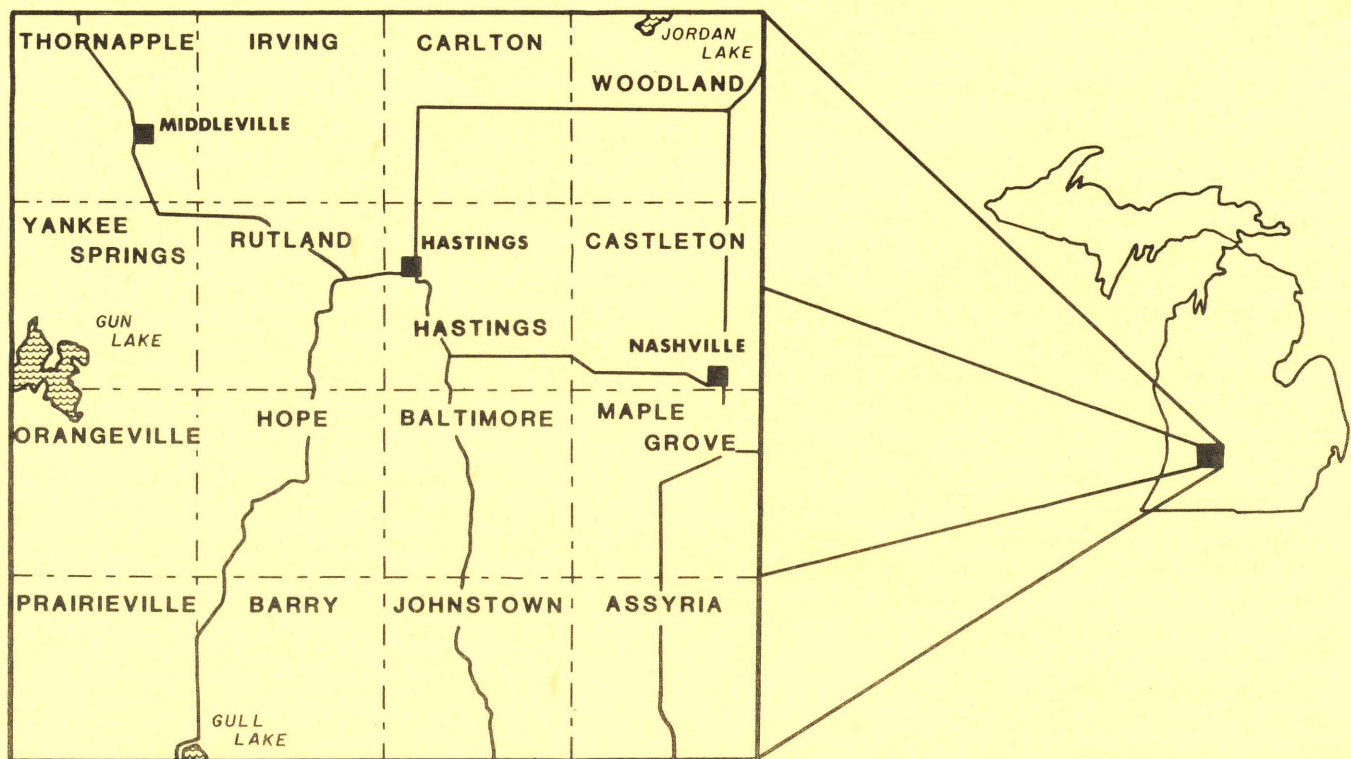


Fig. 1. Township map and location of Barry County, Michigan.



Fig. 2. Aerial photograph illustrating typical forestland distribution pattern in Barry County.

sampled to obtain 12 sections, for a total of 72 sections in the county.

To identify those areas in each selected section which were covered by forests and to determine the names and addresses of the owners, each tract was located on forest cover type maps available for the county (scale 1:31,880) and in the county plat book. Following this procedure, 218 names of individuals who owned forest land were obtained. With help from the County Equal-

ization Department in Hastings, an updated mailing list was obtained for the selected individuals.

A brief cover letter explaining the purpose of the study and a copy of the questionnaire with a postage paid return envelope were mailed to each selected individual. A 30-day response time was suggested. At the end of this period a second letter was prepared and mailed to all who had not responded.

Table 1. Occupation and age class of forest landowners.

Occupation	Percent	Under 20	21-30	Age - Class, Years			
				31-40	41-50	51-60	Over 60
				----- Percent -----			
Full time farmer	21	--	12	35	29	24	--
Part time farmer	15	--	17	8	17	17	42
Professional-Businessman	21	--	12	41	24	24	--
Factory worker	11	--	22	11	33	22	11
Housewife or widow	6	--	--	--	40	20	40
Retired	17	--	--	--	--	21	79
Other	9	--	--	--	--	71	--
Total	100	0	9	14	20	28	24
							29*

*Public organizations

Data Tabulation

The collected data were tabulated so that an easy evaluation and summary could be made. Initially, 19 separate tabulations were made. Later, some were combined and others were eliminated due to too few responses, incomplete answers, or for other reasons.

RESULTS AND DISCUSSION

Owner Characteristics

Based on the mailed questionnaire, respondents were classified into seven occupational categories. The "full time farmer" and the "professional-businessman" categories (Table 1) constituted the highest percentage (21 % each) of total owners. The "retired" category percent ranked third.

