

PRIVATE FOREST OWNERS OF THE CENTRAL HARDWOOD FOREST

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Abstract: A recently completed survey of woodland owners provides insight into the owners of private forest lands in the Central Hardwood Region. There is increasing parcelization of forested lands and an increase in the numbers of nonindustrial private forest-land owners. Over half of the private owners have harvested timber from their holdings at some time in the past, they control three-quarters of the private forest. Owners have a positive attitude toward timber cutting at a time when there is greater demand for products from the forest. Because private forest owners have virtually total authority over their lands, it is essential that we monitor this resource and maintain good stewardship to ensure continued productivity for future generations.

INTRODUCTION

The 14 state Central Hardwood Region (Figure 1) has 136.0 million acres of forest land (36% of the total land area). Approximately 100 million acres of private forest are controlled by an estimated 3,179,900 private ownerships. While these owners hold forest land for a variety of reasons, most have positive views on timber harvesting. Resource professionals and policymakers are determined not to repeat past mistakes: they want to ensure that renewed interest in timber harvesting is based on principles of good stewardship. The forest-based community needs to keep close watch on forest management activities in these states.

A significant development in the management of forests in the Central Hardwood Region has been an increase in the amount of smaller acreage forest ownerships. Since 1978, forest land among ownerships of fewer than 50 acres increased from 12 to 30 million acres; among ownerships of 50 to 99 acres, forest area increased from 12 to more than 18 million acres. Meanwhile forest land among ownerships of 100 to 1,000 acres decreased from 46 to 35 million acres since 1978. These are some of the findings in "Private forest-land owners of the United States, 1994" (Birch 1996). This study was undertaken as a joint effort between the research and state and private branches of the USDA Forest Service, and the National Association of State Foresters. It is the second effort at national coverage since 1978 (Birch and others 1982).

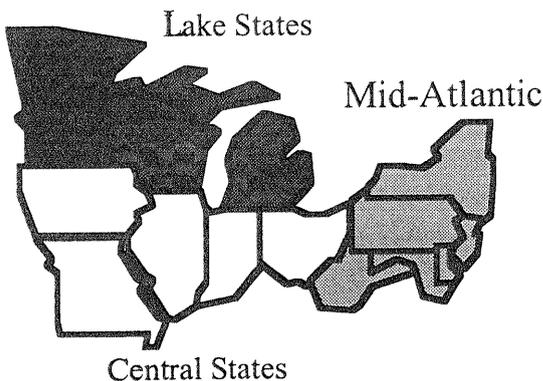


Figure 1. States included in the Central Hardwood Region.

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The 1994 study has some new features: American Indian and Native Tribal Lands formerly classified as federal lands are now recognized as private lands, and the motivations and management intentions of forest-land owners, including timber-harvesting behavior, are explored in detail. The new study also provides reliable results at the state level.

METHODS

The 1994 study was conducted by the USDA Forest Service's Forest Inventory and Analysis (FIA) units in cooperation with the National Association of State Foresters and the USDA Natural Resources Conservation Service, in support of the Forest Stewardship Program of the USDA Forest Service, State and Private Forestry. The questionnaire used in this study was mailed to 13,333 owners of 14,619 private forested sample plots. Sample plot locations were from National Resources Inventory (NRI) plots or FIA plots. Responses from 6,224 ownerships that hold 7,125 of these sample plots are within the Central Hardwood Region.

The questionnaire was derived from earlier ownership studies and has been revised over 20 years for the Northeastern and North Central states. The probability that a forest-land owner will be sampled depends on the rate of sampling and the amount of acreage of forest land owned. Each state and often areas within states have different rates of sampling and response rates differ. This affects the probability that an owner is included in the final tabulations. The total acreage of forest land for a state or sampled area is obtained from the forest inventory. Since the sampling scheme is essentially the one used for the forest inventory, there is a low probability that owners of small parcels of forest land will be included. To estimate the total number of persons or ownership units (Birch 1996), it is necessary to weight the number of owners based on their probability of selection. The summation estimate equals the estimated number of ownership units in the state or region.

