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Some significant woodland management practices of two selected small-woodland owner groups in Wayne County, Tennessee

Frank Lester Brown

To the Graduate Council:

I am submitting herewith a thesis written by Frank Lester Brown entitled "Some significant woodland management practices of two selected small-woodland owner groups in Wayne County, Tennessee." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

Robert S. Dotson, Major Professor

We have read this thesis and recommend its acceptance:

Frank F. Bell, Harold J. Smith, John B. Sharp, Garland R. Wells

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(Original signatures are on file with official student records.)

April 10, 1967

To the Graduate Council:

I am submitting herewith a thesis written by Frank Lester Brown entitled "Some Significant Woodland Management Practices of Two Selected Small-Woodland Owner Groups in Wayne County, Tennessee." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

Robert L. Dolton
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SOME SIGNIFICANT WOODLAND MANAGEMENT PRACTICES OF TWO SELECTED SMALL-WOODLAND OWNER GROUPS IN WAYNE COUNTY, TENNESSEE

A Thesis

Presented to

the Graduate Council of

The University of Tennessee

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

Frank Lester Brown

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CHAPTER I

INTRODUCTION

I. THE STUDY AREA

Wayne County was established in 1819 from sections of Hickman and Humphreys Counties and was named after General Anthony Wayne of Revolutionary War fame (17:8).*

Wayne County with a land area of 472,960 acres, is the second largest county in Tennessee (5:2). It is located approximately 75 miles southwest of Nashville and 12 miles north of Florence, Alabama. As indicated in Figure 1, the Tennessee-Alabama state line forms its southern border, Lawrence County is on the east, Hardin County on the west, and Lewis and Perry Counties on the north. U. S. Highway 64 runs through the middle of the county from east to west, while U. S. Highway 13 leads north and south through the county. Maps, showing Tennessee counties and roads, were used to describe the location of Wayne County.

Wayne County is considered a part of the Western Highland Rim. Elevations above sea level range from 350 to slightly more than 1,000 feet. The land is generally hilly with most hillsides being short and steep, descending 100 to 300 feet to narrow fertile bottomlands.

The soils of the county are mainly residual derivatives from limestone and associated rocks. Most of the soils are low in fertility

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*Numbers in parentheses refer to numbered references in the bibliography; those after the colon are page numbers.

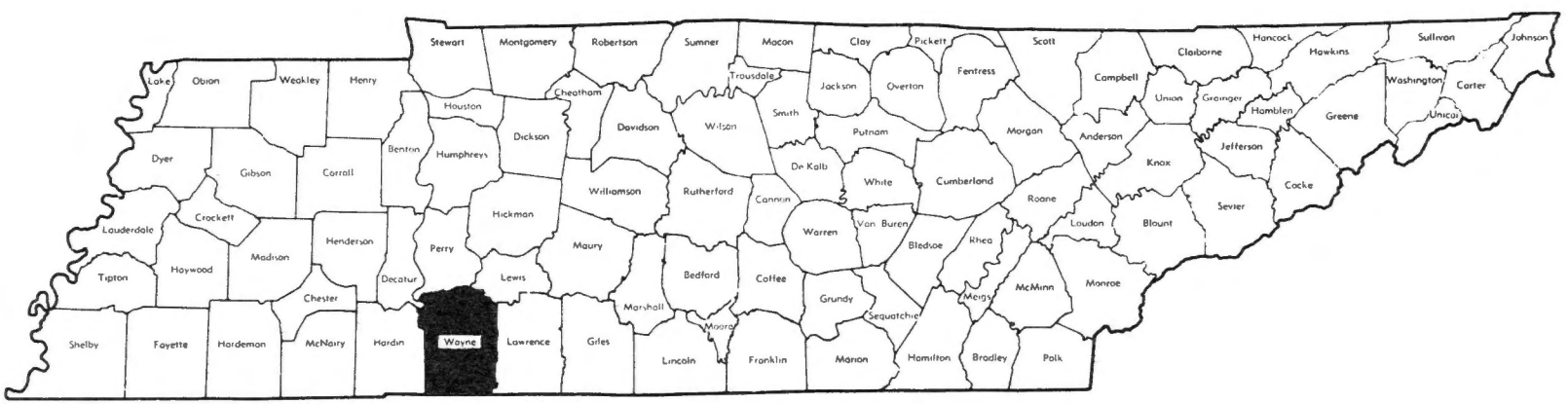

FIGURE 1

LOCATION OF WAYNE COUNTY, TENNESSEE

and a high percent of the upland soils are cherty.

Wayne County has nine main streams and most of them flow into the Kentucky Reservoir of the Tennessee River, which touches Wayne County on the northwest corner at Clifton (17:7).

The population of Wayne County has remained fairly constant since 1900. In 1964, 12,480 people lived in the county (7:7).

Wayne County has three incorporated towns; Waynesboro is the county seat with a population of approximately 1200; and Clifton and Collinwood with a population of about 800 each.

The county is considered 100 percent rural with 67.3 percent being rural nonfarm and 32.7 percent of the population classified as rural farm (6:10).

In 1964, 40.1 percent, or 189,596 acres, of the total land area of 472,960 acres in Wayne County was classified as farmland with a total of 947 farms being reported.**

The average size of farms in the county in 1964 was 200.2 acres with 130 acres of this being woodland. The state average per farm was 114.4 acres with 37 acres designated as woodland. The land and buildings

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**The 1964 United States Census of Agriculture report defines farmland and farms as being places on which agricultural operations were conducted at anytime under the control or supervision of one person, a partnership or a manager. Places of less than 10 acres were counted as farms if the estimated sales of agricultural products for the year amounted to, or normally would amount to at least $250. Places of 10 or more acres were counted as farms if the estimated sales of agricultural products for the year amounted, or normally would amount, to at least $50.

in Wayne County were valued at $11,479 per farm, or $59.54 per acre. These figures compare with the state value of $21,088 per farm, or $183.99 per acre.

In 1964, the Wayne County agricultural income of $1,869,045 was divided as follows: $120,405 from forestry, $1,090,994 from livestock, and $657,646 from crops. It should be here noted that the United States Agricultural Census only included farm operators; thus, the forestry income for many woodland owners was omitted.

Some 834 of the 947 farm operators in the county resided on farms with 458 of the farm operators working 100 days or more off their farms (5:2). This is in keeping with the increased industrial growth and employment in Wayne County which had a payroll of nearly six million dollars in 1965. This employment means that adequate farm help had become scarcer which, if continued, ultimately will affect the use of recommended woodland management practices.

In 1964, the average age of Wayne County farm operators was 50.3 years. This was in contrast to the earlier average age of 48.8 years estimated in 1959 (5:2).

In 1960, the median school years completed by Wayne Countains, 25 years old and over, was 8.1 as compared to 7.2 in 1950 (6:39).

II. IMPORTANCE OF WOODLANDS

In 1963, forests occupied one-third of the total land area in the United States. Two-thirds, or 509 million acres, of this forest

area has been designated as "commercial" forest land suitable for continuous growing of timber products (28:75).

Timber production is very important to the nation's economy. In many areas of the country, the Southeast included, timber and timber industries constitute a primary source of income and employment. In 1962, timber harvesting, processing, manufacturing, construction, transportation, and marketing in the United States employed more than 3 million workers and accounted for about $25 billion of the nation's annual gross national product (28:iii).

Forest land in Tennessee totaled 52 percent of the total land area in 1961. During the ten year period 1950-1960, forest acreage in the state increased 9 percent, or about one million acres. By 1960, commercial forest (all forests privately owned) in Tennessee totaled over 13.4 million acres. The continuing increases in forest acreage seem to be related to soil bank, feed-grain, Agricultural Stabilization and Conservation (ASC), and other government programs. Landowners have tended to convert low producing and eroding acres to forest production where possible (26:3).

In 1952, the most recent year for which complete records were available, forests in Wayne County covered approximately 369,200 acres or nearly 78 percent of the total land area. Wayne County has more forest acreage than any other county in Tennessee (17:14).

In the same year, less than 1 percent of the forest land in Wayne County was publicly owned. Approximately one-half of the privately

owned forest land was contained in ownerships of 2,500 acres and larger (less than 30 ownerships). The remaining forest land was held by approximately 1,000 small ownerships, mostly farmers (17:27).

In 1960, about one-half of the forest area in the United States was held in ownerships of less than 2,500 acres (29:2).

In 1962, the net growth of sawtimber in the United States was 67 billion board feet. Projections of future demands for timber in the United States by the year 2000 A. D. will be approximately 81 billion board feet of sawtimber annually (28:1).

The trend for future supply and demand for Tennessee forest products has been projected to be similar to the above-mentioned national outlook (26:3).

III. FOREST PRODUCTION SITUATION

In 1952, Wayne County had a total sawtimber volume of approximately 307 million board feet or an average of only about 831 board feet per acre. According to Tennessee Valley Administration (TVA) forestry authorities, the average total sawtimber volume potential should be in excess of 3,000 board feet per acre. It was felt that the depletion of sawtimber at that time had resulted in the relatively low annual volume growth of about 60 board feet per acre instead of a potential 270 (17:2). The above-mentioned volume of 307 million board feet of sawtimber included 252 million board feet of hardwood (sound trees 11 inches diameter breast height, d.b.h., or larger), and 55 million board feet of softwood (sound trees 9 inches d.b.h. or larger).

Thus, hardwoods accounted for 82 percent and softwoods the remaining 18 percent of the total (17:18). Upland hardwoods, not best adapted to the soils of Wayne County, covered 73 percent of all forest land with the principal species being white oak, red oak, hickory, and gum. The remaining area was covered by pine and pine-hardwood combinations, 14 percent; cove and bottomland hardwood, 8 percent, and other hardwoods, 5 percent (17:15). Figure 2 shows the principal forest types in Wayne County.

In 1952, the supply of hardwood sawtimber was increasing at an annual rate of about 3.8 million board feet. Estimated total growth was 16.3 million board feet annually; and the annual harvest was approximately 12.5 million board feet.

A study of growth by tree size and species showed that only about 25 percent of the total growth of hardwood sawtimber was in trees 13 inches d.b.h. or larger; and about 25 percent of all the sawtimber was in species considered to have low value. In addition to the large percentage of low-valued species, excessive defects in most of the hardwoods greatly reduced both the volume and quality of sawtimber growth (17:39). It was estimated that only 21 percent of the standing hardwood sawtimber, or 53 million board feet, was capable of being converted into number one common or better grade lumber in 1952 (17:20).

Softwood sawtimber, mostly pine, in Wayne County was severely depleted between 1938 and 1942 when over 57 million board feet was

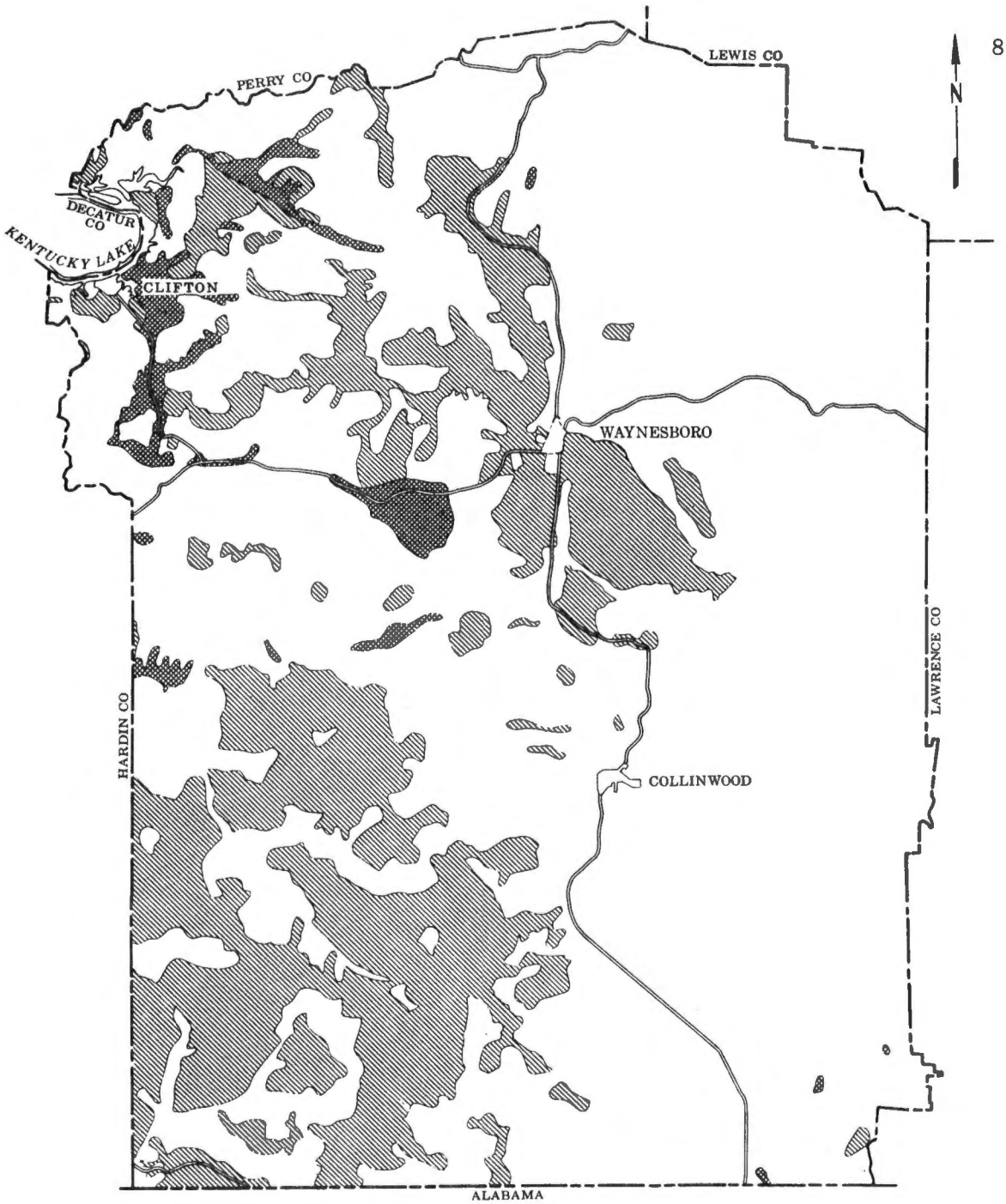


FIGURE 2

PRINCIPAL FOREST TYPES, WAYNE COUNTY, TENNESSEE

harvested and converted to lumber. By 1952, the inventory of softwood sawtimber totaled only about 55 million board feet.

Annual growth of softwood sawtimber would be increased to about 6 million board feet by allowing existing stands, estimated to be 2.4 million board feet, of pole timber to grow to saw log size. At the time of the TVA study, the annual harvest of softwood sawtimber was estimated to be about 5 million board feet (17:38).

In 1952, Wayne County forests contained a high proportion of cull trees. One out of every four hardwood trees 11 inches d.b.h. or larger was a cull; more than one-half of the volume was defective. It was estimated that cull sawtimber trees were wasting 30,000 acres of growing space. Cull trees in pine occurred less frequently; averaging only 2 per 100 sawtimber trees (17:23).

In the 1952 report, the TVA forestry branch compared pine production to hardwoods for the drier upland sites. On dry, cherty soils, those predominating in Wayne County, pine had these advantages: generally a greater volume per acre was grown in a shorter period of time; fewer culls resulted; harvesting costs were lowered, and markets were available for fence posts, pulpwood, poles, and saw logs. In the coves and on moist slopes, high quality hardwoods would be expected to be more profitable than pine (17:3).

IV. WOODLAND MANAGEMENT SITUATION

In 1952, in Wayne County, TVA estimated that only about one-fourth of all commercial forest area, mostly large ownerships, was being managed according to recommended woodland management practices (17:43).

In 1962, 59 percent of all the commercial forest land in the United States was held by small-woodland owners. These owners not only control much of the most potentially productive forest holdings but their actions will determine the amount and quality of timber to be available in the future. However, the small-woodland ownerships generally have a relatively low level of management intensity. For example, these holdings contained only about one-third of the national sawtimber volume (28:103).

Demands for timber products are projected to increase about 80 percent by the year 2000. These projected timber demands could be met with more intensive forest management utilization (28:1). However, this production goal can only be realized if present and future small-woodland owners become more knowledgeable and skillful with regard to the forest production practices they accept and put into use (23:1).

V. NEED FOR THE STUDY

In 1952, the annual value of finished forest products in Wayne County was nearly $1,720,000, of which $856,000 was labor income.

