

The Status and Condition of Alabama's Forests:

ONE MILLION New Acres

by *Andrew J. Hartsell*
Research Forester, U.S.D.A. Forest Service

The latest survey of Alabama's forest resources is complete!! This phrase is being uttered with excitement by a diverse group of forestry related organizations. Forest industry, environmental groups, and state agencies all use survey data in formulating their long-term strategies. So, what is the "survey" and what are the latest results. The purpose of this article is to answer these questions.

History of the Survey

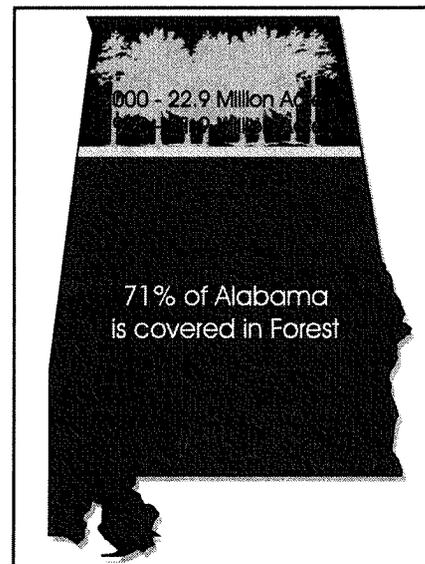
The Forest Inventory and Analysis (FIA) unit of the U.S. Department of

Agriculture, Forest Service, Southern Research Station (SRS) conducts continuing inventories of 13 southern states. The first survey of Alabama was completed in 1936. The initial survey consisted of quarter acre sample plots laid out county by county on parallel lines spaced 10 miles apart. The second survey (1953) established a network of permanent ground plots located on a three-mile grid across the state. All subsequent surveys used this plot grid. Subsequent surveys were performed in 1963, 1972, 1982, 1990, and finally in 2000.

The latest survey involved 4,443 plots with forested condition and took three years to complete.

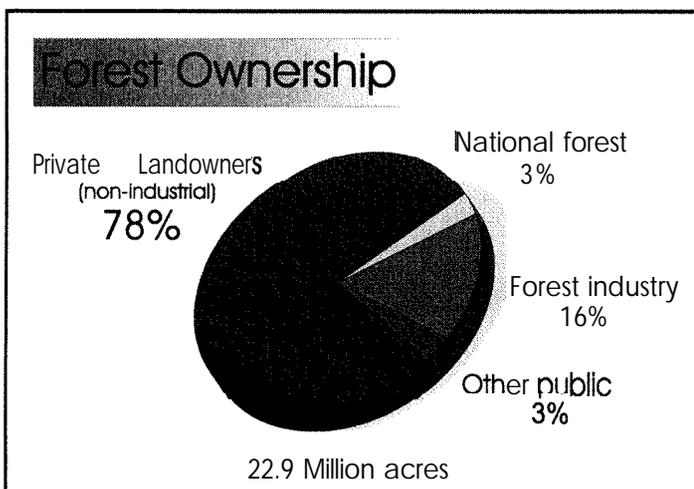
Thus, seven surveys have been conducted in Alabama. Along the way, different sample designs and techniques have been used. Every change was made in order to increase the efficiency of the sur-

vey, utilize latest technologies, or answer new questions. However, there are several key items that have remained unchanged since 1953. The network of plot locations and the methods of determining forest area have remained constant for 50 years.

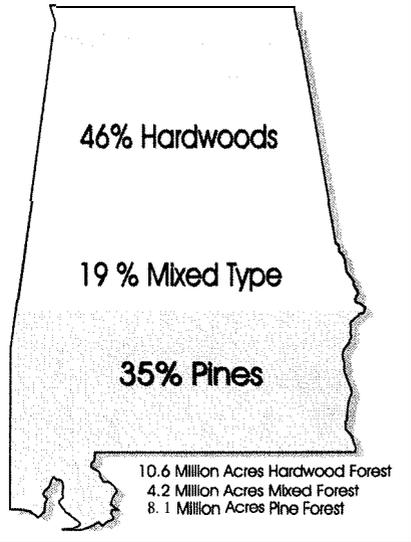


Results of the 2000 Survey

There are currently 22.9 million acres of forests in Alabama (figure 1). This represents a *one million acre increase* over the 1990 estimate. This increase



Alabama's Major Forest Types



resulted from 1.7 million acres of previously non-forest land being converted to forests, and 703,000 acres of timberland being diverted to other land uses. The major cause of deforestation in Alabama is derived from urban-related issues.