Periodic inventories of forest resources by FIA identify ownership of inventory sample plots in broad categories such as forest industry, farmer, corporate, and "other" private owners. In turn, estimates of the total number of acres in each category by geographic area are provided. FIA crews do not interview individual landowners on which inventory plots are located to determine how many acres of forest land each owns. Hence, only a land-ownership study can provide information such as number of owners, their distribution by ownership size class, and their reasons for owning forest land and plans for future use.

RESULTS

There are currently 9.9 million private forest-land ownerships in the United States, an increase of 2.1 million (28%) from the 7.8 million owners estimated in the 1978 study. In the Central Hardwood Region, ownerships increased from 2,620,400 in 1978 to 3,181,000 in 1994. Area of private forest increased from 86 million acres in 1978 to 100 million acres in 1994. Private forest ownerships are well distributed throughout the 14 states. Pennsylvania has 514,000 owners while Delaware has 17,000 (Table 1).

Individual ownerships are by far the most common form of forest-land ownership across the Central Hardwood states (and the nation). As used here individual ownership includes not only land held by a single person but also joint ownership, such as husband and wife or relatives, as distinct from corporations, partnerships, estates, clubs, and trusts. While 94% of the ownerships are classified as individual owners, they control 76% of the private forest land in the Central Hardwood Region (Figure 2). By contrast, corporations account for 2% of the ownerships, but collectively own 15% of the private forest. Partnerships, clubs, etc. make up the remaining 4% of the private ownerships controlling 9% of the private forest.

Table 1. Owners and acres of forest land by state and region, 1994

State	Owners		Acres	
	Thousand	Percent	Million	Percent
Delaware	17	0.5	0.35	0.3
Maryland	126	4.0	2.27	2.3
New Jersey	89	2.8	1.40	1.4
New York	490	15.4	14.37	14.4
Pennsylvania	514	16.2	12.51	12.5
West Virginia	260	8.2	10.75	10.8
Mid-Atlantic	1,497	47.1	41.65	41.7
Illinois	114	3.6	3.64	3.6
Indiana	151	4.7	3.77	3.8
Iowa	56	1.8	1.80	1.8
Missouri	307	9.7	11.64	11.6
Ohio	329	10.3	7.19	7.2
Central states	957	30.1	27.94	28.0
Michigan	333	10.5	12.05	12.1
Minnesota	147	4.6	7.33	7.3
Wisconsin	246	7.7	10.83	10.8
Lake States	726	22.8	30.21	30.2
Total	3,181	100	99.90	100

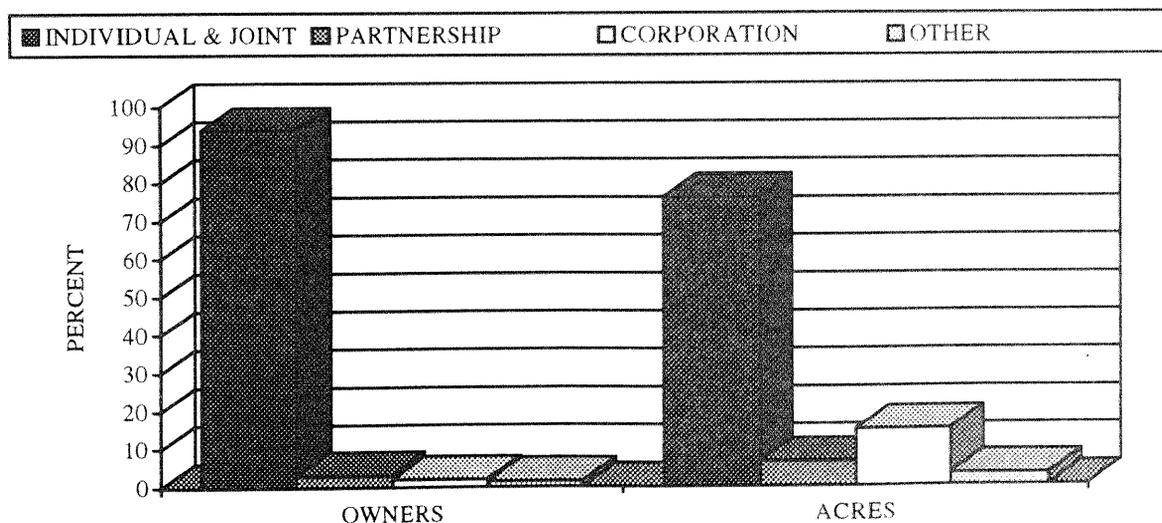


Figure 2. Distribution of private ownerships and private forest land, by ownership type, Central Hardwood Region, 1994.