Also in 1952, the average forest acre in the county was capable of producing about 250-300 board feet per year or 4-5 times the 1952 annual sawtimber growth of 60 board feet. Operation of the forestry enterprise at its full potential would have meant an estimated increase in annual income in 1952 from finished forest products of more than 6 million dollars and would have employed an additional 1,000 full-time jobs (17:6).

Previous undesirable management practices, cutting the best and leaving the poorest; and lack of adequate fire protection prior to 1943 had resulted in one out of every four hardwood sawtimber trees being classified as a cull. Only one out of every eight trees in stands in the seven-state Tennessee Valley area were culls (17:23).

TVA reports indicate that one of the best opportunities for economic development of natural resources, in counties like Wayne, may be found in the area of forestry; a resource that has been severely depleted and neglected to the extent that, in 1952, it was producing only a fraction of its potential (17:1).

There is little reason to believe that the situation above has changed since the 1952 TVA study. If increases in sawtimber value have occurred, they have mainly resulted from improved fire protection.***

***Opinion expressed by Professor Garland R. Wells and Dr. John Sharp, The University of Tennessee, in an interview January 23, 1967.

A report in 1955 of field studies in sixteen states indicated that the adoption of recommended agricultural practices was directly related to the extent farmers made contacts with members of the Cooperative Extension Service. On the average, the adoption rate of participants in Extension activities was found to be double that of nonparticipants (30:24).

Wayne County was selected for this study because of the great potential of forestry as an enterprise, and the possibility of improving it and increasing the net income from forestry. This study was further needed to guide the Wayne County Agricultural Extension staff in taking educational steps to help small-woodland owners interested in raising production and income.

VI. PURPOSES OF THE STUDY

The purposes of this study, then, were to: (1) obtain basic information concerning the characteristics of small-woodland owners in Wayne County, participants in a series of woodland management meetings, and nonparticipants; (2) determine which recommended forestry practices woodland owners, participants, and nonparticipants were using, and (3) identify some of the factors that influenced them to adopt or reject the practices.

CHAPTER II

REVIEW OF RELATED LITERATURE

Considerable literature related to forest management practices of small-woodland owners was found to be available. This chapter will consider available literature related to characteristics of small-woodland owners and their woods; practice adoption, and some factors influencing the adoption of practices. Pertinent items will be discussed under appropriate headings.

I. CHARACTERISTICS OF SMALL-WOODLAND OWNERS AND THEIR WOODS

Importance of Small-Woodland Ownerships

In several resource reports, the U. S. Forest Service has brought attention to the low level of productivity of small-woodland holdings and the importance of this ownership group. The 1958 report especially brought attention to the above as a problem (27:83-86). McArdle, Chief, U. S. Forest Service (2:5) stressed the small-woodland ownerships as a problem and indicated that 80 percent of the small forest tracts in the nation contained less that 100 acres; and 98 percent were smaller than 500 acres.

In 1961, Yoho (1:99), in discussing the increased projected national demand for wood products declared that much of the increase in sawtimber production would have to come from the small-woodland ownerships.

Zivnuska (32:14) noted the low productivity of the average small forest property; while Stadelman (2:81) went on to describe this lack of productivity as the continuing major forestry problem in the United States.

Greeley (2:3) further emphasized the importance of the commercial forests held in small ownerships by indicating that wood-using industries were looking to the small-woodland owner as the key person in the future forestry economy.

Relation of Size of Farm and Woodland to Production and Management Level

In a 1965 study of 185 Louisiana woodland owners, South et al. (25:9) found a positive relationship between size of woodland and level of woodland management. They felt that this was an expected pattern since the larger-woodland owners probably had more to gain by following recommended practices.

McClay (16:90) also discovered that as size of woodland ownership increased, the use of most recommended forestry management practices increased. He further noted that the relationship between ownership size and belief in the profitability of forestry practices was confirmed by positive action in the "woods".

In discussing a 1955 TVA study of 505 forest management demonstrations, established between 1943 and 1948, Olson and Barton (18:2) stated that the quality of management varied directly with the total volume and quality of timber.

In 1962, as a result of a 12-year forestry management study in the Georgia Piedmont by Romancier and Brender (23:1-12), it was reported that small woodlands of less than 100 acres could be profitably managed for sawtimber production. The three forests studied would be comparable; relative to stand, site condition, and previous level of management; to only the best woodlands Wayne County, Tennessee, might offer. It was revealed that, after applying selected recommended forest management practices which most small-woodland owners could be expected to apply, the total volume of sawtimber was increased 60 percent over the 12-year period. In 1948, the initial value of the sawtimber was about $60 per acre as compared to approximately $225 per acre by 1960. It was assumed that much of this increase in value was directly related to the forest management practices used.

In a 1963 study of 425 small-woodland owners in Tennessee, Sharp and Dotson (24:iii) revealed that innovators, (those considered to be among the first to adopt recommended farm practices) when compared to noninnovators (all those not considered to be among the first to adopt recommended practices), had larger farms and woodlands in both acres and dollar values; and were more interested in improving their woodland management.

They further stated that the average farm size for innovators was about 230 acres as compared with 136 acres for noninnovators. They also discovered that innovators usually had larger acreages of cropland, pasture (not woodland), and total woodland than the non-innovators. Woodland owned by innovators averaged about 108 acres

while that owned by noninnovators averaged about 70 acres.

Occupation of Small-Woodland Owners

Of four million small-woodland owners in the nation in 1955, McArdle (2:6) stated that three million were farmers; another million being mostly business and professional people. He further noted that the total acreage was about equally divided between farmers and non-farmers.

The occupations of small-woodland owners were further considered by Farrell (8:4) in a study of 105 Missouri small-woodland owners. He pointed out that 28 percent of the owners indicated farming as their major occupation which was the largest single occupation group. Other ownership occupations and percentages were: business and professional, 26 percent; wage earners, 24 percent; retired, 16 percent, and other, 6 percent. Quinney (20:13) indicated similar findings, in a 1962 study of 198 small-woodland owners in Michigan. He further stated that farming as a leading land use was of decreasing importance in Michigan because of the many competing urban uses of the land.

In contrast to the findings of Farrell and Quinney, Anderson in 1960, studied 200 woodland owners and disclosed that, in two counties in Georgia and North Carolina (3:2), 65 and 50 percent of the small-woodland owners were either full-time or part-time farmers, respectively.

In the Tennessee study, cited earlier, Sharp and Dotson (23:10) noted that 43 percent of the small-woodland owners were classified as full-time farmers, while another 22 percent were listed as part-time.

In a Rhea County, Tennessee study involving 100 small-woodland owners, Wilkerson (29:17) found that 40 percent and 47 percent listed their major occupations as full-time farmer and part-time farmer.

Forestry as a Major Farm Enterprise

In data obtained in 185 interviews with small-woodland owners in Louisiana, South, et al. (25:7) declared that none of the woodland owners reported that the major part of their income was realized from forestry. In the Tennessee studies, Sharp and Dotson (23:12), and Wilkerson (29:18), further discussed forestry as a major enterprise and noted that only 8 percent of the small-woodland owners listed forestry as a major farm enterprise.

Educational Level

Studies (10:11) in eight states revealed that innovators, when compared with noninnovators, had more formal education. In discussing the Louisiana study, South et al. (25:9) declared that the educational level attained was significantly related to the adoption of recommended woodland management practices. They found that 85 percent of those classified as innovators had 10 years or more of schooling as compared with only 43 percent of the noninnovators having so much.

Sharp and Dotson (23:12) noted the average grade level attained by small-woodland owners to be about the ninth grade. Innovators averaged nearly three grade levels higher (11th grade) than did non-innovators (8th grade). The Wilkerson study (29:19) showed similar

results in that the average grade level attained by all small-woodland owners was 9.2; innovators averaged near completion of the 12th grade compared to less than the ninth grade for noninnovators.

Age

Frutchey and Williams (10:11) found innovators to be younger when compared with noninnovators.

A 1957 Michigan study by Yoho, et al. (31:29), showed the most common age of forest landowners to be 41 to 50 years with the average being close to 50 years; while Sharp and Dotson (24:13) noted that the average age of all small-woodland owners in the Tennessee study was 52.8 years. The average ages of innovators and noninnovators were 49.4 and 54.0, respectively.

Wilkerson (29:23) and Martin (15:35) had similar results.

II. PRACTICE ADOPTION

Rogers (21:69) indicated that some people (referred to as innovators) have a tendency to be the first to try out and adopt new ideas. At the same time, there are persons (referred to as noninnovators) who are not first to try out and adopt new ideas. He further revealed that innovators generally differ from noninnovators in that they: (1) have more formal education; (2) are younger; (3) have participated more in formal ways; (4) have higher social status, and (5) have read more.

Frutchey and Williams (10:11, 12) reported that studies in eight states compared two groups of small-woodland owners which were divided

into innovators and noninnovators. They also discovered results similar to Rogers', however, relative to woodland management, additional findings revealed that innovators when compared with noninnovators were: (1) better acquainted with the ASC program; (2) participating more in the ASC program; (3) more interested in woodland improvement; (4) more interested in market and price information, knew where to get it, and preferred professional advice; (5) using more woodland management practices, and were further along in the diffusion process; (6) more interested in a woodland management plan, and (7) more inclined to have a woodland management plan.

In a 1963 Louisiana study of 324 woodland owners, Hestbeck (11:29) found that invariably, innovators were more likely to be adopters of the woodland practices under consideration and they were more likely to have adopted more of them.

In a 1963 study of 428 small woodland owners in Louisiana, concerning 22 woodland management practices, Jones and McKean (13:29) noted that the adoption rates for separate practices ranged from 12 to 90 percent among innovators and from 3 to 60 percent among non-innovators. Innovators tended to have adopted about 50 percent of all the practices as compared to about 25 percent of noninnovators.

Sharp and Dotson (24:iii) found that innovators tended to be farther along in the adoption process, than were noninnovators, as it related to each of the 12 woodland management practices having special relevance in Tennessee. The total group, on the average, was

in the "trial stage" on the practice "shopping around for the best price for selling trees," but nevertheless most indicated they sold to the "usual buyer" without consulting other buyers.

It was further stated that the total group, on the average, was in the "planning to try" stage on nine practices which included: (1) having a plan for growing and selling forest products; (2) planting trees to reforest woodland; (3) establishing woodland on open land suited to trees; (4) thinning the woods; (5) marking trees for selective cutting; (6) using a written contract in selling trees; (7) selling trees to obtain optimum returns; (8) participating in ASC or other government forestry programs, and (9) getting the advice of professional foresters.

The average owners were found to be in the "interested" stage on the practice of "killing undesirable trees." They were only in the "awareness" stage on the practice of "participating in non-government forestry programs."

III. FACTORS INFLUENCING PRACTICE ADOPTION

Studies (12:8) have shown that decision making and practice adoption are influenced by the aspirations and capabilities of the people involved. Individual and family aspirations are usually reflected in their goals, values, and means of achievement. Their capabilities include general occupational knowledge and management skills. These are related to such things as age, formal education, socio-economic status, and social contacts.

Research findings (12:4) indicate that farmers adopt new ideas or practices at different times. They tend to be at different stages in the adoption process at different times as it may relate to a given, recommended practice, or group of practices.

Authorities (12:7) generally agree that the adoption process is a mental process through which an individual passes from first hearing about a new idea to its final adoption. The stages in the adoption process include: (1) awareness (referred to in this study as "aware"); (2) interest (hereinafter, referred to as "interested"); (3) evaluation (hereinafter referred to as "planning to try"); (4) trial (called "tried" in this study), and (5) adoption (hereinafter called "using"). Research has indicated, in general terms, that as one proceeds from unawareness to "using" that more and more intensive or personal contacts are required if adoption of a practice is to result.

At the "aware" and "interested" stages, mass media and group contacts including demonstrations, meetings, farm magazines, newspapers, and radio are most important. At the "planning to try" and "tried" stages; agricultural agencies, neighbors, and friends are generally more important influences than mass media. When farmers move closer to the "using" stage, personal contacts with representatives of agricultural agencies (including extension) are of more importance, but may still be secondary to neighbors and friends.

In a 16 state study, Wilson and Gallup (30:34) revealed that the adoption of recommended agricultural practices was directly related to

the extent to which farmers made contact with members of the Cooperative Extension Service.

In the report by Frutchey and Williams (10:7), it was noted that the four most important reasons woodland owners did not follow recommended woodland management practices were, in the order of their importance: (1) the use of time; (2) use of money; (3) time span needed to grow trees, and (4) lack of technical knowledge. Sharp and Dotson (23:70-72), and Wilkerson (29:79-81) had similar results.

In their study, South et al. (25:12) found that about one-half (47 percent) of the interviewees believed their woodlands to be beneficial and worthwhile. Most of the innovators (71 percent) indicated their woods to be of value while only 27 percent of the noninnovators saw benefits in their woods. Of the owners reporting benefits, nearly one-half made direct reference to the sale of pulpwood and/or timber. Low returns was the reason, most frequently mentioned by respondents, for not receiving benefit from woodland.

Frutchey and Williams (10:7), in a summary of studies in nine states, reported that although 90 percent (of the 2,693 small-woodland owners interviewed) indicated their woodland was of some benefit, there did not seem to be a strong desire to use better management practices. Generally, small-woodland owners valued their woodland and gave income from the sale of marketable timber and stumpage sales as a primary benefit.

In further discussing the value of woodlands, Sharp and Dotson (23:52, 53), noted the benefits that 418 of 425 small-woodland owners

felt they derived from their woodland. Nearly three-fourths (72 percent) of the owners indicated that their woodland provided benefits from the sale of timber and other marketable products. About one-half (52 percent) stated that woodland also was used for the farm and home. Relatively low production and returns were listed, as the main reasons, for those stating "dislikes" for their woodland. Wilkerson (29-76), in another Tennessee county, had similar results.

No literature was found which was specifically related to participants and nonparticipants in group meetings. However, they appeared to be similar to innovators and noninnovators according to literature reviewed.

CHAPTER III

DEFINITION OF TERMS

For purposes of this study, a participant was defined as a landowner who attended four or more of nine forest management meetings scheduled during a thirty-month period. It was assumed that participants were more nearly apt to have the characteristics of innovators and tended to be among the early ones to adopt recommended practices.

Nonparticipants were those attending none of the nine forest management meetings and it was assumed they had the characteristics of noninnovators and were not considered to be among the first to adopt recommended practices.

A small-woodland owner was considered to be an individual who owned at least five acres and less than 2,500 acres of woods.

CHAPTER IV

METHOD AND PROCEDURE

I. POPULATIONS

According to 1966 Agricultural Stabilization and Conservation Service farm listings, there were approximately 1,030 woodland owners in Wayne County. The study was limited to small-woodland owners, the 1,000 having between five and 2,500 acres. The small-woodland owners were further divided into two populations, namely: (1) those hereafter referred to as participants who attended at least four out of a series of nine forestry management meetings over a 30 month period (1964-66), and (2) those hereafter referred to as nonparticipants who did not attend any of the intensive forestry management sessions.

Of the approximately 200 who attended at least one of the nine forestry management meetings during 1964-66, 60 participants attended four or more. They constituted one of the populations.

A second population consisted of all small-woodland owners who attended from one through three forestry management meetings. One hundred and forty owners fitted this classification. This population was not sampled.

The third population consisted of nonparticipants who had not attended a single meeting.

Participant and nonparticipant populations were selected for comparison in the study in an effort to get the greatest degree of difference possible.

II. THE SAMPLES

Fifty-one participants and fifty-one nonparticipants were selected from their respective populations for interview.

Of the total population of sixty participants, fifty-one were available for interview.

