



Alabama's TREASURED Forests

Multiple-Use for the Quality Life

FALL ISSUE 1982

STATE FORESTER'S MESSAGE

By C. W. MOODY



WE ARE FORTUNATE to have an abundant forest resource in our state, but only through proper management can our woodlands continue to meet the demands of a growing population.

Owning land is a cherished privilege, but with it comes an obligation to be a good steward. Seventy-five percent of Alabama's forestland is owned by private citizens. A great responsibility rests with all those who are fortunate enough to possess this resource.

Many landowners in the state are managing their forests well. Many of these are receiving advice and assistance from various government and private sources. We of the Alabama Forestry Commission are providing some help for forest landowners and hope that this publication can further serve to provide information and inspire landowners to implement needed forestry practices.

We encourage you to write to the editor and offer suggestions for articles. Perhaps you simply have a question that can be addressed in our question and answer column "Stumped?" At any rate, take advantage of this opportunity. Think of this book as another tool that you can use. Lay it up on the shelf when you have no need for it, but don't forget where you put it—you never know when it might come in handy.

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The Alabama Forestry Commission supports the Alabama Forestry Planning Committee's TREASURE Forest Program. This magazine is intended to further encourage participation in and acceptance of this program by landowners in the state. Any of the agencies listed above may be contacted for further information about the TREASURE Forest program.

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Alabama's TREASURED Forests

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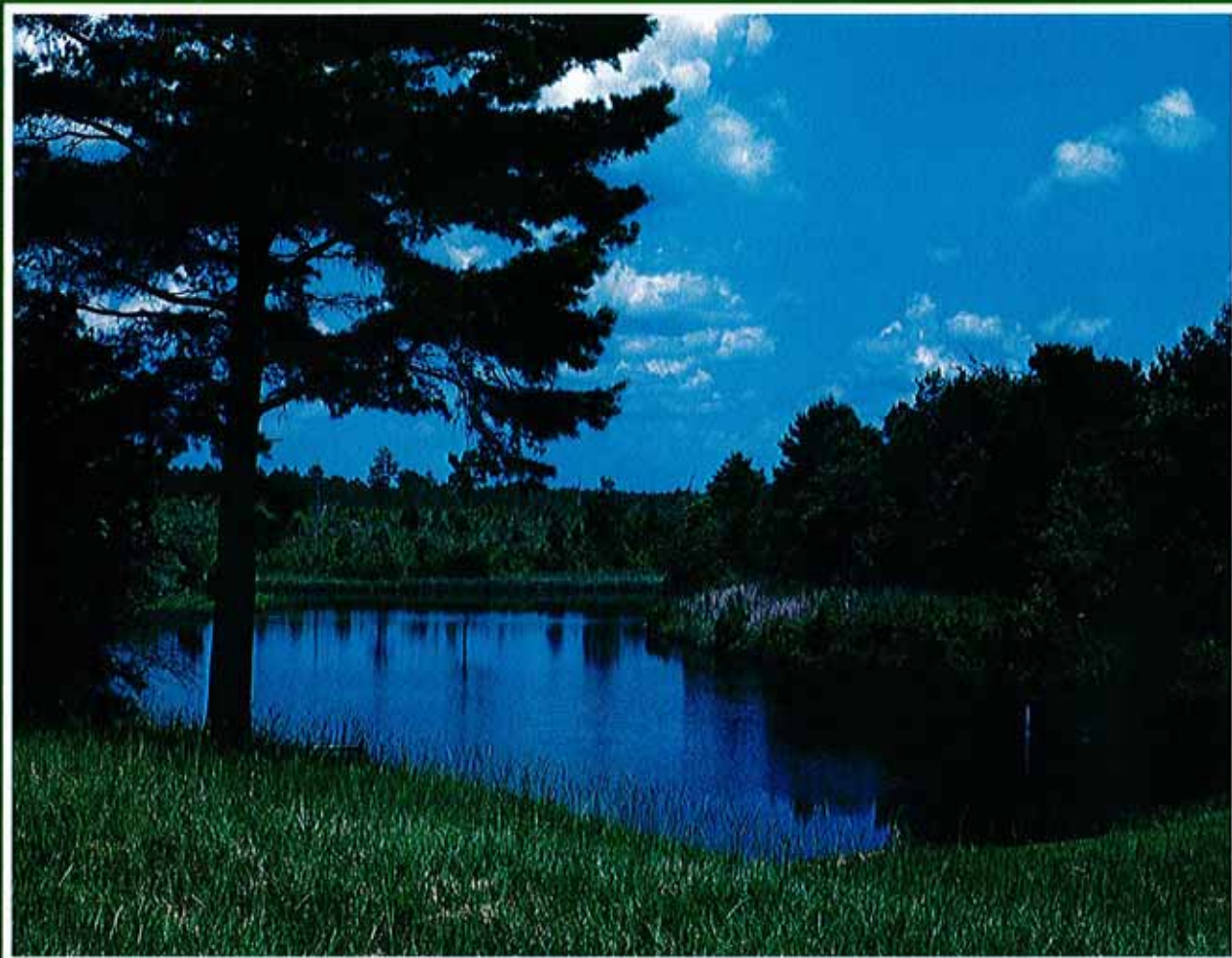
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PINELAND