Grouping the categories into broader classes, it was found that so-called "white collar" workers constituted 21 percent of the owners, "blue collar" workers 47 percent, and the "other" groups 32 percent. From this grouping, it is evident that the majority of owners are in the "blue collar" class. This was not unexpected since the study area is dominated by agricultural and small industrial firms.

The oldest owner in the survey was 82 years of age, and the youngest was in the 21-30 age group. Forest landowners in Barry County are predominantly middle-aged individuals (Table 1). Actually, 53 percent of the owners are older than 50 years of age and 24 percent

are 60 or older. All occupational classes are represented in this age group.

The most predominant category is the "retired" group with 100 percent, followed by the "housewife or widow" and the "part time farmer" categories with 60 and 59 percent, respectively. The involvement of owners over 50 years of age should be considered in the development and planning of forest management programs for small private forests because the interest for long term investments is usually inversely proportional to the age of the owner.

As age increases within the range of 20 to 60 years, the number of owners increases from 9 to 28 percent. Furthermore, the predominant age of the "full time farmer" and "professional-businessman" categories is 31 to 40; the average "factory worker" is in the 41 to 50 age group. No owners less than 20 years old were represented.

Information regarding the owner's income status is considered very important, because it may be directly associated with the expenditures the owner may make to apply specific forest management practices to improve the productivity of his forestland. Although it was clearly pointed out that all responses would be kept confidential, nearly 20 percent did not respond to questions regarding income. The largest no response, 43 percent, was obtained from the "other" category; the lowest came from the "full time farmer" followed by the "professional-businessman" group.

Some 30 percent of the owners indicated their annual income is more than \$20,000 per year, whereas 21 per-

Table 2. Income level of forest landowners in thousand of dollars.

Occupation	5-10	10-15	15-20	Over 20	No response
			----- Percent -----		
Full time farmer	30	18	12	41	6
Part time farmer	33	17	17	17	17
Professional-Businessman	--	6	12	65	12
Factory worker	11	11	33	22	22
Housewife or widow	40	--	20	20	20
Retired	36	21	14	14	14
Other	--	14	14	29	43
Total	21	12	17	30	19

cent of them earn from \$5,000 to 10,000 yearly. (Table 2). More than 50 percent of the respondents earn less than \$20,000. The income status of these owners together with the common perception that "trees grow too slowly to obtain a rapid return on the investment" are seen as deterrents to investments in forest management.

Further examination of the various categories indicates very clearly that nearly two-thirds of the "professional-businessman" group earn more than \$20,000. Likewise, 41 percent of the "full time farmers" have the same income level. When this characteristic is considered along with the predominant age of these two groups (Table 1) it appears that these owners have the financial capability to practice some type of forest management.

On the other hand, owing to the relatively low income (predominantly in the \$5,000 to \$10,000 range) of the "part time farmer," the "housewife or widow" and the "retired" categories, not a lot of forest management investment can be expected. However, with an aggressive educational program, many of these landowners might be encouraged to practice forestry in an effort to supplement their annual incomes.

More than half (59 percent) of the responses to the question which dealt with owner involvement in social organizations were negative, that is, owners were not involved with a social organization at the time the study was conducted. Only 36 percent of all owners were members of clubs or other community organizations. Of these, the "retired" category is represented with the highest percentage (71 percent), whereas the "full time farmer" ranked second with 53 percent, followed by the "professional-businessman" with 35 percent.

Although the high percentage in the "retired" category may be expected because of its unique occupational status, a significant association with some type of social organization exists among the "full time farmer" and "professional-businessman." The "housewife or widow" and "factory worker" categories are least involved in associations with social organizations.

The educational level of the owner is believed to be an important factor with respect to his understanding of recommended forest management programs. It is generally assumed that a better informed landowner will be more inclined to apply recommended forest management practices.

In this study, the results showed that 65 percent of the owners graduated from high school. An additional 18 percent had studied beyond high school, and only 13 percent have an elementary school education or less. All owners in the "factory worker" category graduated from high school, followed by the "housewife or widow" group with 80 percent, the "part time farmer" with 75 percent and the "full time farmer" and "retired" categories, with 64 percent.

The occupational category with the greatest percentage of education beyond high school (71 percent) was the "professional-businessman," with all other categories below 25 percent. The "professional-businessman" and the "factory worker" did not have any owners with less than an elementary education.

From this analysis, we can conclude that the owners of small forestlands in Barry County have the necessary educational background to understand recommended forest management programs applicable to their situations.

Forty percent of the owners have owned their forestland for more than 25 years (Table 3). About one quarter (27 percent) had owned forestland for less than 10 years. The "housewife or widow" and to some extent the "retired" and the "other" owners have been associated with their lands for more than 10 years. Almost half (47 percent) of the "full time farmers" have been forest owners for more than 25 years, whereas for the "factory worker" and "other" categories, the duration of ownership is between 10-25 years.

Table 3. Duration of ownership by ownership.