Parcelization, the breaking up of larger forested tracts into smaller parcels, is occurring across the Central Hardwood Region. Forest land in ownerships smaller than 10 acres increased by 1.7 million acres between 1978 and 1994 (Table 2, Figure 3). More than 16 million acres were added to the 10- to 49-acre size class, a near tripling of the area in this class. Forest land in the 50- to 99-acre class increased by 6.3 million acres during the interval. Much of the additional acreage in small ownerships was from forest land held by owners of 100 to 499 and 500 to 999 acres. Forest land in these size classes decreased by 9.26 million acres. Among ownerships with more than 1,000 acres each, forest land increased by nearly 620,000 acres.

Table 2. Owners (thousands) and acres (millions) of private forest land, by size class of ownership, Central Hardwood Region, 1978 and 1994

Size class (acres)	Owners*		Acres*	
	1978	1994	1978	1994
1-9	1,901.5	1,545.8	3.58	5.30
10-49	333.4	1,151.2	8.60	24.91
50-99	160.4	278.5	11.81	18.12
100-499	210.8	193.2	39.15	30.73
500-999	10.5	7.7	7.02	4.58
1,000+	3.7	3.4	15.69	16.31
Total	2,620.4	3,179.9	85.95	99.94

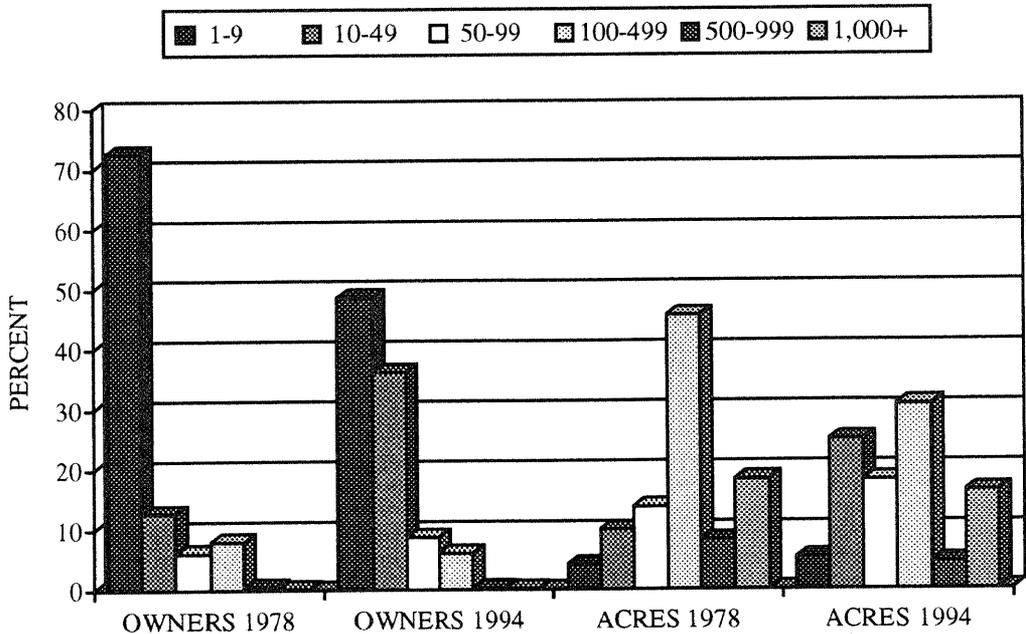
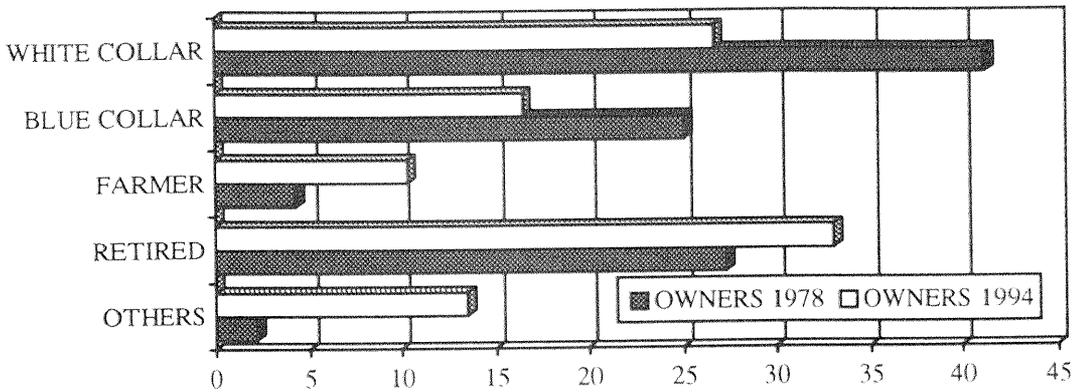