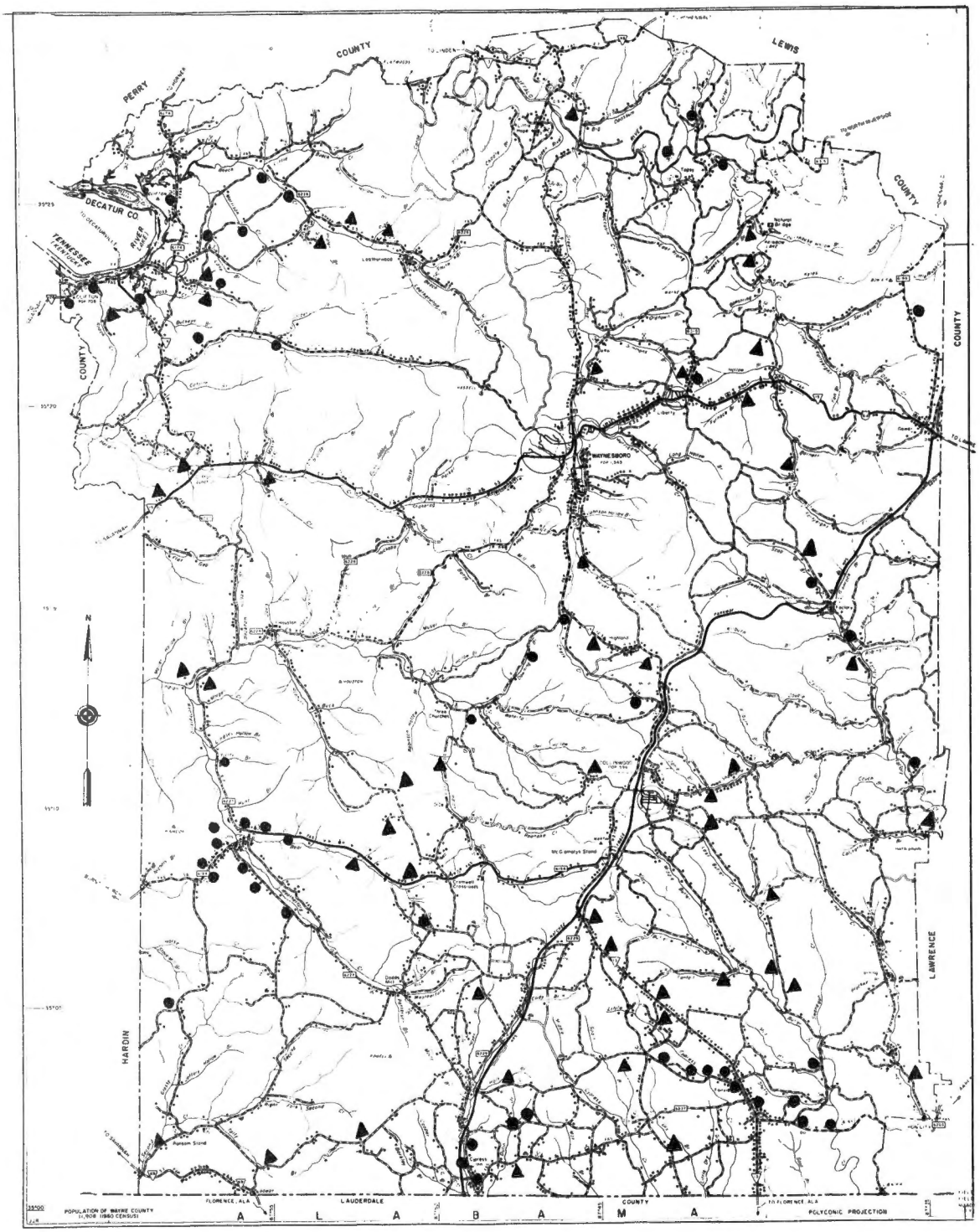
A like number, fifty-one, of the nonparticipants was randomly selected from the list of approximately 800 small-woodland owners.

Each of the 102 small-woodland owners was personally interviewed by the county agent during the spring and early summer months of 1966. Figure 3 shows the location of the interviewees.

III. INTERVIEW SCHEDULE

The schedule used in this study (see Appendix A) was prepared at the request of the National Extension Committee on Organization and Policy (ECOP) Sub-committee on Forestry. Changes in the original schedule form were made to make it fit special Tennessee and Wayne County needs.

The schedule was designed to reveal characteristics, production practices, and factors influencing practice adoption of small-woodland owners. Certain questions were listed on a separate page for completion



LEGEND: ● Participants ▲ Nonparticipants

FIGURE 3

LOCATION OF INTERVIEWEES

by the interviewer following each interview, and consisted mainly of opinions concerning observed attitudes and interests of the interviewees.

As indicated earlier, comparisons in the study were between participants and nonparticipants. Analyses were made based on simple numbers and percents presented in tabular form. Means were computed and included where appropriate.

IV. RATING EXPLANATION

Twenty recommended forestry management practices were included in the interview in an effort to determine differences in the practice adoption level of small-woodland owners who were participants and nonparticipants.

The following scheme was used to classify management levels of each woodland owner interviewed on each of the 20 practices: (1) no points were given if the person interviewed had not heard of the specific practice; (2) one point was given if the person had only heard of the practice; (3) two points were given if the person was only interested in it; (4) three points were given if the person had not tried it but planned to; (5) four points were given if the person had tried the practice but was not using it at the time of the interview, and (6) five points were given if the person had tried the practice and was still using it.

Average practice diffusion ratings of the groups are compared in this report. For this purpose the practice diffusion process is

considered in the following stages: "unaware," 0.0-0.49; "aware," 0.5-1.49; "interested in it," 1.5-2.49; "planning to try," 2.5-3.49; "tried," 3.5-4.49, and "using," 4.5-5.0.

An average practice diffusion rating was obtained for each woodland owner by adding up his or her total score and dividing by 20 (the number of recommended practices). Group total average rating were determined for the purpose of comparing participation groups.

CHAPTER V

FINDINGS OF THE STUDY

This chapter will include findings relevant to the characteristics of small-woodland owners in Wayne County, their adoption of recommended practices, and some of the factors influencing practices, as stated in the purposes of the study. Comparisons were made between those participating in extension forestry sessions (participants) and those who did not (nonparticipants) in an effort to identify generalizable group differences.

I. CHARACTERISTICS OF SMALL-WOODLAND OWNERS

Basic information, concerning the characteristics of small-woodland owners in Wayne County, was needed in order to more effectively plan the forestry part of the county extension program. Some of the characteristics will be discussed under appropriate headings.

Degree to Which Interviewer Knew Small-Woodland Owners

The interviewer indicated how well he knew each of the respondents. Table I shows that 33 percent of the interviewees were known at least "fairly well." Fifty-seven percent of the participants were know at least "fairly well" as compared with only 8 percent of the nonparticipants who were known so well.

TABLE I

DEGREES TO WHICH INTERVIEWER KNEW ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY NUMBERS AND PERCENTS*

Degree to Which Interviewer Knew Respondent	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Very well	7	7	6	12	1	2
Fairly well	26	26	23	45	3	6
Not very well	32	31	22	43	10	20
Not at all	37	36	0	0	37	72
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

Interviewees Attitude Toward Survey

Table II shows that the interviewer was well-received by 95 percent of all the respondents who were either "friendly" or "somewhat friendly." All the participants and 90 percent of the nonparticipants were so classified. Four of the nonparticipants were considered indifferent and one was antagonistic; however, all cooperated by answering the questions.

Total Farm Acreage

Table III discloses that 73 percent of all the interviewees had 100 acres or more--the average being 294 acres. Eighty-four percent of the participants had 100 acres or more as compared to 63 percent for the nonparticipants. Eighteen percent of the participants and 8 percent of the nonparticipants had 500 acres or more. The farms of participants (366 acres) averaged 145 acres more than those of nonparticipants (221 acres).

Total Woodland Acreage

With reference to Table IV, it may be seen that 74 percent of all the respondents had 50 acres or more of woodland--the average being 206 acres. Eighty-two percent of the participants and 65 percent of the nonparticipants had that much. Fourteen percent of the participants compared to 4 percent of the nonparticipants had 500 acres or more. The average woodland acreage of the participants (263) exceeded that of the nonparticipants (150) by 113 acres.

TABLE II

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS ACCORDING TO ATTITUDES TOWARD THE SURVEY AS DETERMINED BY THE INTERVIEWER*

Attitude Toward Survey	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Friendly	80	78	50	98	30	59
Somewhat Friendly	17	17	1	2	16	31
Indifferent	4	4	0	0	4	8
Antagonistic	1	1	0	0	1	2
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE III

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING TOTAL LAND IN SELECTED ACREAGE INTERVALS, AND AVERAGE ACRES*

Acreage Interval	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
30-49	7	7	3	6	4	8
50-99	20	20	5	10	15	29
100-249	38	37	21	41	17	33
250-499	24	23	13	25	11	22
500-2,500	13	13	9	18	4	8
Total	102	100	51	100	51	100
Average Acres	294		366		221	

*Percents are rounded to the nearest whole number.

TABLE IV

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING TOTAL WOODLAND IN SELECTED ACREAGE INTERVALS, AND AVERAGE ACRES*

Acreage Interval	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
10-19	6	5	2	4	4	8
20-29	8	8	5	10	3	6
30-49	13	13	2	4	11	21
50-99	16	16	11	21	5	10
100-249	39	38	19	37	20	39
250-499	11	11	5	10	6	12
500-2,500	9	9	7	14	2	4
Total	102	100	51	100	51	100
Average Acres	206		263		150	

*Percents are rounded to the nearest whole number.

Total Cropland Acreage

As indicated in Table V, 46 percent of all the interviewees were found to have at least 20 acres of cropland--the average being 28 acres. Fifty-one percent of the participants and 39 percent of the nonparticipants had 20 acres or more. Twenty-seven percent of the participants as compared to 12 percent of the nonparticipants had 50 acres or more; the average cropland acreage being 35 and 21, respectively.

Total Improved Pasture Acreage

Table VI shows that 57 percent of all the respondents had 30 or more acres of improved pasture--the average being 55 acres. Seventy percent of the participants and 46 percent of the nonparticipants had 30 or more acres. The total average acreage for the participants was 62 as compared to 48 for the nonparticipants.

Total Grazed Woodland Acreage

As seen in Table VII, 75 percent of all the interviewees had 20 acres or less of their woodland being grazed. Little significant difference is to be noted in comparing participants and nonparticipants on this item.

Total Ungrazed Woodland Acreage

The majority (78 percent) of all the respondents were found to have 30 or more acres of ungrazed woodland (see Table VIII). About equal percents for participants (82 percent) and nonparticipants (74 percent) were in this category.

TABLE V

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING TOTAL CROPLAND IN SELECTED ACREAGE INTERVALS, AND AVERAGE ACRES*

Acreage Interval	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
0-4	37	36	18	35	19	37
5-9	5	5	1	2	4	8
10-19	14	13	6	12	8	16
20-29	13	13	7	14	6	11
30-49	13	13	5	10	8	16
50-99	13	13	9	17	4	8
100-249	7	7	5	10	2	4
Total	102	100	51	100	51	100
Average Acres	28		35		21	

*Percents are rounded to the nearest whole number.

TABLE VI

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING TOTAL IMPROVED PASTURE IN SELECTED ACREAGE INTERVALS, AND AVERAGE ACRES*

Acreage Interval	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
0-4	10	10	1	2	9	18
5-9	5	5	4	8	1	2
10-19	15	15	5	10	10	19
20-29	13	13	5	10	8	15
30-49	18	17	11	21	7	14
50-99	24	23	15	29	9	18
100-249	17	17	10	20	7	14
Total	102	100	51	100	51	100
Average Acres	55		62		48	

*Percents are rounded to the nearest whole number.

TABLE VII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING TOTAL GRAZED WOODLAND IN SELECTED ACREAGE INTERVALS*

Acreage Interval	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
0-4	52	51	26	51	26	51
5-9	7	7	4	8	3	6
10-19	18	17	7	13	11	21
20-29	6	6	4	8	2	4
30-49	6	6	3	6	3	6
50-99	8	8	4	8	4	8
100-249	4	4	3	6	1	2
250-499	1	1	0	0	1	2
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE VIII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING TOTAL UNGRAZED WOODLAND IN SELECTED ACREAGE INTERVALS*

Acreage Interval	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
0-4	9	9	4	8	5	10
5-9	2	2	1	2	1	2
10-19	4	4	1	2	3	6
20-29	7	7	3	6	4	8
30-49	10	10	2	4	8	16
50-99	19	18	11	21	8	16
100-249	33	32	17	33	16	31
250-499	10	10	6	12	4	8
500-2,500	8	8	6	12	2	3
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

Portion of Total Woodland Grazed

By looking at Table IX, it can be seen that 87 percent of all the respondents grazed less than 50 percent of their total woodland acreage. Little difference was to be noted in comparing participants and nonparticipants on this item.

Total Other Land Acreage

The vast majority of all the interviewees (90 percent) had four acres or less of total other land acreage (see Table X). A larger percent of the nonparticipants (98 percent) reported having four or less acres of total other land than was true of the participants (82 percent). Gardens, yards, barn lots, roads, and waste land were considered to be included in this acreage.

Portion of Total Land in Woodland

As shown in Table XI, 98 percent of the owners interviewed, both participants and nonparticipants, had more than 25 percent of their total land in woodland. However, 27 percent of the participants compared to 16 percent of the nonparticipants reported having 75 percent or more of their total land in woodland.

Value of Woodland

All the respondents were asked, by the interviewer, to place dollar values on their woodland, as shown in Table XII. Generally, the interviewees arrived at values by comparing their woodland to similar holdings which had recently been sold and/or by the estimated volume of

TABLE IX

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING DIFFERENT PORTIONS OF THEIR TOTAL WOODLAND GRAZED*

Portion of Total Woodland Grazed	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Less than one-fourth	77	75	39	76	38	74
One-fourth to one-half	12	12	7	14	5	10
One-half to three-fourths	1	1	0	0	1	2
Three-fourths to all	4	4	1	2	3	6
All	8	8	4	8	4	8
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE X

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING TOTAL OTHER LAND IN SELECTED ACREAGE INTERVALS*

Acreage Interval	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
0-4	92	90	42	82	50	98
5-9	6	6	5	10	1	2
10-19	2	2	2	4	0	0
20-29	2	2	2	4	0	0
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XI

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING DIFFERENT PORTIONS OF THEIR TOTAL LAND IN WOODLAND*

Portion of Total Land in Woodland	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Less than one-fourth	2	2	1	2	1	2
One-fourth to one-half	19	19	11	22	8	16
One-half to three-fourths	59	58	25	49	34	66
Three-fourths to all	20	19	13	25	7	14
All	2	2	1	2	1	2
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS HAVING WOODLAND IN SELECTED VALUE CATEGORIES, AND AVERAGE VALUE*

Estimated Value Per Acre (Dollars)	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
15-49	16	15	7	13	9	17
50-99	54	53	29	57	25	49
100-149	14	14	5	10	9	18
150-199	9	9	4	8	5	10
200-249	4	4	2	4	2	4
250-299	2	2	2	4	0	0
300-349	2	2	1	2	1	2
350-399	0	0	0	0	0	0
400-449	0	0	0	0	0	0
450	1	1	1	2	0	0
Total	102	100	51	100	51	100
Average Estimated Value**	$101		$107		$96	

*Percents are rounded to the nearest whole number.

**Average values rounded to the nearest dollar.

timber contained. Most of the woodland valued above $150 per acre was so valued because of its location rather than the value of the woodland alone. The woodland ranged in estimated value from $15 per acre to $450 per acre.

The average per acre value for the 102 farms was $101 per acre. Participants' woodland was estimated to average higher in value per acre ($107) than that of nonparticipants' ($96). Sixty-eight percent of all the interviewees had woodland acreage averaging below $100 in value. Participants' and nonparticipants' estimated values were similar with the exception of the $450-$499 category which contained 2 percent of the participants or one owner. This tended to raise the average woodland value of the participants above that of the nonparticipants.

Distance Lived From Woodland

As noted in Table XIII, 73 percent of all the respondents' woodlands were on the farm where they lived, while 90 percent were within less than ten miles of their place of residence. There was little difference in the participants and nonparticipants with 92 percent of the participants and 88 percent of the nonparticipants living less than ten miles from their woodland. An exception being, that one nonparticipant lived more than 100 miles from his woodland.

Major Occupation

In the classification of all interviewees by occupations, data in Table XIV shows that only 29 percent of all the respondents were

TABLE XIII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS LIVING DESIGNATED DISTANCES FROM THEIR WOODLAND*

Distance From Woodland	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Live on place	75	73	39	76	36	70
Less than 10 miles	17	17	8	16	9	18
10-29 miles	9	9	4	8	5	10
30-99 miles	0	0	0	0	0	0
100 miles or more	1	1	0	0	1	2
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XIV

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY MAJOR OCCUPATIONS*

Major Occupation Listed	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Part-time farmer	56	55	29	57	51	53
Full-time farmer	30	29	17	33	13	25
Retired	10	10	3	6	7	14
Housewife or widow	3	3	0	0	3	6
Business	2	2	2	4	0	0
Professional	1	1	0	0	1	2
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

full-time farmers. An even larger percent (55) were part-time farmers. Slightly more participants (33 percent and 57 percent) than nonparticipants (25 percent and 53 percent) were full-time and part-time farmers, respectively. Six percent of the participants were retired, but 14 percent of the nonparticipants were so classified. In addition, two participants were businessmen. Three of the nonparticipants were housewives or widows; while another was a professional person.