Occupation	Under 10	Years 10-25	Over 25
		----- Percent -----	
Full time farmer	29	24	47
Part time farmer	41	25	33
Professional-Businessman	76	18	6
Factory worker	22	44	33
Housewife or widow	--	40	60
Retired	7	21	72
Other	14	57	29
Total	27	33	40

Some 72 percent of the "retired" group have owned their forestland for more than 25 years. This group represents the longest ownership of any category. On the other hand, those in "professional-businessman" are relatively short term landowners; 76 percent of them have owned their forestland less than 10 years.

The implications of duration of ownership are unclear. Traditionally, long term ownership has been viewed as essential to practicing forest management on private ownerships because of the relatively long maturity periods required for most forest products. However, it is commonly believed that most individuals who presently own forest land are not practicing good forest management regardless of the length of ownership. This may indicate that interest and financial position of the owner are more important than length of ownership as regards the practice of forestry. Accordingly, it might be expected that if the ownership of forest land changed to more well-to-do owners, i.e. business-professionals, an increased sense of management responsibility might be forthcoming.

Individuals own a large part (66 percent) of the forestland in Barry County. Family-type ownerships control about 23 percent. Partnerships represent about 9 percent; however, the larger forest tracts usually are within this class. All corporate ownerships were owned by the "other" category. Individual ownerships of almost all of the other categories are over 70 percent with a higher percentage for the "factory worker" with 89 percent. Partnerships exist in all categories except the "part time farmer" and the "housewife or widow." The family type ownership does not exist in the "factory worker" category, but predominates in the "other" category.

The individual type of ownership is advantageous since only one person makes decisions about the application of various practices and activities for the ownership. On the other hand, other categories of ownership benefit from exchanging ideas for the various management problems and the partitioning of responsibilities. The principal disadvantage is that disagreements about various items may occur among the owners, which may result in postponing or cancelling any proposed management activity.

The majority of forest owners in Barry County (79 percent) acquired their lands by purchase. The remainder obtained their property by inheritance. There were no reports of forest property obtained through gift or other type of acquisition. More specifically, 89 percent of the "full time farmer" and "professional-businessman" have purchased their forest property, followed by the "other" category with 86 percent. The "part time farmer," "factory worker" and "retired" are similar with between 75 and 78 percent having purchased their forest properties. On the other hand 40 percent of the "housewife or widow" category acquired forestland by inheritance.

The high percentage of acquisition of forest property by purchase can be viewed as encouraging because it may indicate a stronger interest of the landowner in his property.

A relationship may exist between the distance a landowner lives from his forestland and the degree of forest management practiced. More than three-fourths of the owners (81 percent) live on their forest property or within two miles of it. Some 13 percent live within 3 to 25 miles, 4 percent within 26 to 100 miles of their property.

In general, the larger the area of forest owned, the more distance to where the owner lives. The high percentage of resident owners is advantageous since these owners may have an immediate perception of existing problems on their forestland. Also, they should have a better opportunity to adopt and apply forest management programs and to supervise such programs when they are carried out.

A high percentage of the owners (84 percent) indicated they plan to hold their forestland for 10 years or longer (Table 4). A small percentage (8 percent) were quite sure they will sell their property within the next few years, whereas some 9 percent plan on selling a part of their land. The "full time farmer" and the "factory worker" were certain they will continue to own their forestland during the next decade, while 92 percent of the "part time farmers" planned to continue ownership.

Between 82 and 86 percent of the other categories, with the exception of the "housewife or widow," planned to retain their forest land. About one-fifth of the "professional-businessman" and the "housewife or widow" owners plan on selling their lands, whereas 40 percent of the latter category plan to sell a part of their land.

Table 4. Plans for holding forest property for the next 10 years.

Occupation	Yes	No	Holding Part of It
			----- Percent -----
Full time farmer	100		
Part time farmer	92	8	
Professional-Businessman	82	18	
Factory worker	100		
Housewife or widow	40	20	40
Retired	86	7	7
Other	86		14
Total	84	8	9

Generally, long-term ownership plans coupled with past long-term ownership, are positive signs that most landowners have close ties to and concern for their land. These owners should be in a position to adopt recommended forestry programs since their ownership plans permit a more probable opportunity for realizing results from adopted programs.

Table 5. Types of forest ownership.

Occupation	Individual	Family	Partnership	Corporation
				----- Percent -----
Full time farmer	53	29	18	
Part time farmer	75	25		
Professional-Businessman	71	18	12	
Factory worker	87		11	
Housewife or widow	80	20		
Retired	79	14	7	
Other	15	57	14	14
Total	66	23	9	2

Forestland Characteristics

To obtain information on the various sizes of forests by ownership, each participant was asked to classify his total forest land ownership into one of four categories: 1 to 25 acres, 26 to 50 acres, 51 to 100 acres and more than 100 acres (Table 6).

Table 6. Size of forestland by ownership.

Occupation	Acres			
	1-25	26-50	51-100	Over 100
	----- Percent -----			
Full time farmer	35	41	12	12
Part time farmer	58	17	25	
Professional-Businessman	41	41	12	6
Factory worker	33	67		
Housewife or widow	100			
Retired	50	43	7	
Other	43	29	14	14
Total	66	23	9	2

More than 50 percent of the individuals own 25 acres or less. Of the remainder, 34 percent own between 26-50 acres, 10 percent own between 51-100 acres, and only 5 percent own more than 100 acres. In summary, 95 percent of the ownerships are less than 100 acres.