Urbanization is responsible for 68% of the forestland clearing in the state. The establishment of plantations was a primary factor for the increase in forestland. The Conservation Reserve Program (CRP) alone was responsible for planting around 200,000 acres a year during the 1990's. Many of these plantings were on lands that were previously in crops or pasture. Today, 71% of the state is in forests.

Private landowners (non-industrial) own 78% of Alabama's forests (Figure 1). Forest industry owns 16%. The remaining 6% is shared between National Forests and other public lands. The majority of the state's forests, 46%, are classified as hardwood stands (Figure 2). Softwood stands account for 35% of the forest area. The remaining forests are classified as mixed. Many individuals will find this information surprising. It is often stated that softwoods, pine plantations in particular, are the dominant for-

Spring 2002

est-types in the state. The latest survey proves this to be an incorrect assumption.

Total forest area has increased over 7% since 1972 (Figure 3). This figure illustrates that forest area has gradually increased across the state for the past 30 years. The impact of plantation forestry is seen in this graph as well. The area of planted stands has increased 225% since 1972, when planted stands accounted for 1.7 million acres. Today, planted stands occupy 5.6 million acres, almost one-fourth of the total forest area of the state. It is important to note that while plantations occupy nearly one-quarter of the state's forestlands, they contain 35% of the states standing softwood inventory. Plantations also are responsible for half of all softwood growing-stock growth and 30% of all softwood removals.

The standing inventory of both softwoods and hardwoods has increased as well (Figure 4). All-live softwood volume has risen 21% over the four-survey

1982, average annual growth of softwoods has risen. A decline in softwood growth occurred between 1972 and 1982. Removals of live softwoods have increased as well, increasing 107% since 1972. Softwood removals exceeded growth during both the 1982 and 1990 surveys, a fact that caused some concern in the past. This trend is reversed for the latest survey, as once again, growth exceeds removals.

Average annual growth of live hardwoods has always exceeded removals (Figure 6). Removals of live hardwoods have increased 83% since 1972.

Currently, 390.6 million cubic feet of hardwoods are removed each year in Alabama. This is offset by the fact that 560.8 million cubic feet are grown each year, a 75% increase over the 1972 estimates.

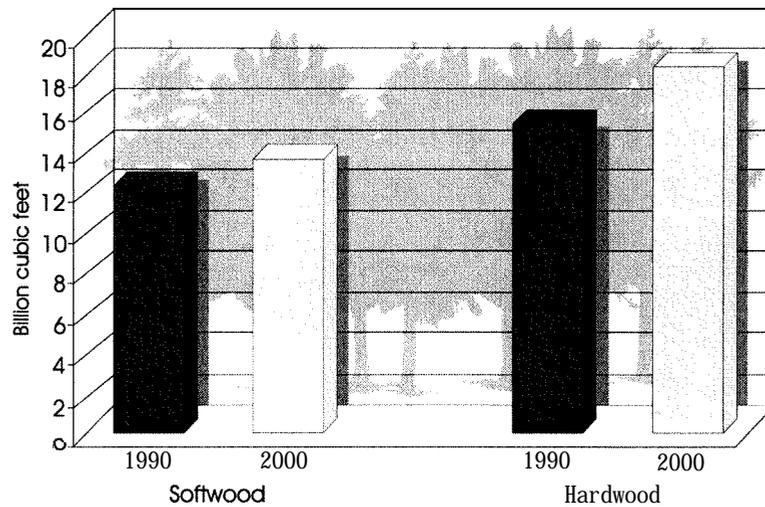
The Future of the Survey

Historically, surveys were performed on an 8-12 year cycle. Any event or

questions that arose between surveys could not be addressed until the next survey. To help provide a continuous data source, FIA and the AFC have teamed together to perform an annual inventory system. With this system, state crews will gather data on 20% of the FIA plots each year. In 5 years, a complete survey will have been performed.

At this time, the

Volume of Timber in Alabama's Forest



period, while live hardwood volume has gone up 69% over the same time frame. In 1972, the volume of softwoods exceeded that of hardwoods. Since then, the inventory volume of hardwoods has always exceeded the softwood inventory.

Average annual growth and average annual removals refer to the amount of wood that is grown or cut each year. Between 1990 and 2000, 923.4 million cubic feet of live softwood volume grew each year (Figure 5). This is a 20% increase over the 1982 value. Since

state will continue gathering data on 20% of the plots, creating a "rolling average." This will enable decision makers, both public and private, to have current information on the state's forest resources, ensuring that Alabama will always have forests for future generations.

For more information on the annual inventory system, or the latest survey of Alabama, visit the national FIA website at: <http://fia.fs.fed.us>.