Major Farm Enterprise

Table XV shows beef to be by far the most important enterprise, with 51 percent of all those interviewed being in this grouping. Beef ranked highest with both participants (57 percent) and nonparticipants (47 percent). General farming accounted for 30 percent of all the interviewees' major enterprises with 20 percent of the participants and 39 percent of the nonparticipants so reporting. It is interesting to note that 17 percent of all the respondents listed forestry as a major farm enterprise. Twenty-one percent of the participants and 12 percent of the nonparticipants fell in this category.

Educational Level

The average grade level attained by all the interviewees was 9.1, as shown in Table XVI. Participants averaged near completion of the 10th grade (9.6) compared to near the ninth grade (8.5) for the nonparticipants. Medians for participants (10.0 grades) and nonparticipants (8.0 grades) were believed when compared to the median grade

TABLE XV

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS REPORTING THE VARIOUS MAJOR FARM ENTERPRISES*

Major Farm Enterprise	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Beef	53	51	29	57	24	47
General farm	30	30	10	20	20	39
Forestry	17	17	11	21	6	12
Nonfarmer	1	1	1	2	0	0
No income	1	1	0	0	1	2
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XVI

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY EDUCATIONAL LEVELS AND THEIR AVERAGE EDUCATIONAL LEVELS*

Educational Level Reported	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
None	2	2	0	0	2	4
1-4 grades	6	6	4	8	2	4
5-7 grades	18	18	7	14	11	21
8th grade	28	27	12	23	16	31
9-11 grades	13	13	6	12	7	14
12th grade	26	25	17	33	9	18
1-3 years college	4	4	1	2	3	6
Bachelor's degree	5	5	4	8	1	2
Total	102	100	51	100	51	100
Average Educational Level	9.1 grades		9.6 grades		8.5 grades	

*Percents are rounded to the nearest whole number.

level (8.1) for all residents of Wayne County 25 years and over in 1960 (6:39). Forty-three percent of the participants and 26 percent of the nonparticipants reported an educational level of twelve grades or higher. The mode for participants was 10th grade and for nonparticipants was 8th grade.

Gross Family Income

Reference to Table XVII discloses information related to the various family income categories. All but one of the respondents answered this optional item. Fifty-six percent of the respondents had gross family incomes between $2,000 and $8,000. Seventy-one percent of the participants and 57 percent of the nonparticipants reported $4,000 or more gross income. Also, more of the participants (44 percent) than that of the nonparticipants (18 percent) had gross family incomes in excess of $8,000.

The average gross income for all the interviewees was $8,238. The participants' incomes were $10,320 as compared to $6,196 for the nonparticipants (a difference of $4,125). The median figures were $5,474 for all interviewees, $7,250 for participants and $4,615 for nonparticipants.

Timber Marketed

Tables XVIII, XIX, and XX provide information in regard to gross income from timber sales, amounts of timber sold and measures used for timber sales for the five year period 1961-1966.

TABLE XVII

NUMBERS AND PERCENTS* OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS REPORTING TOTAL GROSS FAMILY INCOMES IN 1965 BY INCOME CATEGORIES, AND AVERAGE AND MEDIAN INCOMES**

Total Gross Family Income Category	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Not answered	1	1	1	2	0	0
$0-1999	12	12	0	0	12	23
$2000-3999	24	23	14	27	10	20
$4000-5999	19	18	6	12	13	25
$6000-7999	15	15	8	15	7	14
$8000-9999	6	6	6	12	0	0
$10,000-11,999	7	7	5	10	2	4
$12,000-13,999	6	6	4	8	2	4
$14,000-15,999	1	1	0	0	1	2
$16,000-17,999	3	3	2	4	1	2
$18,000-19,999	3	3	2	4	1	2
$20,000-21,999	1	1	0	0	1	2
$22,000-23,999	0	0	0	0	0	0
$24,000-25,999	0	0	0	0	0	0
$26,000-29,999	0	0	0	0	0	0
$30,000-49,999	3	3	2	4	1	2
$50,000-99,999	1	1	1	2	0	0
Total	102	100	51	100	51	100
Average for Those Reporting	$8,238		$10,320		$6,196	
Median Income	$5,474		$7,250		$4,615	

*Percents are rounded to the nearest whole number.

**Averages and medians are rounded to the nearest whole dollar.

TABLE XVIII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS SELLING TIMBER DURING THE PERIOD 1961-1966 ACCORDING TO GROSS SALES CATEGORIES*

Gross Sales Category	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
No sale	68	66	29	57	39	76
Less than $250	11	11	7	14	4	8
$250-499	2	2	2	4	0	0
$500-999	6	6	4	8	2	4
$1000 and over	15	15	9	17	6	12
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XIX

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY THE MEASURES USED IN TIMBER SALES*

Unit of Measure	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Not answered or no sale	68	66	29	57	39	76
Acres	20	20	12	23	8	16
Board feet	8	8	6	12	2	4
Posts or poles or trees	3	3	1	2	2	4
Cords	3	3	3	6	0	0
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XX

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY THE AMOUNTS OF TIMBER SOLD ACCORDING TO UNITS OF MEASURE, 1961-1966*

Amount of Timber Sold by Unit of Measure**	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
No sale	68	66	29	57	39	76
Acres:						
Less than 5 acres	2	2	1	2	1	2
5-24 acres	3	3	2	4	1	2
25-49 acres	1	1	1	2	0	0
50 or more acres	14	14	8	15	6	12
Board feet:						
Less than 1000	0	0	0	0	0	0
1000 and over	9	9	7	14	2	4
Poles or posts or trees:						
Less than 250	3	3	1	2	2	4
Cords:						
Less than 100 cords	3	3	3	6	0	0
100 cords or more	0	0	0	0	0	0

*Percents are rounded to the nearest whole number.

**Numbers and percents do not add up to totals since one owner mentioned marketing by two measures (board feet and cords).

Gross timber sales. As seen in Table XVIII, only 34 percent of all the interviewees reported marketing any timber during the previous five years. A larger percent (43 percent) of the participants had marketed timber than was true for the nonparticipants (24 percent). Twenty-three percent of all the owners interviewed had sold $250 worth of timber or more. When participants and nonparticipants were compared, it was noted that 29 percent of the former and only 16 percent of the latter had sold that much.

Timber measurement used. Data in Table XIX show again that only one-third (34 percent) of all the interviewees had marketed timber during the period 1961-1966. The largest group (20 percent) marketed by acres, a larger percent (23 percent) of the participants reporting sales by this measure than of the nonparticipants (16 percent). The next most frequently mentioned measure was board feet, 12 percent of the participants and 4 percent of the nonparticipants selling some timber this way. A few participants reported selling cords (6 percent); while only one participant and 2 nonparticipants sold by posts, poles, or trees.

Amount of timber marketed. Reference to Table XX shows the amount of timber sold during the 1961-1966 period as reported by the one-third who marketed timber. Most owners who had marketed, 14 percent, reported sales in excess of 50 acres. Fifteen percent of the participants and 12 percent of the nonparticipants marketed these amounts. Smaller percents

marketed from 3 to 50 acres. More participants (14 percent), than nonparticipants (4 percent) sold 1,000 or more board feet. Sales of poles, posts, or trees were all less than 250 each; while those selling by cords, all participants, reported selling less than 100 each.

Frequency of Marketing

Data in Table XXI indicate that 42 percent of all the interviewees had marketed timber at intervals of 20 years or less. A larger percentage of the participants (49 percent) than was true for the nonparticipants (35 percent) so marketed.

Age of Owner

In Table XXII, it may be seen that the average age for all those interviewed was 50.5 years. Average ages of participants and nonparticipants were 48.7 and 52.4, respectively. Only 36 percent of the participants were over 50 years of age as compared to 62 percent of the nonparticipants.

Practice Adoption Level

Following each interview, the respondent was rated by the interviewer with respect to his adoption of recommended forest management practices in general. Study of Table XXIII discloses that 52 percent of all the respondents were judged to be at least "sooner than the average." Seventy-six percent of the participants and 27 percent of the nonparticipants were so classified.

TABLE XXI

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY FREQUENCIES OF MARKETING TIMBER*

Frequency of Marketing	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Intervals of less than 5 years	3	3	2	4	1	2
5-10 year intervals	6	6	3	6	3	6
10-20 year intervals	34	33	20	39	14	27
Intervals of more than 20 years	59	58	26	51	33	65
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY AGE GROUPS, AND AVERAGE AGES*

Age Group (Years)	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Under 30	4	4	1	2	3	6
30-39	13	13	8	15	5	10
40-49	35	34	24	47	11	22
50-59	26	25	9	18	17	33
60 or more	24	24	9	18	15	29
Total	102	100	51	100	51	100
Average Age	50.5		48.7		52.4	

*Percents are rounded to the nearest whole number.

TABLE XXIII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY PRACTICE ADOPTION LEVELS, BASED ON INTERVIEWER'S JUDGEMENT*

Practice Adoption Level	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Among the first few	15	15	15	29	0	0
Soon after the first few	9	9	7	14	2	4
Sooner than the average	29	28	17	33	12	23
A little later than most owners	17	17	7	14	10	20
Among the last few	32	31	5	10	27	53
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

Sex of Interviewees

Table XXIV shows that of those interviewed, 95 percent were males and only 5 percent females. None of the participants were females; while 10 percent of the nonparticipants were so classified.

Interest in Woodland Improvement

The interviewer expressed his opinion concerning each respondents' interest in woodland improvement. Table XXV gives this information. Sixty-five percent of all the respondents were at least "somewhat interested" in improving their woods. More participants (88 percent) than nonparticipants (41 percent) were at least "somewhat interested."

Interest in Management Assistance by Private Arrangement

As disclosed in Table XXVI, 38 percent of all the interviewees indicated that they at least "might be interested" in making private arrangements with a professional forester or company. A larger percent of participants (45 percent) than nonparticipants (31 percent) expressed such a feeling.

Interest in Cooperative Arrangement

Almost the same percentage of interviewees thought that they "might be interested" in cooperative arrangements as were interested in private arrangements. Table XXVII shows that 40 percent of all the interviewees reported that they at least "might be interested." Fifty-three percent of the participants as compared to 27 percent of the nonparticipants expressed this feeling.

TABLE XXIV

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY SEXES*

Sex of Respondent	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Man	97	95	51	100	46	90
Woman	5	5	0	0	5	10
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXV

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS ACCORDING TO INTERVIEWER'S OPINION OF RESPONDENTS' INTEREST IN WOODLAND IMPROVEMENT*

Degree of Interest in Improvement	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Very interested	27	27	22	43	5	10
Somewhat interested	39	38	23	45	16	31
Indifferent	8	8	0	0	8	16
Not interested	28	27	6	12	22	43
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXVI

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY DEGREES TO WHICH THERE WAS INTEREST IN MAKING PRIVATE ARRANGEMENTS WITH A FORESTER OR COMPANY TO HELP MANAGE THEIR WOODLANDS*

Degree of Interest in Obtaining Assistance	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Not interested	63	62	28	55	35	69
Might be interested	33	32	20	39	13	25
Interested	6	6	3	6	3	6
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXVII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY DEGREES TO WHICH THERE WAS INTEREST IN JOINING WITH OTHER OWNERS IN AN ASSOCIATION WHICH WOULD HIRE A PRIVATE FORESTER TO HELP MANAGE THEIR WOODLANDS*

Degree of Interest	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Not interested	61	60	24	47	37	73
Might be interested	35	34	23	45	12	23
Interested	6	6	4	8	2	4
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

Management System Preferred

As may be seen in Table XXVIII, a total of 42 percent of all the interviewees indicates an "interest" in getting a forester's assistance in woodland management; 53 percent of the participants and 32 percent of the nonparticipants were so classified. Thirty-nine percent of the participants and only 28 percent of the nonparticipants either wanted to secure the assistance of a forester thru an association or private arrangement. This compares with participants (14 percent) and nonparticipants (4 percent) who preferred to secure the assistance of a forester in some other way.

Interviewees' Ratings of their Woodland

Consideration of Table XXIX discloses that 81 percent of all the respondents rated the present condition of their woodland at least "fair." Nearly one-fourth (23 percent) of all the respondents rated their woodland as "good." About equal percentages were given in each of the categories for participants and nonparticipants, though the former tended to rate their's slightly higher.

Interviewer's Familiarity with Woodland

Table XXX gives information concerning interviewer's familiarity with the woodland of all those interviewed. The interviewer indicated that he was either "not familiar" or "not very familiar" with 95 percent of all the respondents' woodlands. Ninety percent of the participants and all of the nonparticipants were so classified.

TABLE XXVIII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY MANAGEMENT SYSTEMS PREFERRED*

Management System Preferred	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
None liked	59	58	24	47	35	68
Association with private forester	19	18	12	23	7	14
Private arrangements with forester	15	15	8	16	7	14
Forester to be secured in some other way	9	9	7	14	2	4
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXIX

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY THEIR RATINGS OF THE CONDITION AND VALUE OF THEIR WOODLAND*

Woodland Rating	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Excellent	1	1	1	2	0	0
Good	24	23	14	27	10	20
Fair	58	57	28	55	30	59
Poor	19	19	8	16	11	21
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXX

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS STATING INTERVIEWER'S FAMILIARITY WITH RESPONDENTS' WOODLAND*

Familiarity with Woodland	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Very familiar	0	0	0	0	0	0
Fairly familiar	5	5	5	10	0	0
Not very familiar	20	20	18	35	2	4
Not familiar	77	75	28	55	49	96
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

Interviewer's Rating of Woodland

The interviewer was not familiar enough with 95 percent of all the interviewees' woodlands to rate them, as may be seen in Table XXXI. Thus, 10 percent of the participants' woodlands was rated (6 percent, "good"; and 4 percent, "fair"), and none of that owned by nonparticipants.

II. PRACTICE ADOPTION

All interviewees were questioned concerning their use of twenty recommended woodland practices, and, as a result given woodland management diffusion ratings ranging from zero, "unaware" to five, "using." The practice diffusion ratings were used in comparing the management levels of all interviewees, in relation to the twenty recommended practices.

The recommended practices were divided into four groups and included: (1) planning of the woodland; (2) establishment of the woodland; (3) growth and maintenance of the woodland, and (4) marketing of timber and woodland products. They will be treated separately, and in the order of greatest difference between the diffusion ratings for participants and nonparticipants.

Interviewer's Rating of Woodland Management Level

Table XXXII gives the average practice diffusion rating for the 102 Wayne County interviewees, 51 participants and 51 nonparticipants, as each was rated by the interviewer.

TABLE XXXI

INTERVIEWER'S RATINGS OF THE CONDITION AND VALUE OF WOODLAND OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY NUMBERS AND PERCENTS*

Woodland Rating	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Situation not known well enough to rate	97	95	46	90	51	100
Excellent	0	0	0	0	0	0
Good	3	3	3	6	0	0
Fair	2	2	2	4	0	0
Poor	0	0	0	0	0	0
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXXII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY AVERAGE PRACTICE DIFFUSION RATINGS, AND TOTAL AVERAGE RATINGS AS RATED BY INTERVIEWER*

Average Practice Diffusion Rating Interval**	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
0.00-0.49	0	0	0	0	0	0
0.50-1.49	6	6	0	0	6	12
1.50-2.49	20	20	3	6	17	33
2.50-3.49	44	43	18	35	26	51
3.50-4.49	29	28	27	53	2	4
4.50-5.00	3	3	3	6	0	0
Total	102	100	51	100	51	100
Total Average Rating	3.02		3.57		2.47	

*Percents are rounded to the nearest whole number.

**In the rating scale used: 0 = unaware; 1 = aware of the 20 recommended practices; 2 = interested in the practice; 3 = planning to try the practice; 4 = tried the practice but not using; and 5 = using the practice.

The total average practice diffusion rating for all the interviewees was (3.02), which means they were just "planning to try" the practice. Participants, on the average, were in the "tried" stage (3.57), while nonparticipants were still in the "interested" stage (2.47).

Twenty-six percent of all the interviewees were either in the "aware" (0.50-1.49) or "interested" stage (1.50-2.49). A much smaller percent of participants (6 percent) than nonparticipants (45 percent) were so classified.