Alabama's First
TREASURE FOREST

PINELAND IS A PLACE. . . . a place in Marengo County . . . but it's more than just a place! It is where university professors can measure results of theories put to practice; and it's where a little girl may skip a stone across a lake that bears her name, or stand beneath a tree that's her very own; planted the year she was born.

It is a place where an army general can catch bluegill, and chase grasshoppers for bait, without fear of putting his military dignity in jeopardy. It's where an aged black man can work at his own pace, using a hook that has replaced a hand lost to a corn-planting machine, to earn bread and beans for his wife and himself.

PINELAND is Alabama's First TREASUR(E)* Forest, a place where landowners can see demonstrated benefits to be derived from woodlands appropriately managed for multiple use potential. It's a place that, 20 years ago, was yielding to its owner only a fraction of that which it was capable!

PINELAND is the 'ole home place' and retirement retreat of W. Kelly Mosley whose 40-year career with Southern Bell Telephone Company has been marked with much public service and commensurate recognition, but none that he prizes more highly than his First TREASUR Forest Award, presented in 1976.

PINELAND's approximate 930 acres nestle the Tombigbee River along its bank and across its flood plain to spread into the red hills of the upland near Myrtlewood community.

Its qualities embrace all those suggested by the acronym:

- T - Timber
- R - Recreation
- E - Environment
- A - Aesthetics
- S - Sustained
- U - Usable
- RE- REsource

IT WAS IN 1960 that Kelly Mosley first began to explore the potentials of what is now called Pineland. He was the vice president of public relations and employee communications for Southern Bell. His office was in the company's headquarters in Atlanta. Retirement, an event which he calculated would remove him from an active and rewarding

participation in a vigorous business community, was less than three years away.

"I should need something to occupy my interests," Mr. Mosley recalls. "The Marengo County property had been in my family since 1904. Although I had 'feeling' for the land where I had grown up, I had no real knowledge of land and what might be required to put it in a productive, aesthetically acceptable condition."

What Kelly Mosley may have lacked in



Kelly Mosley with TREASUR Forest sign at Pineland entrance.

"real knowledge of land," he made up in skills learned as a manager: He knew how to tap the sources which could supply the technical know-how required!

One colleague has said, admiringly, "Kelly Mosley can 'milk' your mind . . . use what benefits him at the moment, and file the rest for the future!"

Another aspect of Mr. Mosley's life was to figure importantly into the concept that evolved to become Pineland: a graduate of Alabama Polytechnic Institute (Auburn University), Kelly Mosley had continued throughout his professional career to be a loyal supporter of that institution. He had friends at Auburn . . . people who could put him in contact with the minds possessing the technical skills needed!

One of the first "milkin' jobs" done by Mr. Mosley was aimed at Ivan R. (Ike) Martin who, in 1960, was Extension Forester, Co-operative Extension Service. Later that year Mr. Martin moved to another post, in Washington, D.C., and the Mosley file was passed to his successor, Larkin Wade.