Further analysis reveals that "full time farmers," "professional-businessman" and the "other" categories constitute the 5 percent who own more than 100 acres. The greatest percentage of forestlands within the 51-100 acre class is owned by the "part time farmer" category (25 percent), followed by the "other," "full time farmer" and "professional-businessman." The "factory worker" (67 percent), the "full time farmer" (41 percent), the "professional-businessman" (41 percent) and the "retired" (43 percent) owners all own between 26-50 acres.

The "housewife or widow" category own only small tracts (1-25 acres). Also, the "part time farmer" with 58 percent and the "retired" with 50 percent are in this same group. Only three categories, the "full time farmer," the "professional-businessman" and "other" have forestlands ranging from small, 1-25 acres to large, over 100 acres. The "factory worker" and to some extent the "retired" category own forestlands which average 50 acres or less in size.

Some 59 percent of "professional-businessman" and 65 percent of the "full time farmer" own forestlands of more than 26 acres in size. It is these owners whose age, income level, and educational background should favor accepting and applying recommended forest management programs for their holdings.

Responses to questions regarding variation in forest types on individual ownerships and tree sizes were inadequate for any meaningful interpretations.

Owner-Public Agencies Relations

Nearly 82 percent of the owners had never practiced any type of forest management on their lands (Table 7). The highest percentage (about 29 percent) among all owners who had initiated management programs was among the "professional-businessman" and the "retired" ownerships.

There is an increase among all occupational categories as to their plans for future use of forest management programs. Actually 48 percent of the owners indicated they plan to use a management program for their forestland in the future. With the exception of the "housewife or widow" category, who planned no participation and the "retired" category who planned a 7 percent participation, the remaining categories planned an increase of nearly 40 percent in the use of forest management programs. The "housewife or widow" and "retired" categories were less willing to accept and apply expanded forest management in the future.

Table 7. Past and future use of forest management programs.

Occupation	Use of Programs			
	In the Past		In the Future	
	Yes	No	Yes	No
	----- Percent -----			
Full time farmer	18	82	57	41
Part time farmer	8	92	42	58
Professional-Businessman	29	71	71	29
Factory worker	11	89	56	44
Housewife or widow	20	80		100
Retired	29	71	36	28
Other	14	86	72	28
Total	18	82	48	52

Responses to the question "Why don't you plan to use forest management programs in the future?" were varied. Statements like "not needed," "not intended," "undecided," "not big enough," "plan to manage my own," "difficulty in supervising," "age," "unless someone comes out," are a few examples.

The change in attitudes of many landowners concerning forest management programs is a good indication of a better understanding of the importance and usefulness of the forest resource. Hopefully it is a positive sign that forests will be seen as a manageable resource.

In regard to the interest of the landowner in seeking assistance from a public agency for managing his property, 79 percent of the owners indicated they had never sought such assistance (Table 8). The most reluctant category was the "housewife or widow" with none seeking assistance, and the group which had sought the most assistance was the "professional-businessman" with 47 percent. "Retired" and "others" answered "yes" with respect to seeking public assistance in 29 percent of the responses.

Table 8. Requests for forest management assistance from a public agency.

Occupation	Yes	No
	----- Percent -----	
Full time farmer	18	82
Part time farmer	17	83
Professional-Businessman	47	53
Factory worker	11	89
Housewife or widow		100
Retired	29	71
Other	29	71
Total	21	79

In an attempt to determine why landowners did not seek public assistance, each respondent was asked to list some concerns. Characteristic responses included: "preferred to use my own judgment," "don't know what is available," "Why should I?", "not needed," "never asked," "don't know how," "unaware of any program," "let nature take its course," "have only recently read of this program," "couldn't get a certified forester."

It is important to note that many of the responses indicate the owner was unaware of the existence and availability of such programs. This indicates the need for developing a better system for informing private forest owners of the opportunities in forest management and of the availability of programs which will assist them. It appears that the various public agencies should assume more responsibility to inform landowners of the various sources of assistance and programs which are available.

Each owner who received some type of assistance was asked about his understanding and implementation of the information he received. The majority of the owners (94 percent) understood very well the advice and assistance they received. With the exception of the "professional-businessman" and the "retired" groups all others were fully satisfied with the assistance they received. Some 64 percent said that the information provided had been used. For those who did not follow this advice and/or assistance, some of the reasons given were: "time and cost," "not needed," "no comments," "not yet," and "did not receive enough information."

About 32 percent of the owners (Table 9) had received some type of governmental assistance in the past 10

years. Zero participation was indicated by the "factory worker," whereas 80 percent of the "housewife or widow" had not participated. The highest percentage of assistance was received by the "full time farmer" (53 percent), whereas some 42 percent of the "professional-businessman" had received public assistance.

Each owner was asked to identify the agency from which he had received assistance in the last decade. Over one-half of the owners (51 percent) identified the ASCS (Agricultural Stabilization and Conservation Service) as the agency which provided most assistance (Table 9). Some 26 percent of the owners received assistance from the SCS (Soil Conservation Service) and 15 percent from the Extension Service.

The "housewife or widow" category responded that all assistance had been received from the ASCS. The remaining categories received assistance from more than one agency. Based on these results ASCS programs appear to be the most visible among forest landowners.