The largest percent of all the interviewees (43 percent) were in the "planning to try" stage. Fewer participants (35 percent) than nonparticipants (51 percent) were in this category. Almost one-third, or 31 percent, of all the interviewees were in the "tried" stage (3.50-4.49) or the "using" stage (4.50-5.00). Far more participants (59 percent) as compared to the nonparticipants (4 percent) were in these categories.

Practices in General

As indicated in Table XXXIII, average woodland practice diffusion ratings ranged from 1.50 on Practice 20 (Preparing ground for natural seeding or planting) to 4.41 on Practice 1 (Control grazing).

The average practice diffusion score for all the interviewees was 3.03, or about the middle of the "planning to try" stage of the diffusion process. Participants were seen to outperform nonparticipants on all practices and by all measures with the exception of Practice 3 (Establishing a diameter for trees to be cut).

TABLE XXXIII

AVERAGE WOODLAND MANAGEMENT PRACTICE DIFFUSION RATINGS AND TOTAL AVERAGE RATING*

Woodland Management Practice	All Owners Average Rating (N = 102)	Participants Average Rating (N = 51)	Nonparticipants Average Rating (N = 51)
1. Control grazing (fencing out livestock)	4.41	4.59	4.24
2. Having a plan for growing and selling timber and/or other forest products	4.32	4.80	3.84
3. Establishing a diameter limit for trees to be cut	4.19	4.18	4.20
4. Shopping around for best price for selling trees	4.04	4.06	4.02
5. Selling trees to obtain optimum returns	3.82	4.22	3.43
6. Thinning the woods	3.57	4.12	3.25
7. Killing undesirable trees	3.54	3.80	3.27
8. Participating in non-government forestry programs (local forestry development associations, industrial groups, civic organizations, banks and other business groups, individuals and others)	3.34	5.00	1.69
9. Getting the advice of professional foresters	3.17	4.24	2.10
10. Participating in ASC or other government forestry programs	2.70	3.69	1.71
11. Making an inventory of the salable timber in your woodland and its value	2.66	3.12	2.20
12. Constructing fire lanes	2.66	3.04	2.27
13. Using a written contract in selling trees	2.63	2.88	2.37
14. Marking trees for selective cutting	2.43	3.10	1.76
15. Starting to harvest within a year after marking	2.41	3.14	1.69

TABLE XXXIII (CONTINUED)

Woodland Management Practice	All Owners Average Rating (N = 102)	Participants Average Rating (N = 51)	Nonparticipants Average Rating (N = 51)
16. Planting trees to reforest woodland	2.36	3.39	1.33
17. Controlling insects	2.31	2.76	1.86
18. Controlling disease outbreaks	2.31	2.76	1.86
19. Establishing woodland on open land to trees	2.25	2.71	1.80
20. Preparing ground for natural seeding or planting	1.50	2.16	0.84
Total Average Rating	3.03	3.59	2.49

*In the rating scale used: 0 = unaware; 1 = aware of the practice; 2 = interested in the practice; 3 = planning to try the practice; 4 = tried the practice but not now using it; and 5 = using the practice.

Practices Related to Planning of the Woodland

Interviewees varied greatly in their practice diffusion scores and percents of interviewees in the various stages of practice diffusion with reference to four practices related to planning of the woodland.

Data in Tables XXXIII, XXXIV, XXXV, and XXVI show that Practice 8 (Participating in non-government forestry programs: local forestry development associations, industrial groups, civic organizations, banks and other business groups, individuals, and other), on the average, found all interviewees (3.34) "planning" to try the practice.

Participants (5.00) were in the "using" stage of the diffusion process, while nonparticipants (1.69) were only "interested." More than one-half (53 percent) of all the interviewees were "using" the practice. When participants and nonparticipants were compared, it was found that all of the former and only 6 percent of the latter were "using" the practice. It is interesting to note the fact that 53 percent of the nonparticipants were either "unaware" or barely "aware" of the practice.

Another practice related to planning of the woodland was Practice 9 (Getting the advice of a professional forester). On the average, all of the interviewees rated in the "planning to try" stage (3.17), while participants were in the "tried" stage (4.24) and nonparticipants were only in the "interested" stage (2.10).

Thirty-eight percent of all the interviewees were "using" this practice and 36 percent said they were "planning to try" the practice. When comparing participants and nonparticipants, it was found that 65

TABLE XXXIV

PERCENTS OF ALL INTERVIEWEES AT THE VARIOUS STAGES OF THE DIFFUSION PROCESS WITH REGARD TO THE WOODLAND MANAGEMENT PRACTICES, AND TOTAL AVERAGE PERCENTS*

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N=102 Percent
1. Control grazing (fencing out livestock)	3	8	1	2	6	80	100
2. Having a plan for growing and selling timber and/ or other products	2	9	3	7	0	79	100
3. Establishing a diameter limit for trees to be cut	0	6	0	28	1	65	100
4. Shopping around for best price for selling trees	0	6	2	33	0	59	100
5. Selling trees to obtain optimum returns	0	11	6	27	2	54	100
6. Thinning the woods	4	16	6	19	4	51	100
7. Killing undesirable trees	2	21	2	22	3	50	100
8. Participating in non-government forestry programs (local forestry development associations, industrial groups, civic organizations, banks and other business groups, individuals and others)	16	10	4	16	1	53	100
9. Getting the advice of a professional forester	14	9	2	36	1	38	100

TABLE XXXIV (CONTINUED)

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N=102 Percent
10. Participating in ASC or other government forestry programs	7	28	5	33	1	26	100
11. Making an inventory of the salable timber in your woodland and its value	3	27	4	49	0	17	100
12. Constructing fire lanes	0	20	41	16	1	22	100
13. Using a written contract in selling trees	2	33	4	41	0	20	100
14. Marking trees for selective cutting	4	36	2	43	0	15	100
15. Starting to harvest within a year after marking	5	36	1	43	0	15	100
16. Planting trees to reforest woodland	11	36	10	15	6	22	100
17. Controlling insects	19	3	7	71	0	0	100
18. Controlling disease outbreaks	19	3	7	71	0	0	100
19. Establishing woodland on open land suited to trees	3	49	8	13	14	13	100
20. Preparing ground for natural seeding or planting	25	42	8	15	1	9	100
Total Average Percent	7	20	6	30	2	34	

*Percents are rounded to the nearest whole number.

TABLE XXXV

PERCENTS OF PARTICIPANTS AT THE VARIOUS STAGES OF THE DIFFUSION PROCESS WITH REGARD TO THE WOODLAND MANAGEMENT PRACTICES, AND TOTAL AVERAGE PERCENTS*

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N=51 Percent
1. Control grazing (fencing out livestock)	0	6	2	4	4	84	100
2. Having a plan for growing and selling timber and/ or other products	0	4	0	2	0	94	100
3. Establishing a diameter limit for trees to be cut	0	6	0	29	0	65	100
4. Shopping around for best price for selling trees	0	4	4	33	0	59	100
5. Selling trees to obtain optimum returns	0	6	0	27	0	67	100
6. Thinning the woods	0	10	6	16	0	68	100
7. Killing undesirable trees	0	12	2	31	4	51	100
8. Participating in non-government forestry programs (local forestry development associations, industrial groups, civic organizations, banks and other business groups, individuals and others)	0	0	0	0	0	100	100
9. Getting the advice of a professional forester	0	4	0	29	2	65	100

TABLE XXXV (CONTINUED)

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N=51 Percent
10. Participating in ASC or other government forestry programs	0	12	2	39	0	47	100
11. Making an inventory of the salable timber in your woodland and its value	0	18	4	53	0	25	100
12. Constructing fire lanes	0	14	35	18	0	33	100
13. Using a written contract in selling trees	0	23	8	47	0	22	100
14. Marking trees for selective cutting	0	18	2	57	0	23	100
15. Starting to harvest within a year after marking	0	16	2	59	0	23	100
16. Planting trees to reforest woodland	0	23	6	22	6	43	100
17. Controlling insects	4	4	4	88	0	0	100
18. Controlling disease outbreaks	4	4	4	88	0	0	100
19. Establishing woodland on open land suited to trees	0	45	3	8	22	22	100
20. Preparing ground for natural seeding or planting	6	45	10	21	2	16	100
Total Average Percent	1	14	5	34	2	43	

*Percents are rounded to the nearest whole number.

TABLE XXXVI

PERCENTS OF NONPARTICIPANTS AT THE VARIOUS STAGES OF THE DIFFUSION PROCESS WITH REGARD TO THE WOODLAND MANAGEMENT PRACTICES, AND TOTAL AVERAGE PERCENTS*

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N=51 Percent
1. Control grazing (fencing out livestock)	6	10	0	0	8	76	100
2. Having a plan for growing and selling timber and/ or other products	4	14	6	12	0	64	100
3. Establishing a diameter limit for trees to be cut	0	6	0	27	2	65	100
4. Shopping around for best price for selling trees	0	8	0	33	0	59	100
5. Selling trees to obtain optimum return	0	16	12	27	4	41	100
6. Thinning the woods	8	22	6	23	8	33	100
7. Killing undesirable trees	4	29	2	14	2	49	100
8. Participating in non-government forestry programs (local forestry development associations, industrial groups, civic organizations, banks and other business groups, individuals and others)	31	22	8	31	2	6	100
9. Getting the advice of a professional forester	27	14	4	43	0	12	100

TABLE XXXVI (CONTINUED)

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N=51 Percent
10. Participating in ASC or other government forestry programs	14	45	8	27	2	4	100
11. Making an inventory of the salable timber in your woodland and its value	6	37	4	45	0	8	100
12. Constructing fire lanes	0	25	47	14	2	12	100
13. Using a written contract in selling trees	4	43	0	35	0	18	100
14. Marking trees for selective cutting	8	55	2	29	0	6	100
15. Starting to harvest within a year after marking	10	57	0	27	0	6	100
16. Planting trees to reforest woodland	21	49	14	8	6	2	100
17. Controlling insects	33	2	10	55	0	0	100
18. Controlling disease outbreaks	33	2	10	55	0	0	100
19. Establishing woodland on open land suited to trees	6	53	11	18	8	4	100
20. Preparing ground for natural seeding or planting	45	39	6	8	0	2	100
Total Average Percent	13	27	7	27	2	23	

*Percents are rounded to the nearest whole number.

percent of the participants "were using" this practice and only 12 percent of the nonparticipants. Forty-three percent of the nonparticipants were in the "planning to try" stage of the diffusion process compared to 29 percent for the participants.

Nearly one-fourth (23 percent) of all the interviewees were either "unaware" or "aware" of the practice. When participants and nonparticipants were compared, it was found that only 4 percent of the former and 41 percent of the latter were so classified.

Almost all of the interviewees were familiar with Practice 10 (Participating in Agricultural Stabilization and Conservation or other government forestry programs). On the average, all of the interviewees were at the start of the "planning to try" stage (2.70). About two full diffusion stages of difference may be noted between the participants and nonparticipants since the former averaged in the "tried" stage (3.69) and nonparticipants only in the "interested" stage (1.71).

About one-third (33 percent) of all the interviewees were in the "planning to try" stage and 26 percent said they were "using" the practice. Thirty-nine percent of the participants were "planning to use" this practice as compared to 27 percent for the nonparticipant group. Nearly one-half (47 percent) of the participants were "using" the practice, while only 4 percent of the nonparticipants were "using" it.

More than one-third (35 percent) of all the interviewees reported being "unaware" and "aware" of this practice; while only 12 percent of the participants (all of the "aware"), compared to 59 percent of the

nonparticipants, (45 percent of them "aware"), were in these categories.

With reference to Practice 2 (Having a plan for growing and selling timber and/or other forest products), the Tables disclose that, on the average, all the interviewees were in the "tried" stage (4.32). Participants (4.80) had attained the "using" stage with nonparticipants (3.84) one stage lower, in the "tried" stage. Only 2 percent of all the interviewees were "unaware" of this practice and 79 percent of all the interviewees were "using" it. Nearly all (94 percent) of the participants were "using" this practice, compared to 64 percent for the nonparticipants.

Practices Related to Establishment of the Woodlands

Three practices of the 20 recommended practices in Tables XXXIII, XXXIV, XXXV, and XXXVI, pages 75-83, were related to establishment of the woodland.

Practice 16 (Planting trees to reforest woodland) found all of the interviewees (2.36) "interested" in the practice. Participants (3.39) were in the "planning to try" stage of the diffusion process and nonparticipants (1.33) rated two stages lower, just in the "aware" stage. Nearly one-half (47 percent) of all the interviewees were not even "interested" in this practice, while 22 percent were actually "using" it. Another 15 percent said they "planned to try" this practice. When comparing participants and nonparticipants, it was found that 23 percent of the former and 70 percent of later were not even "interested" in using this practice. More participants (43 percent) were "using" this practice

than nonparticipants (2 percent). Another 22 percent of the participants "planned to try" the practice; while only 8 percent of the nonparticipants were in this category.

Another recommended practice, Practice 20, (Preparing ground for natural seeding or planting), rated a low of 1.50 or barely in the "interested" stage for all the interviewees. Participants scored about mid-point in the "interested" stage (2.16), while nonparticipants were only "aware" (0.84) of the practice. Only 9 percent of all the interviewees were using this practice and a total of more than two-thirds (67 percent) were not even "interested." Among the participants, 51 percent were in the "unaware" or "aware" stage of the practice, but 16 percent were "using" it. More than four-fifths (84 percent) of the nonparticipants were either in the "unaware" or "aware" stage, and only 2 percent were using this practice.

Woodland owners were in the "interested" stage (2.25) concerning Practice 19 (Establishing woodland on open land suited to trees). Participants rated in the "planning to try" stage (2.71), while nonparticipants were scarcely in the "interested" state (1.80). More than one-half (52 percent) of all the interviewees were not even "interested" in this practice and only 13 percent were "using" it. Twenty-two percent of the participants were "using" this practice as compared to only 4 percent for the nonparticipant group.

Practices Related to Growth and Maintenance of the Woodland

Reference to Tables XXXIII, XXXIV, XXXV, and XXXVI, pages 75-83, shows that six of the 20 practices dealt with growth and maintenance of the woodland.

Practices 17 and 18 (Controlling insects) and (Controlling disease outbreaks) rated exactly the same in all the practice diffusion scores and percents of interviewees in the various stages of the practice diffusion process and will be treated together.

The average score for all the interviewees (2.31) fell within the "interested" stage. Participants scored in the "planning to try" stage, while nonparticipants were only "interested" in the practices. Nineteen percent of all the interviewees were "unaware" of these practices and 71 percent were "planning to try" them. Among the participants, only 4 percent were "unaware" of these practices, but 88 percent were in the "planning to try" stage. One-third (33 percent) of the nonparticipants were "unaware" of these practices, and 55 percent reported they were "planning to try" them. It is interesting to note that none of the interviewees had "tried" or were "using" the practices.

Practice 1 (Control grazing) rated highest among all the 20 practices in the average rating for all interviewees (4.41). This placed them in the "tried" stage.

Little difference was noted between participants (4.59) and nonparticipants (4.24), even though they fell in different stages of the diffusion process. Four-fifths (80 percent) of all the interviewees were "using" this practice. Further comparisons showed 84 percent of the participants "using" this practice compared to 76 percent for the nonparticipant group.

The next practice in this group was Practice 6 (Thinning the woods). The average score for all the interviewees (3.57) barely fell

within the "tried" stage. Participants (4.12) were in the "tried" stage and nonparticipants (3.25) were in the "planning to try" stage.

Twenty percent of all the interviewees were not even "interested" in this practice. Ten percent of the participants and 30 percent of the nonparticipants were so classified. More than one-half (51 percent) of the interviewees were "using" this practice. Sixty-eight percent of the participants as compared to only 33 percent of the nonparticipants reported "using" this practice.

Among other important practices related to woodland maintenance and growth was Practice 7 (Killing undesirable trees). All of the interviewees (3.54) rated barely in the "tried" stage. Participants (3.80) were in the "tried" stage and nonparticipants (3.27) were in the "planning to try" stage. One-half (50 percent) of all the interviewees were "using" this practice, while 21 percent were just "aware" of it. About equal percents of participants (51 percent) and nonparticipants (49 percent) were "using" this practice. Only 12 percent of the former and 29 percent of the latter were only "aware" of this practice.