It was Mr. Wade who coordinated the drafting of an original plan that would establish the Marengo County tract as a "Whole Farm Forestry Demonstration," a program that provided for sharing with other timberland owners information gained in experimental projects such as that proposed for Mosley's property.

Drafting of the original plan utilized the

special talents of many people. Stated in the briefest of terms, the plan purposed to divide the acreage into four categories, each based on forest types, soil tests, and related factors. The four classifications were: 1) High-Swamp Hardwoods, comprising approximately 290 acres adjacent to the Tombigbee River and including a portion to Beaver Creek bottomland, all subject to periodic flooding; 2) Drain Areas, namely those troughs between the hills which carry run-off water to Beaver Creek and the river; 3) and 4) Upland Pine Sites.

The latter were divided into two classifications according to pine stocking as it existed when the plan was drawn (1967). In general, pine stock of 35% or less put the site in one category; more than 35% put it in the other. As improvement practices were implemented, however, it proved impracticable to manage the classifications separately and the two were merged into one. Upland Pine now comprises 586 acres, all planted to loblolly.

Work Was Begun In Mid-'60s

Kelly Mosley retired from Southern Bell September 1, 1963. He says it took him "about two years" to adjust to retirement, and another two to "get things moving in the right direction" at Pineland. In 1965 and '66 he built a hunting lodge and installed a water system . . . the latter proving a major undertaking which eventually resulted in pumping from a source 800 feet from the lodge.

The 290-acre swamp hardwood area had been cut last in 1950 . . . high-graded! Cut the best, leave the rest! From 1968 through 1972, Joe Burns, a consulting forester, marked cull trees and those of poor quality; and a logger "cleaned up" the stand.

The logger understood Mr. Mosley's objectives, and accomplished them to the landowner's satisfaction. "In situations like this," Mr. Mosley said, "where there's little, or no profit to be made by either party, a right approach can cause both logger and landowner to see benefits that will accrue to them in the future. It's fitting that a landowner should give a bit on stumpage (price) to get the job he wants; and a logger needs to know that he'll get a fair play when the good stuff comes up for cutting."

Clean-up on the swampland produced salable materials amounting to only 400 mbf in sawlogs and a little more than 4,000 cords of pulpwood. In the ten years since the clean-up was completed, the area has grown vigorously. It is well stocked with cherrybark oak, water oak and chestnut oak; and there are excellent sites where the gums, both tupelo

*The original logo, without the final "E", has been reserved for the first 75 charter recipients of the Alabama Forestry Planning Committee's TREASURE Forest Program. A new sign bears the acronym TREASURE and has been awarded all recipients since the original 75.

Pineland *continued*

and sweet, have come on strong. Joe Burns' last cruise, made in 1982, showed a 15.9% increase in volume over the past three years. Current inventory exceeds a million mbf in sawlogs and approximately 1,000 cords of hardwood pulp.

Since the clean-up, Mr. Mosley has practiced "patch-cutting" in the swamp hardwood area. The treatment opens up half-acre to two-acre blocks so that sunlight can get to the understory. Nature then does its own thing with excellent results.

Some blocks within the hardwood swamp area have been planted to sycamore and not all of it has been successful. One patch of about forty acres grew well for about four years, then stagnated. The site was bulldozed and planted to pine, even though it is subject to flooding. The loblolly has done well in spite of water standing for up to two weeks when the Tombigbee was at flood stage.

Some 26 acres, chiefly located along the drains where the swampland merges with the upland, has continued to grow well. The landowner continues to recommend sycamore for such sites.

Pine Is Primary Objective

As the name "Pineland" suggests, Mr. Mosley's primary objective is to grow pine trees. The original survey revealed approximately 220 acres of upland to be so poorly stocked with pine that the recommended treatment was to clear-cut all salable trees, treat the remainder with herbicide and fire, then hand-plant loblolly.

The survey showed another approximately 340 acres to contain sparse stocking of 20- to 30-year-old shortleaf and loblolly. Treatment prescribed was to harvest marketable hardwoods, inject what remained with a herbicide, and treat the understory with mist-blown herbicide and fire.