Use of and Investment in Forestland

To obtain information on the past use of forest land, each individual was asked to review nine possible uses and to select and rank the two most important ones. Some 35 percent of the owners indicated that permanent residence and use of forest products to meet their own needs was the primary use of their forestland (Table 10). Use for private recreation ranked as the second primary use (5 percent), and timber selling as the third (4 percent). Other categories had low primary use values with percentages less than 2 percent.

As a second priority, the use of forestland as a location for a permanent residence and use of forest products for the owner's needs ranked first with 14 percent. Production of timber for sale ranked second (11 percent) and owner's recreation third (9 percent). It is obvious that the production of timber for sale does not play a very significant role for most landowners. Another significant finding is that the smaller the acreage of forestland, the more common the use for a permanent residence. The only groups which indicated the sale of forest products as a secondary use of forest land was the "other," "retired," and "full time farmer" with percentages ranging from 15 to 22 percent.

Table 9. Receipt of governmental assistance in the past 10 years and agency from which owner received the assistance.

Occupation	Agency					
	Yes	DNR	SCS	ASCS	Extension Service	Other
	----- Percent -----					
Full time farmer	53		25	58	17	
Part time farmer	33		25	50	25	
Professional-Businessman	41		14	43	14	29
Factory worker						
Housewife or widow	20			100		
Retired	36	17	33	33	17	
Other	43		60	20	20	
Total	32	3	26	51	15	5

Table 10. Important primary (P) and secondary (S) uses of the forest land in the past 10 years. A = Owner's permanent residence and use of the forest products for his own needs. B = Owner's recreation (hunting, summer home). C = Commercial recreation. D = Production of timber for sale. E = Production of other services (e.g. maple syrup, Christmas trees, etc.) F = Pasture for grazing. G = Speculation in land value. H = Inactive. I = Other (specify).

	A		B		C		D		E		F		G		H		I	
	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S
	-Percent-																	
Full time farmer	29.4	11.7	2.9	8.8			2.9	5.9	14.8			5.9	2.9	2.9		2.9	5.9	2.9
Part time farmer	41.6	8.3	4.2	20.8				4.2	8.3			4.2				8.3		
Professional-Businessman	29.4	11.8	2.9	14.8			2.9	2.9			2.9		2.9	14.8	5.9	5.9	2.9	2.9
Factory worker	38.9	22.2		5.5				5.5	11.1	16.6								
Housewife or widow	50.0	30.0						10.0					10.0					
Retired	28.6	3.6	14.3	7.1			7.1	17.8		7.1		7.1						
Other	28.6	7.1	7.1	7.1			7.1	21.5							7.1	7.1	7.1	
Total	35.2	13.5	4.5	9.1		0.4	3.9	11.4	1.6	3.4	1.2	2.1	0.8	4.6	1.3	3.9	1.4	1.8

For planned uses of forest land during the next 10 years, use for permanent residence ranks first with 34 percent (Table 11). Furthermore, in the future at least some owners plan on timber selling as a more important use as indicated by the 6 percent response. Land speculation was in third place with 3 percent.

For secondary uses, the owners will apparently place more emphasis on selling timber products (18 percent) and recreational uses (12 percent) than for permanent residence (9 percent). Thus, owners appear to be more interested in receiving income from their forestland in the future than in the past 10 years. Surprisingly, the "other" and "retired" categories are more interested in selling forest products, followed by the "part time farmer" and the "professional-businessman."

Information on investments made in forest management indicated that only 20 percent of the owners had spent money (\$1-1,000) to improve productivity and protection of their forestland. Of this rather small percentage the "other" category was most significant

with 43 percent. The "professional-businessman" was second with 35 percent. The remaining categories were below 20 percent.

No owner had invested more than \$1,000 for forest improvement.

These findings can be attributed to the small annual return usually associated with the long-term nature of forest management. The lack of information on the part of most landowners about the need for timber stand improvement practices and the benefits which can be expected also help explain the low rates of landowner investment.

For those owners who had invested some money in forest management activities, each was asked to specify what type of activity had been completed (Table 12). Almost one-third of the money had been spent for tree planting. Pruning was second with 19 percent; removing undesirable trees was third with 18 percent and site preparation was fourth with 15 percent. Thinning, fencing and other were each represented with less than

Table 11. Important primary (P) and secondary (S) uses of the forest land within the next ten years. A = Owner's permanent residence and use of the forest products for his own needs. B = Owner's recreation (hunting, summer home). C = Commercial recreation. D = Production of timber for sale. E = Production of other services (e.g. maple syrup, Christmas trees, etc.). F = Pasture for grazing. G = Speculation in land value. H = Inactive. I = Other (specify).

	A		B		C		D		E		F		G		H		I	
	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S
	-Percent-																	
Full time farmer	32.3	11.8	2.9	14.8			8.8	11.8				2.9	2.9		2.9	5.9		2.9
Part time farmer	33.3	4.2	4.2	16.6			12.5	20.8				4.2				4.2		
Professional-Businessman	26.5	5.9		14.7			14.7	20.6			2.9	5.9	2.9	2.9				2.9
Factory worker	38.8	11.1		11.1				16.7	11.1	11.1								
Housewife or widow	40.0	20.0		10.0				10.0					10.0				10.0	
Retired	28.6	3.6	10.7	10.7			7.1	25.0		7.1			3.6	3.6				
Other	35.7	7.1		7.1				21.5					7.1				7.1	14.3
Total	33.6	9.1	2.5	12.1			6.2	18.2	1.6	2.6		1.4	2.8	2.4	.8	1.4	2.4	2.9

Table 12. Forest management activities for which the money was spent.