Practice 12 (Constructing fire lanes), on the average, found all interviewees (2.66) in the "planning to try" stage of the diffusion process. Participants rated in the "planning to try" stage (3.04), while nonparticipants were in the "interested" stage (2.27). Forty-one percent of all the interviewees were "interested" in this practice and 22 percent were "using" it. Thirty-three percent of the participants and 12 percent of the nonparticipants were "using" this practice.

Practices Related to Marketing of Timber and Woodland Products

Seven of the 20 recommended practices in Tables XXXIII, XXXIV, XXXV, and XXXVI, pages 75-83, were related directly to marketing timber and woodland products.

Practice 14 (Marking trees for selective cutting) found all interviewees (2.43) in the "interested" stage. Participants (3.10) were in the "planning to try" stage, while nonparticipants (1.76) rated one stage lower, in the "interested stage."

Forty-three percent of all the interviewees said they were "planning to try" this practice, while 36 percent were "aware" of it. When comparing participants and nonparticipants, it was found that 57 percent of the former and 29 percent of the latter were "planning to try" this practice. Eighteen percent of the participants were only in the "aware" stage of the diffusion process compared to 55 percent for the nonparticipants. Another 15 percent of all the interviewees were "using" this practice. When participants and nonparticipants were compared, it was found that 23 percent of the former and only 6 percent of the latter were so classified.

With reference to Practice 15 (Starting to harvest within a year after marking), all interviewees (2.41) were in the top of the "interested" stage. Participants (3.14) were a full stage higher, or in the "planning to try" stage, than the nonparticipants (1.69) who were barely "interested."

Forty-three percent of all the interviewees were in the "planning to try" stage of the diffusion process and 15 percent said they were "using" the practice.

Fifty-nine percent of the participants were "planning to use" this practice as compared to 27 percent for the nonparticipant group. Nearly one-fourth (23 percent) of the participants were "using" the practice, while only 6 percent of the nonparticipants were "using" it.

More than one-third (36 percent) of all the interviewees reported being just "aware" of this practice; while 16 percent of the participants compared to 57 percent of the nonparticipants were in that stage.

For Practice 11 (Making an inventory of the salable timber in your woodland and its value), all interviewees (2.66) were in the "planning to try" stage of the diffusion process. Participants (3.12) were almost a stage higher, or in the "planning to try" stage, than were the nonparticipants (2.20) who were "interested." Almost one-half (49 percent) of all the interviewees were in the "planning to try" stage, and 17 percent were "using" the practice. One-fourth (25 percent) of the participants were "using" it, compared to only 8 percent for the nonparticipant group. Also, it may be noted that 18 percent of the participants were not even "interested" as compared to 43 percent of the nonparticipants.

Interviewees rated relatively high on Practice 3 (Establishing a diameter limit for trees to be cut) with all interviewees (4.19) in the "tried" stage. Very little difference was noted between participants (4.18) and nonparticipants (4.20) at the various stages of the diffusion process. More than one-fourth (28 percent) of all the interviewees were "planning to try" this practice, while 65 percent reported "using" it already.

Practice 4 (shopping around for the best price for selling trees), on the average, found all interviewees (4.04) in the "tried" stage of the diffusion process. Participants (4.06) and nonparticipants (4.02) were at the same stage. All groups were about equal in the percents in the various stages of the diffusion process. One-third (33 percent) were in the "planning to try" stage, and more than one-half (59 percent) were "using" it.

With reference to Practice 5 (selling trees to obtain optimum returns), all interviewees (3.82) were found to be in the "tried" stage. Participants (4.22) were in the "tried" stage and nonparticipants (3.43) were in the "planning to try" stage. Fifty-four percent of all the interviewees were "using" this practice; while 11 percent were only "aware" of it. More than two-thirds (67 percent) of all the participants were "using" it, as compared to 41 percent of all the nonparticipants. Only 6 percent of all the participants were in the "aware" stage, compared to 16 percent of the nonparticipants in this category.

For Practice 13 (using a written contract in selling trees), all interviewees (2.63) were just in the "planning to try" stage. Participants (2.88) were in the "planning to try" stage, while nonparticipants were in the "interested" stage (2.37). Even though 41 percent of all the interviewees were in the "planning to try" stage, only 20 percent were actually "using" it. About one-half (47 percent) of the participants were "planning to try" this practice compared to only 35 percent

of the nonparticipants. About equal percents of participants (22 percent) and nonparticipants (18 percent) were "using" the practice.

Also, it may be noted that 23 percent of the participants were just in the "aware" stage, compared to 43 percent of the nonparticipants.

Time From Marking to Harvest

Table XXXVII shows that only 15 percent of all interviewees were marking trees before harvesting, and that all of these were harvesting within twelve months after they had marked them. Twenty-four percent of the participants and 6 percent of the nonparticipants marked their trees.

Sources Known for Market Information

As may be seen by Table XXXVIII, 88 percent of all those interviewed reported knowing an average of 1.5 sources for obtaining market information. On the average, participants reported knowing 1.8 sources of such information each as compared with 1.1 for nonparticipants.

Timber and forest industry sources, including sawmill operators, lumber dealers, timber buyers, and pulp and paper company representatives were by far the most popular sources. One or more from this group of sources was mentioned by 83 percent of all the interviewees; while 86 percent of the participants and 80 percent of the nonparticipants mentioned one or more of the four.

It was interesting to note that the Extension Service rated highest as a source for market information among the professional groups

TABLE XXXVII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS ACCORDING TO NUMBER OF MONTHS TREES WERE MARKED BEFORE HARVESTING*

No. of Months Between Marking and Harvesting	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Did not mark before harvesting	87	85	39	76	48	95
Twelve months or less	15	15	12	24	3	6
More than twelve months before harvesting	0	0	0	0	0	0
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XXXVIII

NUMBERS AND PERCENTS* OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY SOURCES KNOWN FOR MARKET INFORMATION, AND AVERAGE NUMBER OF SOURCES**

Source of Information	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
None known	12	12	4	8	8	16
Sawmill operator	43	42	18	35	25	49
Lumber dealer	39	38	21	41	18	35
Papermill company representative	18	18	14	27	4	8
Timber buyer	13	13	10	20	3	6
Extension Service (county agent and Extension forester)	12	12	9	18	3	6
Service forester	9	9	8	16	1	2
Consulting and industrial forester	6	6	6	12	0	0
Journals or market reports	3	3	3	6	0	0
Neighbor or friend	2	2	1	2	1	2
Soil conservationist	1	1	0	0	1	2
National forest ranger	1	1	0	0	1	2
Woodland management company representative	1	1	1	2	0	0
ASC committeeman	1	1	0	0	1	2
Average Number of Sources	1.5		1.8		1.1	

*Numbers and percents do not add up to totals since some owners mentioned more than one source.

**Percents are rounded to the nearest whole number.

listed. Twelve percent of all the respondents named the Extension Service; 18 percent of the participants and 6 percent of the nonparticipants indicated this source. Service forester (9 percent) and other foresters, consulting and industrial, (6 percent) were about equal in importance as reported by all the interviewees. More of the participants (16 percent) than nonparticipants (2 percent) indicated the service forester as a source. When participants and nonparticipants were compared, it was found that 12 percent of the former and none of the latter reported the other foresters mentioned as sources for market information.

Additional sources of information listed by all respondents were: journals or market reports, neighbors or friends, soil conservationist, ASC committeeman, national forest ranger, and a woodland management company representative.

Interest in Obtaining Timber Market Information

Table XXXIX shows that a majority of all those interviewed (70 percent) were at least "somewhat interested" in obtaining market information related to timber and other forest products. Eighty-eight percent of the participants and 51 percent of the nonparticipants were in this category. Another 27 percent of all the interviewees were "not interested." Only 12 percent of the participants as compared to 49 percent of the nonparticipants reported that they felt they didn't need such timber market information.

TABLE XXXIX

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY DEGREES OF INTEREST IN OBTAINING MARKET INFORMATION FOR TIMBER AND OTHER FOREST PRODUCTS*

Degree of Interest in Obtaining Market Information	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Very interested	19	19	13	25	6	12
Somewhat interested	52	51	32	63	20	39
Indifferent	3	3	0	0	3	6
Not interested	28	27	6	12	22	43
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

Sources Known for Timber Production Cost Information

With reference to Table XL, nearly two-thirds (63 percent) of all the interviewees mentioned knowing an average of 2.1 sources for obtaining timber production cost information. Far more participants (86 percent) than was true for the nonparticipants (39 percent) knew where to get such information. On the average, participants reported knowing 3.4 sources and nonparticipants 0.7.

Eighty-two percent of the participants and 25 percent of the nonparticipants mentioned one or more Extension Service persons as sources for timber production cost information. Fifty-five percent of the participants and 6 percent of the nonparticipants gave the service forester or state forester as a source. Consulting and industrial foresters rated equal with all interviewees (27 percent); forty-nine percent of the participants and 6 percent of the nonparticipants mentioned both consulting and industrial foresters as sources for information. Additional sources for obtaining timber production cost information listed by all interviewees include: ASC committeeman, 6 percent; lumber dealer, 5 percent; neighbor or friend, 4 percent; U. S. D. A. 3 percent; sawmill operator, 2 percent; journals or market reports, 2 percent; pulp and paper company representative, 2 percent; national forest ranger, 2 percent; TVA, 1 percent, and personal experience, 1 percent.

Interviewees' Need for Timber Production Cost Information

Reference to Table XLI indicates that 64 percent of all the interviewees were at least "somewhat interested" in information

TABLE XL

NUMBERS AND PERCENTS* OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY SOURCES KNOWN FOR TIMBER PRODUCTION COST INFORMATION, AND AVERAGE NUMBER OF SOURCES**

Source of Information Known	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
None known	38	37	7	14	31	61
Extension Service (county agent and Extension forester)	67	65	41	82	13	25
Service forester	59	57	28	55	3	6
Consulting forester	28	27	25	49	3	6
Industrial forester	28	27	25	49	3	6
ASC committeeman	6	6	2	4	4	8
Lumber dealer	5	5	3	6	2	4
Neighbor or friend	4	4	1	2	3	6
U. S. D. A.	3	3	1	2	2	4
National forest ranger	2	2	0	0	2	4
Sawmill operator	2	2	1	2	1	2
Journals or market reports	2	2	2	4	0	0
Papermill company representative	2	2	2	4	0	0
T. V. A.	1	1	1	2	0	0
Personal experience	1	1	0	0	1	2

TABLE XL (CONTINUED)

Source of Information Known	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Soil conservationist	0	0	0	0	0	0
Vo-Ag teacher	0	0	0	0	0	0
Timber buyer	0	0	0	0	0	0
Average Number of Sources	2.1		3.4		0.7	

*Numbers and percents do not add up to totals since some owners mentioned more than one source.

**Percents are rounded to the nearest whole number.

TABLE XLI

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY THEIR INTEREST IN OBTAINING INFORMATION CONCERNING TIMBER PRODUCTION COSTS*

Interest in Having Production Cost Information	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Very interested	22	22	16	31	6	12
Somewhat interested	43	42	26	51	17	33
Indifferent	4	4	2	4	2	4
Not interested	33	32	7	14	26	51
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

concerning per acre timber production cost. A much larger percent of the participants (82 percent) than was true of the nonparticipants (45 percent) reported being at least "somewhat interested."

III. FACTORS INFLUENCING PRACTICE ADOPTION

Data here presented were collected in an effort to identify some of the more important attitudes which interviewees have concerning their woodland. The paragraphs to follow will discuss what factors other than those identified earlier appear to have influenced all respondents to adopt or not adopt recommended forestry practices.

Woodland Benefit

A majority of all the interviewees (82 percent) thought their woodland was a benefit to them, as may be seen in Table XLII. Slightly more participants (88 percent) than nonparticipants (76 percent) were so classified. Eight percent of the participants and 22 percent of the nonparticipants reported that their woodland was of only "some" benefit.

Things Liked About Woodland

Interviewees were asked to list the things they liked about their woodland (see Table XLIII). Of those mentioning likes, 55 percent of all the interviewees noted that their woodland provided them with marketable timber. A slightly larger percentage of participants (59 percent) than nonparticipants (51 percent) mentioned sale of timber as being the most important benefit received from their woodland. More

TABLE XLII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS STATING IF WOODLAND IS OF BENEFIT TO THEM*

Woodland is of Benefit	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
Yes	84	82	45	88	39	76
No	3	3	2	4	1	2
Some	15	15	4	8	11	22
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

TABLE XLIII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS MENTIONING VARIOUS THINGS THEY LIKED ABOUT THEIR WOODLAND IN ORDER OF FREQUENCY OF REPORTING*

Thing Liked About Woodland	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
None mentioned	2	2	1	2	1	2
Provides marketable timber	56	55	30	59	26	51
Timber is increasing in value	18	17	9	17	9	17
Firewood is provided	9	9	1	2	8	16
General farm use	7	7	3	6	4	8
Provides security	4	4	2	4	2	4
Provides fence posts	3	3	3	6	0	0
Provides shelter for livestock	2	2	1	2	1	2
Is good for soil conservation	1	1	1	2	0	0
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

of the nonparticipants (16 percent) than participants (2 percent) mentioned "Provides fire wood" as a thing they liked. Two benefits mentioned only by participants were "Provides fence posts" (6 percent) and "Is good for soil conservation" (2 percent).

Other benefits mentioned by all interviewees in descending order of importance were: "Timber is increasing in value," 17 percent; "General farm use," 7 percent; "Provides security," 4 percent, and "Provides shelter for livestock," 2 percent. Little difference was to be noted when participants and nonparticipants were compared on these last items.

Things Disliked About Woodland

In the same manner, interviewees were asked to list things they disliked about their woodland. Only 15 percent of all the respondents listed dislikes, fewer participants (8 percent) than nonparticipants (22 percent) reporting.

As it may be seen in Table XLIV, the only category with any appreciable difference between participants and nonparticipants was the item, "Woodland growth is too slow." Only nonparticipants (10 percent) reported this as a dislike. Nonparticipants also mentioned "Production is poor" (4 percent) and "Land should yield more" (2 percent).

Other limited benefits mentioned in about equal percents by both participants and nonparticipants were: "Quality and value are too low," 3 percent; "There's not enough for use," 2 percent, and "We have the wrong species," 2 percent.

TABLE XLIV

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY THINGS DISLIKED ABOUT WOODLAND IN ORDER OF FREQUENCY MENTIONED*

Thing Disliked About Woodland	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
None mentioned	87	85	47	92	40	78
Woodland growth is too slow	5	5	0	0	5	10
Quality and value is too low	3	3	2	4	1	2
There's not enough for use	2	2	1	2	1	2
Production is poor	2	2	0	0	2	4
We have the wrong species	2	2	1	2	1	2
Land should yield more	1	1	0	0	1	2
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

Reasons Why Woodland Owners Do Not Adopt Recommended Practices

With reference to Table XLV each respondent was asked to select the principal reasons why woodland owners generally do not adopt recommended forest management practices. Specifically, they were asked to select four reasons as the most important from twelve established in previous studies. Also, they were asked to rank the four reasons selected according to importance. The most important reason selected was "Such a long time to grow crop and get income" with equal percentages (74 percent) of participants and nonparticipants reporting this answer. Nearly equal percents of participants (65 percent) and nonparticipants (67 percent) named "More rewarding activities claim time and money" as the second most frequently mentioned reason why woodland owners do not adopt woodland management practices. The third reason given by the respondents (59 percent) was "Net benefit would result but too small." Sixty-one percent of the participants and 57 percent of the nonparticipants gave this reason. Almost one-half (49 percent) of all the respondents listed the fourth reason as "Don't have technical knowledge needed," with 53 percent of participants and 45 percent of nonparticipants reporting as much. Among additional reasons named, it was found that 43 percent of all the respondents reported "Cost of practices outweighs possible benefits" for not adopting recommended practices, more nonparticipants (47 percent) than participants (39 percent) being included. More than one-third (34 percent) of all the respondents mentioned "Physically unable to do supervision and management

TABLE XLV

PERCENTS OF 102 INTERVIEWEES (51 PARTICIPANTS AND 51 NONPARTICIPANTS) STATING VARIOUS REASONS WHY WOODLAND OWNERS DO NOT ADOPT RECOMMENDED WOODLAND MANAGEMENT PRACTICES (IN THE TOP FOUR) IN ORDER OF FREQUENCY MENTIONED*

Reason Why Woodland Owners Do Not Adopt Recommended Practices	All Owners N=102 Percent	Participants N=51 Percent	Nonparticipants N=51 Percent
Such a long time to grow crop and get income	74	74	74
More rewarding activities claim time and money	66	65	67
Net benefits would result but too small	59	61	57
Don't have technical knowledge needed	49	53	45
Cost of practices outweighs possible benefits	43	39	47
Physically unable to do supervision and management needed	34	31	37
Want to keep woodland "wild" as in nature	33	33	33
Hope to clear woodland for pasture	24	24	24
Uncertainty of ownership in undivided estate	6	8	4
Expect to sell my woodland	6	6	6
Woodland too far away for supervision	4	2	6
Expect to move away from farm	2	4	0

*Each owner gave four reasons why he did not adopt recommended practices, therefore percents in the table total 400 percent instead of 100 percent.

needed" as another reason; with almost equal percents of participants (31 percent) and nonparticipants (37 percent) reporting such.