Although the two classifications were treated separately in the original plan, it proved more practical to consolidate applications into a one-practice procedure: clear-cut all merchantable trees, both hardwood and pine; inject the remaining large hardwoods and spray the smaller ones with herbicide; control burn, and plant loblolly by hand.

Planting began in 1967, when only 21 acres were accomplished. Nineteen sixty eight was the year of greatest activity as 134 acres were completed. There has been some planting each year since, ranging from a low of eight acres in 1973 to 97 acres in 1979. As this is being written (June 1982), a total of 586 acres have been planted to pine . . . all by hand, and all with loblolly. In the last

seven years, the seedlings used have been an "improved" variety; that is, they originated from stock bred to be resistant to disease and to grow more rapidly than does the ordinary tree.

For all practical purposes, original management objectives have now been achieved. All upland areas where there previously existed a mixed stand of hardwoods and pine have now been clear-cut, treated and planted

PINELAND today is the result of cooperation among several public agencies, including: Alabama Department of Conservation and Natural Resources, Alabama Department of Education—Vocational Division, Agri-business Education, Alabama Forestry Commission, Alabama Soil and Water Conservation Committee, Alabama Cooperative Extension Service, USDA—Farmers Home Administration, USDA Forest Service, National Forests in Alabama, USDA—Forest Service, Southeastern Area, State & Private Forestry, USDA—Soil Conservation Service and USDA—Agricultural Stabilization and Conservation Service. Representatives of local forest industries also participated in Pineland's development.

to pine. Herbicide treatments continue, however, to control hardwood emergence within the planted loblolly. Thinning has commenced on some of the earliest plantings.

As the new phase begins, it is well to review the cost of development at Pineland. All development has produced 1,500 mbf of pine sawlogs, 581 mbf of hardwood sawlogs, and 14,000 cords of pulpwood (both hardwood and pine). Mr. Mosley said receipts from these sales and from the swamp hardwoods have paid the cost of all improvements. "You might say that the project has paid its way, and we've gained its recreational aspects as a bonus," he said.

Public Recognition

Kelly Mosley's achievements at Pineland have been widely acclaimed. His acreage was certified as a Tree Farm early in its development phase. It received the Goodyear Conservation Award for Alabama in 1968; and Kelly Mosley was named Forest Conservationist of the Year as part of the Governor's Conservation Awards—1975 program.

Pineland's most prestigious recognition came in 1976 when it was selected by the Alabama Forestry Planning Committee to be the First TREASURE Forest.

The second item featured in the acronym TREASURE is, of course, "Recreation," an aspect that has certainly been given "capital letter" treatment by Pineland's owner. Early in the program, two fishing lakes were constructed about a mile apart. One is about two acres in size, the other twice as large. Both were stocked with bream and bass and the yield has averaged approximately 175 pounds of fish annually per surface acre.

Game fields are an important part of Pineland's recreation program. A total of eight plots have been established. They range in size from three-quarters of an acre to about three acres. Located at widely separated sites throughout the tract, the fields are joined by a network of game trails that meander through the forests to offer wildlife ready access to food, water and cover.

There are 14 miles of road on Pineland—laid out to afford vehicle access to within a few hundred feet of most portions. Roadways, waterways, grassy areas surrounding the lakes, some of the game trails, and all the game fields, have been seeded to clover, fescue and/or bahia grass. In the fall oats and rye are planted to provide winter forage. All these areas—even game trails—are maintained by periodic mowing with a "Bush Hog." The practice protects developed areas from woods encroachment and improves quality of forage for wildlife. Also, the "patch-cutting" now being practiced in the swamp hardwood area enhances forage opportunity for deer and wild turkey.

It's a "People" Place

PINELAND has become a retreat, not only for Kelly Mosley and his wife, Theodosia, but also for many of their friends. The Mosleys have continued to reside in Atlanta since Kelly's retirement, but they travel to Pineland once or twice each month year-around. They are often joined there by friends with whom they can share the retreat's peace, its beauty and tranquility. Guests can fish the lakes, walk wooded trails and watch wildlife. Perhaps the best experience of all is the simple magnificence of a summer shower as the sun sets beyond the Tombigbee.