Figure 3. Distribution of private forest ownerships, by size class of ownership, Central Hardwood Region, 1978 and 1994.

Nationwide, the “new” (having first acquired forest land since 1978) individual private owner is younger and better educated, and has a higher income than the previous owner. Comparing occupation data from 1994 and 1978 (Birch 1996, Birch and others 1982) shows the changing profile of owners in the Central Hardwood Region. The new study (Birch 1996) shows an increase in the proportion of farmers, retirees, and other owners, including service workers (Figure 4). The proportion of acreage held by individuals increased among retired, white collar, and other owners. There were major decreases in area held by farmers and blue collar owners.

PERCENT OF OWNERS



PERCENT OF ACRES

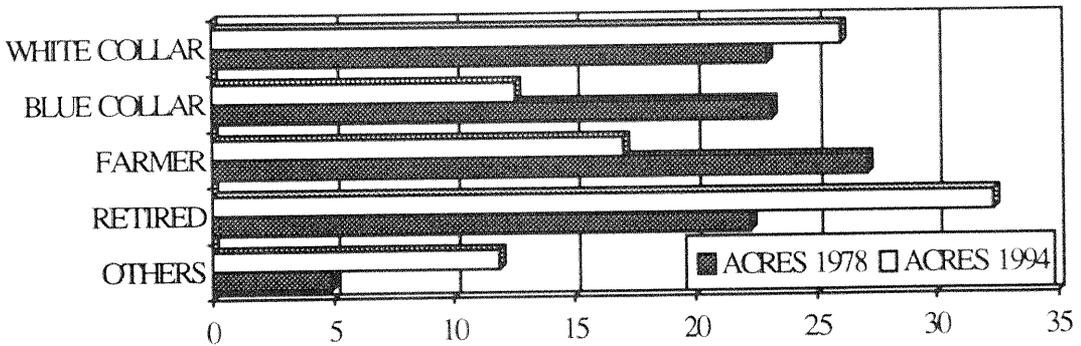


Figure 4. Distribution of individual ownerships, by owner occupation, Central Hardwood Region, 1978 and 1994.

It is estimated that 32% of all individual owners of forest land are over 65 years old. They own 38% of the private forest land in the Central Hardwood Region (Figure 5). The high proportion of older owners has serious implications for land tenure in the future. Much of the forest land controlled by older owners will change hands in the next decade. Individual owners under 45 years of age hold only 15% of the forest land owned by individuals. Owners 45 to 64 years of age control 43% of the forest land held by individuals.