Equal percents of both the participants and nonparticipants indicated that they "Wanted to keep woodland 'wild' as in nature" (33 percent each) and, "Hoped to clear woodland for pasture," (24 percent each) as reasons for woodland owners not adopting recommended practices.

Other reasons mentioned by small numbers were "Uncertainty of ownership in undivided estate," "Expect to sell my woodland," "Woodland too far away for supervision," and "Expect to move away from farm."

Participation in ASC Forestry Practices

The two Agricultural Stabilization and Conservation practices available to interviewees at the time of the study were "Tree Planting" (designated as A-7) and "Timber improvement" (designated as "B-10"). By requesting assistance through ASC, the landowner would be reimbursed for practically all costs involved in performing the practices. The cost of the tree seedlings and labor for planting them was estimated at about $15 per acre, ASC paying the entire amount. The cost of timber improvement varies considerably, depending upon the size and number of trees to be removed. ASC paid a maximum of $20 per acre for this practice.

The timber improvement practice (B-10) was included as an ASC practice starting in 1963; whereas tree planting (A-7) had been available since 1956. Eight percent of all the interviewees indicated they had "used" the B-10 practice, as may be seen in Table XLVI. Sixteen

TABLE XLVI

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS BY PARTICIPATION IN ASC FORESTRY PRACTICES*

ASC Forestry Practice	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
	N=102		N=51		N=51	
Tree planting (A-7)						
Heard about and used	24	23	22	43	2	4
Heard about but not used	74	73	29	57	45	88
Have not heard about or used	4	4	0	0	4	8
Timber improvement (B-10)						
Heard about and used	8	8	8	16	0	0
Heard about but not used	59	58	42	82	17	33
Have not heard about or used	35	34	1	2	34	67

*Percents are rounded to the nearest whole number.

percent of the participants compared to none of the nonparticipants were in this category. More than one-half (58 percent) of all the interviewees had "heard" of the practice but had not "used" it. More participants (82 percent) had "heard" of this practice than nonparticipants (33 percent). Fully two-thirds (67 percent) of the nonparticipants had never heard of this relatively new practice. Nearly all of the interviewees (96 percent) had at least "heard" of the tree planting practice (A-7); while only 23 percent had "used" it. Forty-three percent of the participants were "using" this practice as compared to only 4 percent of the nonparticipants. Fewer participants (57 percent) than nonparticipants (88 percent) indicated they had "heard about but not used" the tree planting practice. It was interesting to note that 8 percent of the nonparticipants reported that they had not even "heard" of the practice.

Seeking Advice

Concerning to whom interviewees turned for woodland management advice, Table XLVII shows that 66 percent of all the interviewees sought no advice at all. A comparison of participants and nonparticipants shows that more of the former (61 percent) than the latter (8 percent) had sought advice. Each of the 35 interviewees who had sought woodland management advice talked to an average of 4.7 individuals during the previous year, 31 participants talking to an average of 5.0 and 4 nonparticipants to only 2.3.

TABLE XLVII

NUMBERS AND PERCENTS* OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS REPORTED TO HAVE SOUGHT ADVICE OF VARIOUS PROFESSIONAL WORKERS AND OTHERS, AND AVERAGE NUMBER SOURCES OF ADVICE**

Person From Whom Advice Sought	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
	N=102		N=51		N=51	
No advice sought	67	66	20	39	47	92
Professional						
Extension Service (county agent and Extension forester)	46	46	45	88	1	2
Service forester	21	21	21	41	0	0
Consulting forester	14	14	14	27	0	0
Industrial forester	10	10	10	20	0	0
Soil conservationist	6	6	6	12	0	0
TVA forester	5	5	5	10	0	0
Vo-Ag teacher	2	2	2	4	0	0
National forest ranger	0	0	0	0	0	0
Non-professional						
Neighbor or friend	21	21	18	35	3	6
Timber buyer	15	15	13	25	2	4
Sawmill operator	14	14	12	24	2	4

TABLE XLVII (CONTINUED)

Person From Whom Advice Sought	All Interviewees No.	All Interviewees Percent	Participants No.	Participants Percent	Nonparticipants No.	Nonparticipants Percent
	N=102		N=51		N=51	
ASC committeman	7	7	6	12	1	2
Banker	2	2	2	4	0	0
Average Number Per Interviewee for Those Who Sought Advice	N=35		N=31		N=4	
	4.7 persons		5.0 persons		2.3 persons	

*Numbers and percents do not add up to totals since some owners mentioned more than one source of advice.

**Percents are rounded to the nearest whole number.

Participants were seen to be much more interested than nonparticipants in seeking professional advice. Eighty-eight percent of the participants mentioned Extension Service personnel, 41 percent mentioned service forester, 27 percent mentioned the consulting forester, 20 percent said the industrial forester, 12 percent listed the soil conservationist, 10 percent listed the TVA forester, and 4 percent gave the teacher of vocational agriculture. Only 2 percent of the nonparticipants reported seeking the advice of the professionals listed. The single individual involved mentioned the County Agent.

Exactly one-fourth (25 percent) of all the interviewees reported having sought the advice of non-professionals listed with regard to woodland management. Forty-five percent of the participants and only 6 percent of the nonparticipants were included. More than one-third (35 percent) of the participants mentioned neighbor or friend, while about equal percents mentioned timber buyer (25 percent) and sawmill operator (24 percent) as a source for advice. Also 12 percent of the participants reported the ASC Committeeman and 4 percent mentioned the banker.

Of the 6 percent of nonparticipants who reported having sought any from those listed as non-professionals. All reported neighbors or friend, while equal percents (4 percent) reported timber buyer and sawmill operator, and 2 percent mentioned ASC Committeeman.

Plans For Future Management

Nearly three-fourths (71 percent) of all the interviewees reported having some plan for future management of their woodland and use of

woodland products. Reference to Table XLVIII shows that more of the participants (82 percent) than nonparticipants (59 percent) fell in this category. Fifty-nine percent of all the respondents indicated having some plan involving the use of at least one of the twenty recommended practices studied. When participants and nonparticipants were compared, it was noted that 80 percent of the former and only 37 percent of the latter were planning to use at least one of the recommended practices.

An additional 12 percent of all the interviewees mentioned having a plan related to the use of their woodland or products, but not a management plan involving recommended practices. Fewer participants (2 percent) than nonparticipants (22 percent) reported such a plan.

TABLE XLVIII

NUMBERS AND PERCENTS OF ALL INTERVIEWEES, PARTICIPANTS AND NONPARTICIPANTS ACCORDING TO OWNERS' PLANS FOR FUTURE MANAGEMENT OF THEIR WOODLAND AND USE OF WOODLAND PRODUCTS*

Plan for Management	All Interviewees		Participants		Nonparticipants	
	No.	Percent	No.	Percent	No.	Percent
No plan	30	29	9	18	21	41
Plan for use of woodland products but not a management plan	12	12	1	2	11	22
Plan for using at least 1 practice	25	24	13	25	12	23
Plan for using at least 2 practices	15	15	10	20	5	10
Plan for using at least 3 practices	15	15	13	25	2	4
Plan for using at least 4 practices	4	4	4	8	0	0
Plan for using 5 or more practices	1	1	1	2	0	0
Total	102	100	51	100	51	100

*Percents are rounded to the nearest whole number.

CHAPTER VI

SUMMARY AND IMPLICATIONS

Although woodlands cover more than three-fourths of the land area in Wayne County, less than one dollar per acre annual net cash income was being derived at the time of the study from sale of timber and other forest products. The Cooperative Extension Service had long held as agricultural objectives to help farmers and other land owners increase the efficiency of their production and to make their marketing efforts more profitable. In order for Extension workers in Wayne County to have a basis for making long-range educational plans in the forestry work area, benchmark data with regard to the land owners and their practices were needed. The purposes of the study were: (1) to obtain basic information concerning the characteristics of small-woodland owners in Wayne County, including those who were participants in a series of woodland management meetings, and others who were nonparticipants; (2) to determine which recommended forest practices the woodland owners, including participants and nonparticipants, were using, and (3) to identify some of the factors that influenced them to adopt or reject the practices.

Small-woodland owners, those with from 5 to 2,500 acres, made up 97 percent of all woodland owners in the county. They owned roughly one-half of all land, and constituted the population segment included in the study.

Separate facts were needed for participants (those who attended a minimum of four of the nine county meetings held in the 30-month period prior to the study) and nonparticipants (those attending none of the meetings) in order to partially evaluate the effectiveness of the meetings held and in order to have two extreme groups to compare in terms of practice adoption.

Fifty-one of the sixty participants were readily available, and a like number (51) of the 800 nonparticipants were randomly selected for inclusion. All were interviewed in the spring and early summer of 1966.

The interview schedule used in the study was adapted from one used for a Tennessee statewide study in 1962-63. Analyses were made in simple numbers, percents and averages, according to all owners interviewed, participants and nonparticipants.

All landowners interviewed were questioned concerning their use of twenty recommended woodland management practices, and, as a result given practice diffusion ratings ranging from zero "unaware" to five, "using." Average practice diffusion ratings were established for all interviewees and for participants and nonparticipants. The practice diffusion ratings were used in comparing the management levels of all interviewees in relation to the recommended practices.

The average practice diffusion rating intervals were: (1) 0.00-0.49, "unaware"; (2) 0.50-1.49, "aware"; (3) 1.50-2.49, "interested"; (4) 2.50-3.49, "planning to try"; (5) 3.50-4.49, "tried, but not now using," and (6) 4.50-5.00, "using."

A review of related literature disclosed that small-woodland owners classified as participants and nonparticipants in this study were somewhat similar to innovators and noninnovators in other previous studies.

Earlier studies showed that characteristically, innovators, when compared with noninnovators tended to: (1) be better educated; (2) be younger; (3) be full-time farmers; (4) have major enterprises other than forestry; (5) have larger, more valuable farms and woodlands; (6) have higher gross family incomes and social statuses, and (7) be operating at higher management levels.

With regard to the adoption of recommended practices, innovators tended to: (1) be among the first to adopt recommended woodland management practices and (2) participate more fully in the ASC and governmentally-sponsored and other management-aid programs than did noninnovators.

Concerning other factors causing small-woodland owners to consider and adopt recommended management practices, previous studies identified: (1) the personal "likes" and "dislikes" of owners; (2) personal capabilities; (3) the use of Extension assistance available, and (4) the alternative uses of time, money, and knowledge in management.

I. SUMMARY OF FINDINGS

With regard to the characteristics of small-woodland owners, listed below are some of the principal findings.

1. Nearly three-fourths of all interviewees had 100 or more acres of total land and 50 or more acres in woodland, more than four-fifths of the participants and less than two-thirds of the nonparticipants being included.

2. The average size of farm for all interviewees was 294 acres, for participants, 366 acres, and for nonparticipants, 221 acres. Woodland acreages for the three categories mentioned above were 206, 263, and 150 respectively.

3. Nearly all (98 percent) of the interviewees had more than one-fourth of their total land in woodland, little difference being noted between participants and nonparticipants.

4. The average value of woodland per acre for all interviewees were about $101, the range being $15 to $450. Comparable figures were, for participants, a value of about $107 and a range of from $15 to $450; and, for nonparticipants, a value of about $96 and a range of from $40 to $300.

5. About three-fourths of the owners interviewed lived on the farm where their woodland was located, little difference existing between the two participation groups.

6. More than one-half of the owners in all categories were part-time farmers, full-time farming being reported by more than an additional one-fourth.

7. The major enterprise of beef was reported by about one-half of owners in all participation categories, general farming being

the next most popular enterprise. One-fifth of the participants and one-ninth of the nonparticipants reported forestry as a major enterprise.

8. The average educational grade level for all interviewees was 9.1 with participants (9.6), more than one grade level higher than nonparticipants (8.5).

9. Average annual total gross family incomes were $8,238 for all interviewees, $10,320 for participants and $6,196 for nonparticipants. Median incomes for the above categories were $5,474, $7,250, and $4,615, respectively.

10. Only 34 percent of all interviewees reported marketing timber in the last five years, with more participants (43 percent) than nonparticipants (24 percent) being included. More than two-thirds of those marketing had sold $250 worth of timber or more.

11. More than one-half of those marketing had sold timber by the acre. An additional one-fourth had sold by board feet. Little difference was noted between participation groups.

12. Less than one-half of all interviewees had marketed timber at desired intervals of less than twenty years, larger percentage of the participants (49 percent) than nonparticipants (35 percent) marketing at intervals of less than twenty years.

13. Average ages were 50.5 years for all interviewees, 48.7 years for participants and 52.4 years for nonparticipants.

14. Nearly two-thirds (65 percent) of all interviewees were at least "somewhat interested" in woodland improvement with more participants (88 percent) than nonparticipants (41 percent) being this interested according to interviewer's rating.

15. Characteristically, participants and nonparticipants in this study appeared to be similar to the innovators and noninnovators of earlier studies.

A summary of major findings related to the adoption of twenty recommended woodland management practices by those interviewed is listed below.

1. Participants had higher average practice diffusion ratings than nonparticipants on nineteen of the twenty recommended woodland management practices.

2. Participants tended to have "tried" the practices, while nonparticipants were only "interested" in them.

3. Greatest differences between participation groups were noted for the following practices: (a) participating in non-government forestry programs; (b) getting the advice of professional foresters; (c) planting trees to reforest woodland; (d) participating in the ASC forestry program; (e) starting to harvest within a year after marking; (f) marking trees for selective cutting, and (g) preparing ground for natural seeding or planting.

4. Relatively few were marking and, then, harvesting trees within a year, 23 percent of the participants and 6 percent of the nonparticipants so reporting.

With regard to timber market information, nine-tenths of the participants and one-half of the nonparticipants were interested in obtaining it. Participants knew an average of 1.8 sources of such information compared with 1.1 sources known by nonparticipants.

Of those mentioning professional sources of market information known, the largest numbers mentioned the Extension Service, 18 percent of the participants and 6 percent of the nonparticipants indicating this source.

About two-fifths of the owners mentioned both sawmill operator (42 percent) and lumber dealer (38 percent) as non-professional sources of market information known, little difference existed between the participation groups.

Eighty-six percent of the participants and 39 percent of the nonparticipants knew one or more sources for production cost information; the average number of known sources being 3.4 and 0.7, respectively. Practically all of those not knowing a source of production. cost information were not interested in obtaining such information.

Eighty-two percent of the participants and 25 percent of the nonparticipants mentioned one or more Extension Service persons as sources for timber production cost information. More than one-half (55 percent) of the participants and 6 percent of the nonparticipants gave the service forester; while 49 percent of the former and only 6 percent of the latter indicated other foresters as sources.

Concerning other factors which appeared to have influenced all interviewees to adopt or not adopt recommended forestry practices, findings listed below were among the more important.

1. Nearly all (97 percent) of the interviewees thought their woodland was of at least some benefit to them, the remainder reporting it was of no benefit at all.

2. Of the things owners liked most about their woodland, "Provides marketable timber" was mentioned by more than one-half of all interviewees. "Timber is increasing in value" was mentioned by one-sixth of the owners.

3. About one-seventh of all owners interviewed listed things they "disliked" about their woodlands, fewer participants (8 percent) than nonparticipants (22 percent) reporting.

4. Woodland "dislikes" reported by all interviewees included: "Quality and value are too low," "There's not enough for use," and "We have the wrong species." One-tenth of the nonparticipants also mentioned "Woodland growth is too slow" as a dislike.

5. Almost equal percents of participants and nonparticipants felt that in general Wayne County woodland owners most often do not adopt recommended production practices because of the following four reasons: (1) "It takes such a long time to grow the crop and get income"; (2) "More rewarding activities claim time and money"; (3) "Net benefit would result, but too small," and (4) "Don't have the technical knowledge needed."

6. All of the participants and most (92 percent) of the non-participants were acquainted with the ASC tree planting (A-7) practice, 43 percent of the former and 4 percent of the latter actually using this practice.