Deer season can only be described as "an event" at Pineland. Last season 35 deer were harvested—an excellent year, but the kill is not what deer hunting is about! It's camaraderie that counts! Old friends . . . cronies with decades of experiences to recall, tales to be retold, and maybe even a new experience to be shared!

Pineland's lodge becomes the hub of activity. The faces may change daily, but Kelly Mosley, now 80, remains there for "the season," participating to the fullest. It's a



Earliest planting has now been thinned twice.

man's time! Theo, whom Kelly married in 1977, views it as an occasion to visit her own children and grandchildren at Clarksdale, Mississippi.

Honor To Whom Honor Is Due

All of Pineland's principal features are named—marked with attractive signs painted white on green. The game fields, the deer stands, and some of the game trails remember the landowner's hunting friends. Others honor people who have played key roles in the development of Pineland—professors at Auburn University and others attached in some way to that great institution.

Members of the Mosley family are given prominent recognition. Helene's Walk is a very special trail that loops around the lodge and turns on a hillside above Ellen's Lake. It is dedicated to Helene Mosley, Kelly's first wife, who died in 1975. Anne Mosley Brown Road honors the Mosley's only child; and, as is the privilege of granddaughters, Margaret

and Ellen are thrice honored. Lakes and trails bear their names, and there's a tree for each—planted the year each was born. Theo's Park, covered with fern, dogwood, wild azalea and watermelon red crape myrtle, pays tribute to Theodosia.

The main road through the tract is called "Buck" Compton Freeway, named for A. W. (Buck) Compton, of Nanafalia, a community just a few miles south of Pineland. "Buck" Compton has played a most important role at Pineland. A man of many talents, he functions as a logging contractor. It was he who logged off all the old stand timber. His crews also planted the new crop. They built the roads, prepared the game fields and swamped the game trails. They used injection tools and mistblowers to combat hardwood competition in pine stands; and it is "Buck's people" and machinery who now thin the pine plantations and do the "patch-cutting" in the swamp hardwoods.

Mr. Mosley said, "I don't own any machinery bigger than an axe. 'Buck' Compton

mows the roads and trails when they need it and, in a general way, just looks after the place."

There are no tenants—no employees—at Pineland. However, there is Matthew, a black man of undeterminable age with whom Kelly Mosley "shares" the land and its benefits; and there is a road called Matthew. Matthew's wife, Bessie, cares for the lodge, cleans and cooks when the Mosleys visit.

It is Matthew who has provided Mr. Mosley one of his favorite stories:

Major General George Duncan, deputy commander of the Third Army, was a guest at Pineland. Matthew watched as the general crawled about on his hands and knees in search of a grasshopper to be used as bait for an Ellen's Lake bluegill. He turned to Kelly Mosley and asked, "Is that man a sho-nuff general?"

Pineland does that to people! There are no generals, no university professors; and no, there are no corporate vice presidents at PINELAND. But there are "sho-nuff" people! ♣

FIRE

IS YOUR BURN LEGAL? By HUGH MOBLEY & PAUL FRANK, FIRE PREVENTION & CONTROL

IN 1981, more than 2000 wildfires resulted from campfires and debris burning which ignited nearby grass and woodland. The damage caused by these fires could have been reduced if knowledge of the plans for fire use had been available to Alabama Forestry Commission fire protection personnel.

The Burn Permit Program was established to help District Foresters obtain information concerning the intended use of fire by citizens in their district. When the exact location of a planned fire is known, a quicker response can be made if the fire should get out of control. In addition, the District Forester can provide advice and suggestions to the citizen using fire as a management tool when contact with the citizen is made during the burn permit application procedure.

Burn permits are required by The Alabama Code when an area greater than one-quarter acre is burned or if burning is done within 25 feet of continuous natural fuel. All types of burning are covered under the law. In addition, the law requires firms, associations, and corporations as well as individuals to obtain burn permits.

Permits are easy to obtain. They can be issued over the telephone (FIGURE 1), in person, or by mail. Each district office can issue burn permits from 7:30 a.m. until 5:30 p.m. Monday through Friday or at other times when the offices are actively operating. When a burn permit is issued, the individual receiving the permit must show that resources for controlling the fire are available. This means that the tools, equipment, and manpower must be ready on the fire

scene to control the blaze until it is out. In times of fire alert conditions, the burn permit may not be issued until conditions for burning improve.