PERCENT

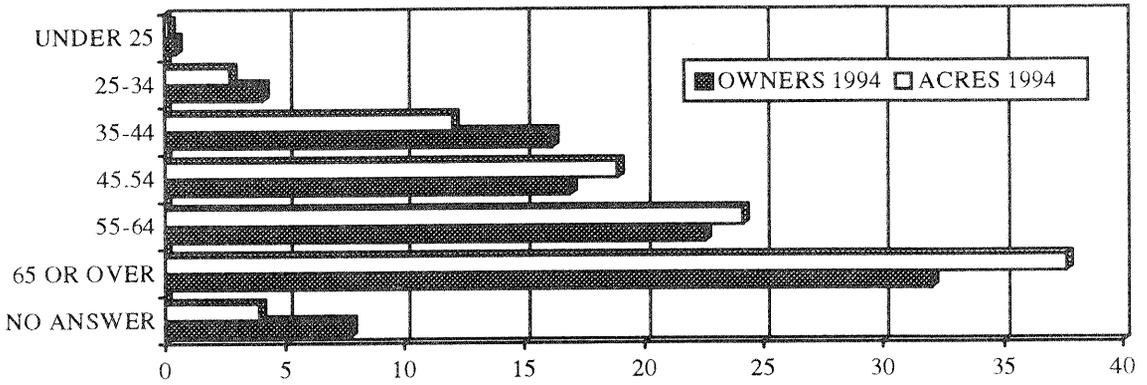


Figure 5. Distribution of individual ownerships, by owner age, Central Hardwood Region, 1994.

The yearly transition to many new forest owners makes it difficult to communicate information about management and new programs such as stewardship. The use of mass communication, especially the electronic media, is essential to reach these owners (Birch and Pywell 1986). Approximately 30% of the current owners acquired forest land for the first time since 1978, they control 23% of the private forest land (Figure 6). The largest decrease in numbers of owners was among those who first acquired forest land prior to 1950. The largest decrease in acreage owned was among those who had first acquired forest land between 1970 and 1977.

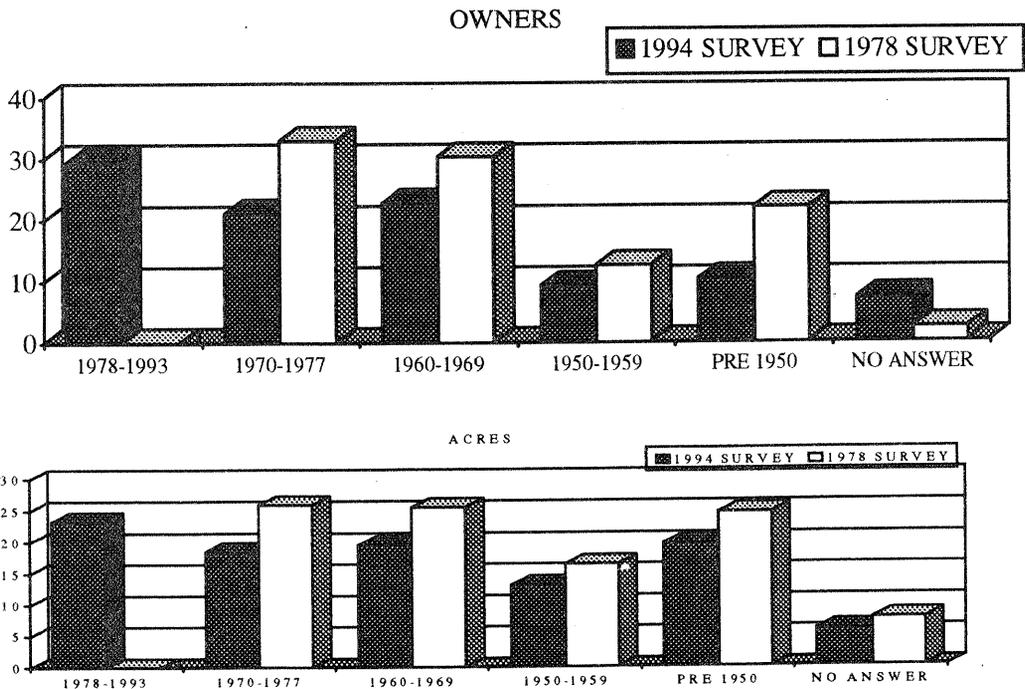


Figure 6. Distribution of private ownerships, by year owner first acquired forest land, Central Hardwood Region, 1978 and 1994.

Owner Objectives

Forests produce many benefits for their owners, so it is not surprising that we found diverse reasons for owning forest land. Some potential benefits can be produced with little or no effect on others, while other benefits even increase when another benefit is produced.