7. Nearly all (98 percent) of the participants and one-third of the nonparticipants were acquainted with the ASC timber improvement (B-10) practice, 16 percent of the former and none of the latter actually using it.

8. More than one-half (59 percent) of all interviewees indicated having some plan for the future management of their woodland involving at least one of the twenty recommended practices studied; more participants (80 percent) than nonparticipants (37 percent) reporting such a plan.

9. Sixty-one percent of the participants and only 8 percent of the nonparticipants had sought woodland management advice from someone during the previous year; talking to an average of 5.0 and 2.3 individuals, respectively.

10. Of the professional individuals whose woodland management advice was sought, by far the largest numbers named Extension personnel, including 88 percent of the participants and only 2 percent of the nonparticipants. Professional individuals from whom advice was sought by participants only included: Service forester (41 percent); consulting forester (27 percent); industrial forester (20 percent); soil conservationist (12 percent), and TVA forester (10 percent).

11. Neighbor or friend was indicated as the non-professional individual from whom most owners sought woodland management advice, 35 percent of the participants and 6 percent of the nonparticipants so reporting.

II. IMPLICATIONS

Some of the implications that might be drawn from the findings of this study include the following:

1. Since participants in this study tended to be more innovative than nonparticipants and have characteristics similar to the innovators of other studies, it is implied that the meetings and demonstrations held in Wayne County tended to attract potential adopters and/or innovators.

2. Since nearly all woodland owners in both participation groups were "friendly" when visited and two-thirds expressed an "interest" in improving their woods, and most needed timber production cost and marketing or other information, they need and should be receptive to further intensive efforts in the area of woodland management.

3. Since most of the woodland owners interviewed liked their woodland because of monetary value, mostly in the form of marketable timber, and disliked the relatively low return, it should be more clearly demonstrated that forestry management is relatively profitable if practice adoption is to follow educational efforts.

4. Finally, since most of the owners interviewed reported beef or general farming as major farm enterprises, it is clear that forestry must compete with and/or supplement or complement other such profitable farm enterprises.

III. RECOMMENDATIONS

The findings and implications of this study indicate that certain recommendations might be in order. They are listed below.

1. Factors found to be different between and within the two participation groups should be further analysed, and results used in planning for more effective and efficient future educational forestry work for Wayne County.

2. It is recommended that additional research be conducted to evaluate and ascertain the relative effectiveness of intensive series of Extension woodland management meetings held in Wayne County.

3. Finally, additional research is needed to identify factors resulting in owner motivation and to design other methods of education useful in helping small-woodland owners realize the potential value of their woodland.

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APPENDIX

A or B
(Circle One)

THE AGRICULTURAL EXTENSION SERVICE, UNIVERSITY OF TENNESSEE
Knoxville, Tennessee

TENNESSEE WOODLAND MANAGEMENT SURVEY

INTRODUCTION: I am helping with a survey that is being made to obtain information to use in planning programs helpful to woodland owners. The answers you give will be added to those given by other people who are being interviewed in this county in order to get a complete picture of the forestry situation in Wayne County. Could I have a little of your time to go over these questions?

1. About how many acres do you have in your farm(s)? Cropland? Improved pasture (not woodland)? Total woodland? Woodland grazed? Woodland ungrazed? Other land?

   a. Total (b + c + d + e) land _____
   b. Cropland _____
   c. Improved pasture _____
   d. Total woodland
      (1) Grazed _____
      (2) Ungrazed _____
   e. Other land _____

   (Check to be sure items b, c, d and e add up to the TOTAL FARM ACREAGE in a.)

TO THE INTERVIEWER: If the respondent has fewer than five acres of total woodland, terminate the interview. If five acres or more of total woodland, check the appropriate category in item 2 below and continue the interview.

2. About how many acres of total woodland do you have?

   a. 5-9 _____ acres
   b. 10-19 _____
   c. 20-29 _____
   d. 30-49 _____
   e. 50-99 _____
   f. 100-249 _____
   g. 250-499 _____
   h. 500-2500 _____

3. As you see it, is your woodland of any benefit to you?

   a. Yes_____ b. Some_____ c. No_____

TO THE INTERVIEWER: If NO to question 3 above, skip to question 6. If SOME, ask questions 4 and 5. If YES, ask question 4. YES and SOME answers delete 6.

4. In what way <u>does</u> it benefit you? _____

_____

5. In what way <u>doesn't</u> it benefit you as much as you would like?

_____

6. Why do you think so? _____

_____

7. We have listed on these cards some reasons why woodland owners do not adopt recommended woodland management practices. (Hand respondent the set of 12 cards.) Now here is what we would like you to do:

   a. Please look through all the cards; read each one; then pick out the four (4) cards that show why you believe woodland owners do not use better woodland management practices. After you have selected the four (4) cards, please hand me the rest.

   b. Now these four (4) reasons are not of the same importance; so please go through them and decide which one is probably of <u>most importance</u>. Please give me the number on the back of the card. Also, do this with each of the remaining three cards.

Rank	1	2	3	4
Card No.				

Are there any other reasons why you believe woodland owners do not adopt recommended woodland management practices?

_____

_____

_____

_____

TO THE INTERVIEWER: The purpose of this next question is to find out if the respondent:

(1) is aware of certain recommended practices;
(2) is interested in using them;
(3) has tried them;
(4) is still using them, or will use then when the need arises;
(5) and his reasons for never trying the practices, or for not using them after trying them.

INTERVIEWER hands each card to respondent separately after saying: "I have here a set of cards. On each card is a woodland management practice. Would you read each card and tell whether you have tried that practice." (Check "Yes" or "No" in the "Has Tried" column below.)

In his reply the respondent may also answer the other four points. If not, interviewer will ask appropriate questions to obtain the answers. Check in appropriate columns below.

8. Woodland practices	Has Tried		Is Using or Will Use		Read or Heard of		Interested in	
	Yes (a)	No (b)	Yes (c)	No (d)	Yes (e)	No (f)	Yes (g)	No (h)
(1) Making an inventory of the salable timber in your woodland and its value								
i. Reasons _____								
(2) Having a plan for growing and selling timber and/or other forest products								
i. Reasons _____								
(3) Planting trees to reforest woodland								
i. Reasons _____								
(4) Preparing ground for natural seeding or planting								
i. Reasons _____								

	Has Tried		Is Using or Will Use		Read or Heard of		In-terested in	
	Yes (a)	No (b)	Yes (c)	No (d)	Yes (e)	No (f)	Yes (g)	No (h)
(5) Establishing woodland on open land suited to trees								
i. Reasons _____								
(6) Thinning the woods								
i. Reasons _____								
(7) Killing undesirable trees								
i. Reasons _____								
(8) Marking trees for selective cutting								
i. Reasons _____								
(9) Establishing a diameter limit for trees to be cut								
i. Reasons _____								
(10) Constructing fire lanes								
i. Reasons _____								
(11) Control grazing (fencing out livestock)								
i. Reasons _____								
(12) Controlling insects outbreaks								
i. Reasons _____								

	Has Tried		Is Using or Will Use		Read or Heard of		In-terested in	
	Yes (a)	No (b)	Yes (c)	No (d)	Yes (e)	No (f)	Yes (g)	No (h)
(13) Controlling disease outbreaks								
i. Reasons _____								
(14) Shopping around for best price for selling trees								
i. Reasons _____								
(15) Using a written contract in selling trees								
i. Reasons _____								
(16) Starting to harvest trees within a year after marking								
i. Reasons _____								
ii. No. of months after marking when harvest of trees started _____ (Months) (To be completed for those who have tried this practice.)								
(17) Selling trees to obtain optimum (best) returns								
i. Reasons _____								
(18) Participating in ASC or other government forestry programs								
i. Reasons _____								

	Has Tried		Is Using or Will Use		Read or Heard of		Interested in	
	Yes (a)	No (b)	Yes (c)	No (d)	Yes (e)	No (f)	Yes (g)	No (h)
(19) Participating in non-government forestry programs (local forestry development associations, industrial groups, civic organizations, banks, and other business groups, individuals and others)								
i. Reasons _____								
(20) Getting the advice of professional foresters								
i. Reasons _____								

9. Are you acquainted with the ASC program to share the cost of woods improvement and tree planting?

   a. Yes_____ b. No_____

10. Under the ASC program you can receive payment for certain woodland practices, if you are qualified, and by following certain requirements. Which of the three following practices have you used under the ASC program, read or heard about before today.

TO THE INTERVIEWER: Read each practice in the list below, and check whether or not respondent has used the practice under the ASC program and received payment for using it. Also, check whether or not respondent has read or heard about the practice before today.

	USED PRACTICE UNDER ASC PROGRAM		READ OR HEARD ABOUT BEFORE TODAY	
	Yes (1)	No (2)	Yes (3)	No (4)
a. Thinning out trees (Part of B-10 practice)				
b. Killing undesirable trees (Part of B-10 practice)				
c. Planting seedling trees (A-7 practice)				

11. During the past year, have you talked with anyone about the management of your woodland?

a. Yes_____ b. No_____

TO THE INTERVIEWER: If NO, skip to question 13. If YES, ask question 12 first.

12. With whom have you talked? (Check one or more of the following. If respondent gives names, write them at the side and check list later.)

a. Neighbor or friend_____
b. County agent_____
c. Extension forester_____
d. Other technical foresters:
(1) service forester_____
(2) consulting forester_____
(3) industrial forester_____
(4) TVA forester_____
e. Sawmill operator_____
f. Timber buyer_____
g. Soil conservationist_____
h. ASC committeeman_____
i. Vo-Ag teacher_____
j. National forest ranger_____
k. Banker_____
l. Other (specify)_____
_____

13. Major occupation of respondent

a. Full-time farmer_____
b. Part-time farmer_____
c. Business (specify)_____
d. Professional (specify)_____
e. Wage earner_____
f. Housewife or widow_____
g. Retired_____
h. Other (specify)_____

14. What is your major farm enterprise?

a. Forestry_____
b. Dairy_____
c. Beef_____
d. Hogs_____
e. Poultry_____
f. Other livestock_____
g. Grains_____
h. Fruits_____
i. Vegetables_____
j. Potatoes_____
k. Cotton_____
l. General farm_____
m. Tobacco_____
n. Other (specify)_____
o. Nonfarmer_____

15. Would you please complete this sentence? (Hand respondent the card.)

"The thing I <u>like</u> most about my woodland is_____

_____

TO THE INTERVIEWER: If respondent mentions more than one thing, write down all of them, and ask him "Which is <u>most</u> important?" Then underscore it.

16. Would you please complete this sentence? (Hand respondent the card.)

"The thing I dislike most about my woodland is_____

_____

TO THE INTERVIEWER: If respondent mentions more than one thing, write down all of them, and ask him "Which do you dislike most?" Then underscore it.

17. Distance--residence to woodland (check one or more appropriate categories, but only once per category).

a. Live on place_____
b. Less than 10 miles_____
c. 10-29 miles_____
d. 30-99 miles_____
e. 100 miles or more_____

18. What was the highest grade level that you completed? (Circle one.)

0 None | 1 2 3 4 5 6 7 8 Grade School | 9 10 11 12 High School | 1 2 3 4 Col. Undergrad. | Bachelor's Degree | Master's Degree | Doctor's Degree

19. Age of respondent

a. Under 30_____
b. 30-39_____
c. 40-49_____
d. 50-59_____
e. 60 or more_____

20. What plans do you have for the future management of your woodland? (Including what use will be made of timber and how you plan to manage your woodland so that there may be the kinds and amounts of timber you may want to have.)

_____

_____

_____

21. (If respondent says he has no plans in question 20 above, ask why.)

_____

_____

STATEMENT FOR INTERVIEWER: Now, Mr._____, the next three questions are about whether you would be interested in any arrangements for having someone help manage your woodland for you under terms satisfactory to you.

22. Would you be interested in making private arrangements with a forester or company to help manage your woodlands under good forestry practices for a contracted period of years under terms satisfactory to you?

a. Not interested____ b. Might be interested____ c. Interested___
d. If not interested, ask why_____

23. Would you be interested in joining other owners in this area in an association which would hire a private forester to help manage your woodland under terms satisfactory to you?

a. Not interested____ b. Might be interested____ c. Interested___
d. If not interested, ask why_____

24. Would you be interested in joining other owners in this area in securing the services of a forester in some other way to help manage your woodland under terms satisfactory to you?

a. Not interested___ b. Might be interested___ c. Interested___
d. If interested in securing the services of a forester in some other way, state how_____

25. Which of these three would you prefer?

a. Private arrangements with a forester or company (question 22)___
b. Joining an association hiring a private forester (question 23)___
c. Securing the services of a forester in some other way (question 24)_____
d. None of them_____

26. Do you need market information on prices of timber and other forest products similar to that available for other farm crops and livestock?

a. Very interested_____ c. Indifferent_____
b. Somewhat interested_____ d. Not interested_____

27. Where can you get market information on prices of timber and other forest products?

a._____
b._____
c. Don't know_____

28. Do you need information on how much it costs per acre and how long it takes to produce timber to help you in your future woodland planning?

a. Very interested_____ c. Indifferent_____
b. Somewhat interested_____ d. Not interested_____

29. Where can you get information about how much it costs per acre and how long it takes to produce timber?

a._____
b._____
c. Don't know_____

30. Have you sold any timber from your woodland in the last five years?

a. Yes_____ b. No_____

TO THE INTERVIEWER: If the answer to question 30 above was NO, skip to question 35. If the answer to question 30 was YES, ask questions 31, 32, 33, and 34.

31. What year was the most recent one when you sold timber? 19_____
(Year)

32. About how much did you get for your timber that year?

a. Less than $250_____ c. 500-999_____
b. 250-499_____ d. 1000 and over_____

33. About how much timber did you sell that year?_____ (Circle one or more: acres; boardfeet; cord, and other).

34. How did you arrive at the price per unit you got for your timber that year?_____
_____

35. About how often has timber been sold from your woodland in past years?

a. At intervals of less than 5 years_____
b. At 5 to 10 year intervals_____
c. At 10 to 20 year intervals_____
d. At intervals of more than 20 years_____

36. (OPTIONAL) Approximately what was your total (gross) family income last year? (Hand card to respondent and ask him to select a category.)

a. 0-1999 _____
b. 2,000-3,999 _____
c. 4,000-5,999 _____
d. 6,000-7,999 _____
e. 8,000-9,999 _____
f. 10,000-11,999 _____
g. 12,000-13,999 _____
h. 14,000-15,999 _____
i. 16,000-17,999 _____
j. 18,000-19,999 _____
k. 20,000-21,999 _____
l. 22,000-23,999 _____
m. 24,000-25,999 _____
n. 26,000-29,999 _____
o. 30,000-49,999 _____
p. 50,000-99,999 _____

37. How would you rate the present condition and value of your woodland?

a. Excellent _____
b. Good _____
c. Fair _____
d. Poor _____

38. In your opinion, what is the per acre value of your woodland? _____

39. What is the per acre stumpage value (10 inches d.b.h.)? _____

Name of Respondent _____

Address _____ County _____ Number _____

Name of Interviewer _____

Date _____

NAME OF RESPONDENT_____

NUMBER_____

QUESTIONS FOR THE INTERVIEWER TO ANSWER:

40. All people do not adopt new practices at the same time. About where would you place the respondent with respect to adopting new recommended woodland practices?

a. Among the first few_____
b. Soon after the first few_____
c. Sooner than average_____
d. A little later than most owners_____
e. Among the last few_____

41. Is the respondent

a. Man_____ b. Woman_____

42. Interest of respondent in improving his woodland (in interviewer's judgment).

a. Very interested_____
b. Somewhat interested_____
c. Indifferent_____
d. Not interested_____

43. Respondent's attitude toward survey (in interviewer's judgment).

a. Friendly_____
b. Somewhat friendly_____
c. Indifferent_____
d. Antagonistic_____

44. Should the respondent pay more attention to the management of his woodland in light of his situation?

a. Yes_____ b. No_____ c. Uncertain_____

45. How well do you know the respondent?

a. Very well_____
b. Fairly well_____
c. Not very well_____
d. Not at all_____

46. How familiar are you with the respondent's woodland situation?

a. Very familiar_____
b. Fairly familiar_____
c. Not very familiar_____
d. Not familiar_____

47. If very or fairly familiar with their woodland situation, how would you rate the present condition and value of his woodland?

a. Excellent_____
b. Good_____
c. Fair_____
d. Poor_____