When an individual receives a burn permit, a great deal of responsibility is placed on that individual. Responsibility for controlling the fire, confining it by plowing or by clearing a fire break in some other manner, is assured by the person as well as responsibility for providing the legal description of the location and a description including the time, type, and size of the burn. Compliance with the Air Pollution Control Commission regulations is also a responsibility of the holder of a burn permit.

If burning is conducted without a burn permit, the individual doing the burning will be issued an Unlawful Burning Notice. This notice provides the offender with two aids. First, the offender has a written notice that an offense against the law has been committed. Second, the offender has a written summary of the fire laws for reference.

Criminal prosecution is independent of the Unlawful Burning Notice. Normally, second violations will be criminally prosecuted. Some first offenses may be criminally prosecuted, too, especially when the offense is severe. The Unlawful Burning Notice is not a warning. It is an official notification that the law has been violated and that the offender may be prosecuted at a later time. Generally, the law enforcement officer will use the first offense as an opportunity to convey to the offender an explanation of the fire laws. The officer will also explain the importance of

1-800-572-2017

Calhoun • Cherokee • DeKalb • Etowah
Jackson • Madison • Marshall

1-800-292-6653

Blount • Cullman • Shelby • Winston
St. Clair • Jefferson • Tuscaloosa

1-800-452-5923

Fayette • Greene • Hale • Lamar
Pickens • Sumter • Tuscaloosa

1-800-492-3711

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1-800-672-6912

Baldwin • Choctaw • Mobile
Clarke • Washington

1-800-942-3107

Colbert • Franklin • Lauderdale
Limestone • Lawrence • Marion • Morgan

1-800-392-5679

Bullock • Elmore • Lee • Lowndes
Macon • Montgomery • Russell

Figure 1.—Toll-Free Numbers

complying with the law for the protection of the offender, other people, property and our state's forest resources.

Alabama has established the Burn Permit Program to more effectively control the use of fire as a tool in land management. Through the use of this program, more efficient use

can be made of Forestry Commission personnel and equipment, resulting in great savings to the taxpayer of Alabama. Failure to use the burn permit may result in criminal prosecution. To help Alabamians understand the fire laws and to help them realize the importance of using the burn permit, the

Unlawful Burning Notice Program has been developed. The purpose of both of these programs is to help the citizens of Alabama gain the greatest benefit from their forest resources. ♣

SMOKE DETECTOR By WALTER VEST, CHIEF LAW ENFORCEMENT OFFICER

SMOKE DETECTORS SAVE LIVES! DON'T STAY HOME WITHOUT ONE!

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) has launched a year-long smoke detector campaign. While one-half of the homes in America have smoke detectors, those who need help most—minorities, the elderly, the handicapped—are still largely unprotected.

Recent findings about smoke detector use nationwide indicate that:

- Chances of dying in a fire are reduced by one-half if a smoke detector is present in the home.
- Smoke detectors are giving the first warning of a fire in about 40% of all cases—a significant percentage when one considers that most fires occur while occupants are awake.

- Twenty-one percent of all homeowners who have detectors received them as gifts.
- Only 38 percent of the homes with the greatest likelihood of having a fire (those with family incomes of \$15,000 or less annually) have smoke detectors.
- In the 50 percent of all homes without detectors, only 10 percent of the homeowners cited cost as a reason for not buying a smoke detector. The reason generally cited was that detectors are "not important."

Because much of the nation's annual loss due to fire—7,800 deaths; 230,000 injuries; and \$5 billion in property—is preventable because the smoke detector is the single device with the greatest potential to reduce fire losses, support for the campaign is almost universal. FEMA is working in partnership with the National Fire Protection Association, Inter-

national Society of Fire Service Instructors, International Association of Fire Chiefs, International Association of Fire Fighters, International Association of Professional Black Fire Fighters, the National Volunteer Fire Council and other organizations in the Joint Council of Fire Service Organizations on the campaign. In addition, a number of federal and state agencies, trade groups, industry business interests also are assisting in the effort.