Occupation	Planting	Thinning	Pruning	Activity			
				Removing Cull Trees	Site Preparation	Fencing	Other
				----- Percent -----			
Full time farmer	33		33			33	
Part time farmer					100		
Professional-Businessman	21	21	14	21	7	7	7
Factory worker	100						
Housewife or widow			50	50			
Retired	20		20	40		20	
Other	33	17	17	17			17
Total	30	5	19	18	15	9	3

9 percent. Nearly 43 percent of all activities dealt with stand improvement and approximately 45 percent with preparation and planting of unforested sites. Only in 9 percent of the cases was money spent for protection purposes.

Harvesting and Marketing Practices

Some timber cutting had been completed during the past 10 years by one-half of all owners. Of these, 10 were classified as "full time farmer," 8 as "part time farmer," 7 as "retired," 6 as "professional-businessman," 4 as "factory worker," 4 as "other" and 2 as "housewife or widow." Incidentally, the "full time farmer" category was the group with the highest percentage of large forest tracts. The majority of owners cut only a small portion of their land, ranging from 1 to 35 percent. Only 4 percent cut nearly all the forest land they owned. Three groups, the "full time farmer," "professional-businessman" and "retired" had cut about one-third (37 percent) of their lands (Table 13).

Table 13. Percentage of land that was cut in the past 10 years.

Occupation	1-35%	36-70%	71-100%
	----- Percent -----		
Full time farmer	90	10	
Part time farmer	100		
Professional-Businessman	83	17	
Factory worker	100		
Housewife or widow	100		
Retired	86	14	
Other	75		25
Total	91	6	4

Several types of harvesting systems were used. The percentages of each are presented in Table 14. The selection method seems to be the preferred method of cutting. One-half of the owners used this method, whereas nearly 40 percent did not follow any particular system. The clearcutting and shelterwood system were represented with very small percentages (6 and 4 percent, respectively). The "other" category used the selection method entirely.

Table 14. Cutting systems used in the past 10 years.

Occupation	Clear-cutting	Shelter-wood	Selection	No specific system
Full time farmer		10	70	20
Part time farmer			38	70
Professional-Businessman	17	17	50	17
Factory worker	25		25	50
Housewife or widow				100
Retired			71	29
Other			100	
Total	6	3	50	40

The "housewife or widow" group did not identify any specific system. Nearly 70 percent of the "full time farmer" and the "retired" used the selection method. The "professional-businessman" used some of all existing methods (except seed-tree). Likewise 17 percent of the "other" group indicated that no specific system was followed.

Some 60 percent of the owners indicated they personally supervised the harvest operation. In 24 percent of the cases, the logger provided supervision. Only 11 percent of the harvest operations were supervised by a professional forester. This is unfortunate because both the landowner and logger may not be entirely objective in their selections.

Supervision by the logger may lead to deterioration of the forest resource because his emphasis is on getting as much volume as possible without necessarily improving the condition of the woodlot. They tend to cut the best and most productive trees, leaving lower quality wood in the forest resulting in a woodlot which progressively contains a higher volume of low quality material.

The "professional-businessman" and the "retired" owners indicated they had used some of each of the proposed methods of supervising cutting operations. Both groups did not provide an opportunity for the logger to supervise the harvesting operation. The "professional-businessman" gave the same priority to the professional forester as to himself in providing supervision. The "retired" and "part time farmer" used a professional forester 29 and 12 percent of the time respectively. The

Table 15. Limitations assigned during the cutting procedures.

Occupation	Species Limitation	Diameter Limitation	Premarked Trees	Other	No Limitation
			----- Percent -----		
Full time farmer	18	27	18	27	10
Part time farmer		38	50	12	
Professional-Businessman			33	33	33
Factory worker		25		25	25
Housewife or widow			50	50	
Retired		29	43	14	14
Other				50	50
Total	3	17	38	30	12

“housewife or widow” and the “full time farmer” in 50 and 27 percent of the cases permitted the logger to supervise the harvesting operation.

Any limitations which are imposed during the cutting operations can be viewed as a means of regulating the amount and timing of the harvest. Such limitations can also be viewed as a means of providing some degree of forest management. Unfortunately only 58 percent of the owners imposed effective limitations during the timber harvest (Table 15). Of these, 38 percent premarked trees which would be sold, while some 17 percent sold on the basis of a diameter limit cut.

The first method can work well if the owner does the marking and also supervises the cutting. The second method depends on the specified minimum diameter. If it is above the lower limits of merchantability, this may result in an acceptable cutting. However, if it is below such limits, the forest will deteriorate. Furthermore, many trees near the diameter limit are often cut before they have the opportunity to develop into higher quality material, e.g., from small sawlogs into quality veneer logs.