Nearly 40% of the private forest-land owners stated that their primary reason for owning forest land is that it is “part of the farm” or “residence” (Figure 7). In general, these ownerships hold smaller than average tracts. Another 11% of the owners stated that farm or domestic use is the most important reason for owning forest land. Many of these owners consider their woodland as a source of fenceposts, fuelwood, and similar products.

Recreation and esthetic enjoyment is the primary reason why 30% of the owners hold forest land. The area controlled by people with these objectives represents 29% of the private forest land.

Land investment often is thought of as a hedge against inflation. Private landowners who list investment as their primary reason for owning forest land account for 6% of the owners and 8% of the private forest.

Only 1% of the private forest-land owners hold their land primarily for timber production, but these owners control 11% of the private forest land. Some owners own forest land for the minerals under the surface, many of these owners are included under the other category. Also included under the other category are the lands owned by Indian Tribes as part of their cultural heritage.

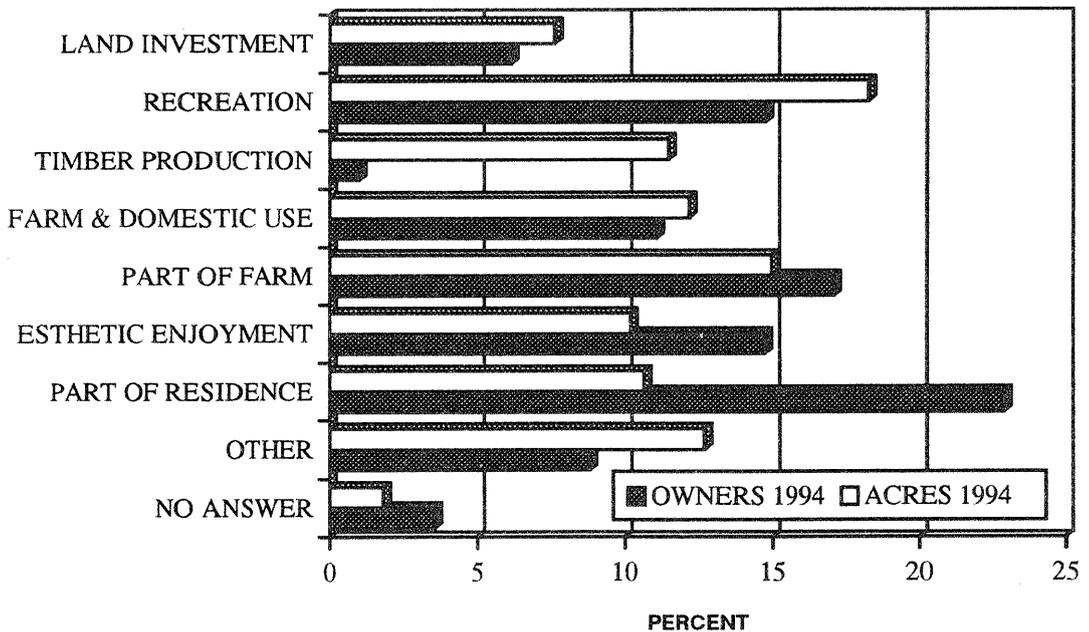


Figure 7. Distribution of private ownerships, by primary reason for owning forest land, Central Hardwood Region, 1994.

Timber Harvesting

Nearly one-half (48%) of the private owners in the Central Hardwood Region have harvested timber. These owners control 71% of the private acreage. By contrast, the 52% who have not harvested own only 29% of the forest land.

Those who stated that they intend to harvest in the next 10 years represent an estimated 36% of the private forest-land owners and 56% of the forest land. Conversely, the 29% who said they never intend to harvest own only 14% of the private acreage (Figure 8). Owners with indefinite harvest plans control 23% of the private forest land.