The remaining owners used no particular method of regulating cutting. This group (42 percent) indicated the need for public resource agencies and other concerned interests, to inform them about the desirability of following some type of forest management plan, if their woodlands are to remain productive and continue to have economic value.

Marked trees for harvest was the preferred method for the “part time farmer,” “housewife or widow,” and

“other” category with 50 percent using this method, and the “retired” with 43 percent. The “part time farmer” (38 percent) used a diameter-limit cut, whereas the “professional-businessman” (33 percent) followed no limitation.

Among individuals who had not harvested timber in the past 10 years, 35 percent specified lack of merchantable timber as the main reason, 26 percent and 13 percent indicated the “no desire to sell” and “conflicting commitments,” respectively, whereas 25 percent specified other reasons (Table 16). The “conflicting commitments” reason was predominant for owners of larger tracts and where partnerships were present. One-half of the “full” and “part time farmer,” and 43 percent of the “retired” stated they had no desire to sell forest products, although some merchantable material may be present on their ownerships.

Some 43 percent stated that they will continue harvesting their forestlands. The percentage is lower than for those who followed similar practices (50 percent) in the past decade. More than 33 percent of the owners expressed uncertainty about future actions toward their property with 24 percent certain that no cuttings were going to be made on their forestlands.

The “full time farmer,” “professional-businessman,” “factory worker,” and the “other” categories indicated (53 to 59 percent) they expect to continue harvests in the future. The only uncertain or negative category was the “housewife or widow.” The “factory worker” and “professional-businessman” responded negatively with 11 and 12 percent, respectively. In terms of selling the

Table 16. Reasons for not harvesting timber in the past and next 10 years.

Occupation	Reasons							
	Immature Timber		Conflicting commitments		No desirability to sell		Other	
	Past	Future	Past	Future	Past	Future	Past	Future
	Percent							
Full time farmer	33	29		14	50	57	17	28
Part time farmer	50	43			50	28		28
Professional-Businessman	33	50	11		22	25	33	25
Factory worker		25	20	25	20	50	60	
Housewife or widow	67		33	25		75		
Retired	14	22	29	22	43	44	14	11
Other	50	50		50			50	
Total	35	31	13	20	26	40	25	9

cut products in the next decade, only 37 percent of the owners who will continue harvesting, will do so. "Full time farmer," "part time farmer," and "professional-businessman" represent the main groups that will sell forest products in the next 10 years.

As to reasons for not cutting in the next decade, 40 percent of the owners stated that they don't want to sell (Table 16). This is 14 percent higher than the number who did not sell any timber in the past 10 years. Nearly 31 percent stated their forests are immature. "Conflicting commitments" regarding land ownership increased by 6 percent, to a total of 18 percent. The "other" reasons dropped from 25 to 9 percent.

Reasons for not cutting may also include the desire for more intensive recreational uses, for general land speculation, for production of other services (wildlife) or because of low return compared to the needed effort and expenditure. There may also be a lack of information and understanding about the renewable nature of the forest. Many individuals may view harvesting as depleting their resource, and in doing so it destroys its many other values which they view as equal or more important than economic gains.

It is possible that educational programs may result in more owners being willing to cut timber. Such programs should explain the renewable nature of the forest crop, recommended management practices and current information on the prices of timber, the costs and returns expected from harvesting, possible tax advantages from timber based revenue, and available assistance and service information.

In response to questions as to who presently provides information to landowners about available wood markets, potential forest products buyers and current wood prices, three-fourths of the owners said they had not received any information regarding marketing in the past decade (Table 17). The remaining one-fourth received information from several sources ranging from 3 percent from private consulting foresters to 7 percent from forest industries. Several owners indicated that they had received information from more than one source.

In general, the forest owner doesn't receive much help from the public sector. It is true there is some difficulty for the owner to approach the several public agencies and obtain marketing information related to various forest products and services. There appears to be a need for an organized public agency effort to prepare and distribute on a regular basis current information on prices and marketing of forest products.

The "full time farmer" and the "professional-businessman" were the two categories which most commonly obtained marketing information from various sources. In particular, members of the latter group received information from all the listed sources. In contrast the "factory worker" did not obtain marketing information from any source.

Regarding landowner interest in receiving marketing information in the future, 59 percent answered "yes." The most interested categories were the "other" and the "professional-businessman" with 86 and 82 percent, respectively, whereas the category with the least interest was the "housewife and widow" group with a 20 percent interest.

It may be possible to increase the number of interested owners, if they can obtain information without additional effort. Hopefully, such information will be translated to a better understanding of the various problems and issues related to the forest resource and to improved actions with respect to the implementation of forest management practices.

Owner's Opinion on Specific Concepts

Although there is general agreement that the returns from forest management practices are low, 83 percent of the owners did not want to convert their forest land to some other use. They wish their forests to remain as they are, even though cutting followed by clearing of the land so it could be used for other purposes, mainly agricultural, would increase their financial returns.

There are several reasons for this attitude. First, most of the owners purchased their land with forest vegetation on it and were acquainted with the financial im-

Table 17. Sources of received information about forest products, buyers, etc. in the past 10 years.

	Service forester	Extension forester	Private forester	Source			No Information
				Forest industry	Buyer	Other	
				----- Percent -----			
Full time farmer	6			11	22	61	
Part time farmer			8	8	8	75	
Professional-Businessman	5	15	5	5	5	65	
Factory worker						100	
Housewife or widow				20		80	
Retired	7	7	7	7		73	
Other	14					86	
Total	4	3	3	7	5	77	

plications of the purchase. Second, many forestlands are obtained through inheritance so ties with the land and family may be strong. Third, many owners prefer to use forestland for other activities such as a recreational site, hunting area or to enjoy its aesthetic contributions. Finally, many owners are not familiar with agricultural practices which require more time and a greater degree of knowledge and financial investment.

The most decisive category was the "other" who all (100 percent) wanted to retain their forest land as it is. Nearly 93 and 89 percent of the "retired" and the "factory worker" gave the same response. Some 22 percent of the "professional-businessman" owners were interested in land conversion, and 20 percent of the "housewife or widow" were uncertain. If uncertainty can be interpreted as a negative answer, then 94 percent of the owners said "no" to the prospect of cutting the forest and using the land for other purposes.

The close ties of landowners with their forest are very clearly indicated relative to leasing forest lands to a wood-using industry. More than 90 percent of the owners are not interested in leasing their property. Only 8 percent were willing to lease, but only for up to 10 years. The "factory worker" and the "housewife or widow" were totally negative in considering leasing; 18 percent (the most interested group) of the "professional-businessman," would consider a land lease. Some of the owners indicated they would agree to lease only after examination of the terms of the contract.

Table 18 presents the owner's opinion about the productive condition of their forestland. More than 70 percent of the owners believe that their lands are not fully productive. The opinions of the "professional-businessman" were almost unanimously (94 percent) negative regarding productivity of their lands. A similar response was obtained from the "other" with a 86 percent response. On the other hand, 50 percent of the "retired" and 44 percent of the "factory worker" thought that their land is producing at a maximum.

More than two-thirds of the owners realized their land is not producing the maximum yield possible.

Table 18. Owner's opinion on the productive condition of his forestland.

Occupation	Fully Productive	Not Fully Productive
	----- Percent -----	
Full time farmer	29	71
Part time farmer	25	75
Professional-Businessman	6	94
Factory worker	44	56
Housewife or widow	40	60
Retired	50	50
Other	14	86
Total	30	70

Reasons for this opinion may be attributed to the general condition of their forestland or because revenues are not as high as expected. It may also be true that some owners realize they are not following the best approach in managing their land which could lead to an increase in profits.

Some 78 percent of the owners said that the land should be made more productive, but only 37 percent indicated they intend to spend money for this purpose (Table 19). The most interest and commitment to intensify the practice of forestry came from the "professional-businessman." This group gave a "yes" response of 82 percent to increasing productivity, and 65 percent "yes" to spending money for that purpose. It seems that many landowners are aware that something should be done, but are not willing to make a financial commitment to their forest lands.

Table 19. Owner's opinion on maximizing the production of his forestland.

Occupation	Land should be made more productive		Spend more money	
	Yes	No	Yes	No
	----- Percent -----			
Full time farmer	88	12	35	65
Part time farmer	92	8	50	50
Professional-Businessman	82	18	65	35
Factory worker	80	20	40	60
Housewife or widow	60	40		100
Retired	57	43	29	71
Other	86	14	43	57
Total	78	22	37	63

Regarding interest in participating in an organization which would coordinate overall forest activities and serve as an educational and forest business center, no clear trends were apparent. In favor of this approach were 47 percent of the "professional-businessman," 43 percent of the "other" and 40 percent of the "housewife or widow" categories. Opposed were the "factory worker" with 44 percent and the "full time farmer" with 41 percent.

Obviously considerable effort is needed by concerned organizations if they are to be successful in influencing owners to react more effectively to the various issues related to management of the small privately owned forest.

Opinions on exchanging scattered forested areas with another one of the same acreage but somewhere else, preferably closer to major holdings, were not strong. The close ties between the owner and his forestland were again evident. Only 14 percent accepted the proposal, whereas 86 percent rejected it.

RECOMMENDATIONS

Based on analysis of the information and the results obtained, some general recommendations designed to improve forest management practices and to increase the volume of forest products derived from privately owned forests are offered. Most recommendations refer to the several concerned public agencies.

1. Develop a clear and improved communications system between the forestland owner and the various public agencies.

2. Regularly disseminate information regarding new available programs, assistance, consultations, forestry methods and techniques, workshops, proper agencies, tax incentives, potential buyers, timber prices, etc.

3. Develop education and demonstration programs to combat the belief that forestry doesn't pay.

4. Develop new wood and low quality material markets to increase the demand for forest products.

5. Develop other markets based on the forest.

6. Develop and use various new approaches to encourage the owners to practice more intensive forestry.

7. Support the idea of establishing a forest owners' association.

8. Increase the owners' awareness about the existence of and the benefits from multiple-use of their forestlands.

9. Develop better short and long-term funding systems for forest based activities.

10. Increase public service forestry assistance.

11. Conduct training sessions for owners on forest improvement practices and actions.

12. Increase awareness of all citizens on the benefits gained from increased management of privately owned forestlands.

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A copy of the questionnaire used in this study is available by writing to the MSU Bulletin Office, P.O. Box 231, East Lansing, Michigan 48823.