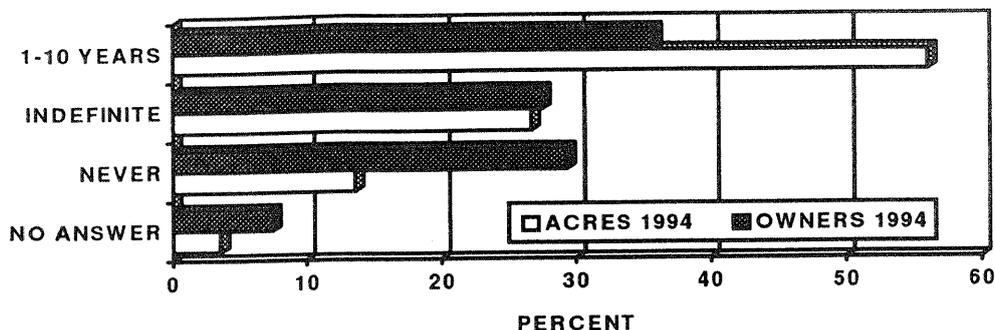


Figure 8. Distribution of private ownerships, by harvest intentions of private ownerships and acres of forest land owned, Central Hardwood Region, 1994.

Management Planning

A final measure of management activity is provided by the number of owners and acres of private forest land covered by written management plans. Approximately 5% of the private ownerships with 22% of the private forest land have some form of written management plan (Figure 9). Forest industry owns 25% of the forest land owned by those with a written plan. The other 75% is controlled by 157,700 nonindustrial private forest-land owners with some form of written plan. Ownership size has a strong influence on whether a plan has been prepared: plans are uncommon among small and midsize ownerships, while over half of the owners as well as more than half forest land in the 1,000-plus acre properties are covered by a written plan.

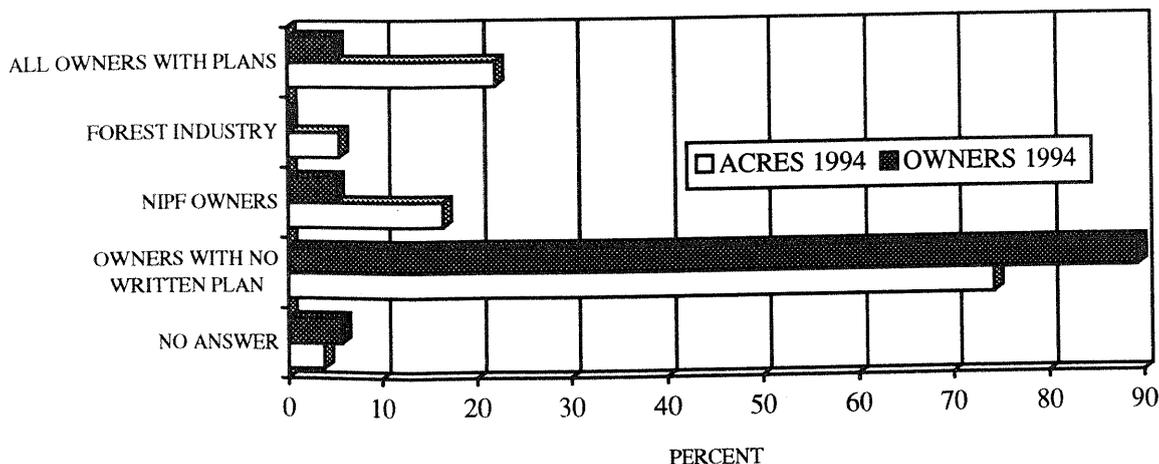


Figure 9. Distribution of private ownerships and acres of forest land owned, by whether a written management plan has been prepared, Central Hardwood Region, 1994.

CONCLUSIONS

The increasing number of owners makes the job of communicating with owners more difficult. The short tenure of ownership among those who hold smaller tracts will require an ongoing effort to communicate forestry assistance programs. Communication of such programs also is vital to reach the large proportion of forest-land owners and acreage that currently is not covered by a written management plan.

Parcelization of forest land into smaller tracts can be viewed by some to have serious adverse impacts on timber production and wildlife species that require interior forest conditions. Also, additional disturbance no doubt will result from future road construction and installation of utility lines. Still, despite these concerns, more people today are enjoying the forests of the Central Hardwood Region than in 1978, and attitudes about timber harvesting remain positive.

LITERATURE CITED

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