Statistics show that FEMA Region IV, comprised of eight Southeastern states, has the highest fire death rate per million of the ten regions. The Alabama Forestry Commission, State Fire Marshal, and President of the State Fire Chief's Association urge installation of smoke detectors in the second half of the homes of America—those that need them the most! ♣

SMOKE CHASING By RALPH R. WILES, CHIEF PILOT

AIRCRAFT SAVES TIME AND DOLLARS

AERIAL FIRE DETECTION is not new to the thinking of fire planners. In fact, the first aerial patrols were flown over northern California forests in 1924, and the famed Jimmy Doolittle was one of the pilots. Results of these on-off experiments were not always bad, but the effects were of short duration until 1945 when the present air-ground detection system began.

The Alabama Forestry Commission has been steadily increasing its portion of the fire detection system as aircraft become available. Of the sixteen aircraft in use, all but one have been acquired through the General Services Administration excess property program.

The enthusiasm and dependence on aircraft has increased by leaps and bounds by field personnel. Smoke-chasing has been greatly reduced since patrol aircraft can quickly sort smokes and greatly reduce the time and cost

of crews being dispatched to "false alarms."

Smoke sorting by aircraft includes the assigning of priorities to wildfires with consideration given to their potential danger to property and its value—such as potential loss of pine plantations. Early detection is also an advantage in reducing fire size.

Aircraft assist fire fighters by directing them to "hard-to-get-to" fires and advising the best position for direct attack by taking into account natural fire barriers such as roads and streams. Assistance is given on large fires by checking the fire line for breakovers or "spotting." Arsonists can be tracked or identified from the air. The unseen areas that existed in the tower-lookout system are eliminated and the reduction of visibility due to smoke or haze has little effect on air detection.

As a rule of thumb, an aircraft flying at a speed of 100 miles per hour can cover 700,000 acres with one "look" per hour. The average speed of Commission aircraft is approximately 150 miles per hour but "high risk"

areas need to be seen more often than once during a sixty-minute period.

The Commission employs one full-time pilot in each of the ten forest districts with his aircraft based at the District Headquarters. During the 1981-1982 fire season, six temporary pilots were employed. During the fire season, records show these aircraft flew 1,696 fire detection flights between October 1, 1981, and April 15, 1982. In these 2,168.1 flight hours, a total of 8,860 smokes were checked, of which 3,071 were wildfires. At the average speed of 150 miles per hour, this figures to 325,215 miles of patrol.

The present air-ground detection system is where both air and ground detections are used in combination to realize the benefits of each. It is expected that some lookout towers will always be needed for high frequency detection in the high fire risk areas, but the reduction in tower manning does allow for an increase in the number of fire suppression personnel and allows men to be used profitably on maintenance and other work. ♣

For "Do-It-Your-Selfers"

FOREST MANAGEMENT ON A SHOESTRING

By TOMMY PATTERSON, FOREST MANAGEMENT CHIEF

ARE YOU A "DO IT YOURSELF"? If so, then you are a part of America's increasing society that wears their self-appointed title with proud dignity.

The past few years of high inflation and increasingly high labor costs have caused many of us to learn how to remodel our own homes, grow our own vegetables, repair our own cars and even to do those jobs necessary to manage our own forests.

A private forest landowner once said that for about three hundred dollars, any landowner could buy the three basic tools needed to keep his woods healthy and fast-growing. These three tools are a *drip torch*, a *tree injector*, and a tree planting bar called a *dibble*. Any forester can show you catalogs with prices or tell you where you can buy these tools. Of course, keep in mind that you may be able to rent, borrow or even make these items to reduce costs even further.

Before you consider using any of these tools, you first need to have a written plan that will tell you exactly where, when and how you should use these tools in your forest. Let's call this plan a forest management plan.

A forest management plan can be prepared by any licensed or registered forester in Alabama. Your local Alabama Forestry Commission office can normally prepare a written plan for you at no charge.

A forest management plan should contain a map of your property showing the forestland divided into one or more management compartments called tracts. In your plan, the forester will make specific recommendations about what needs to be done on each tract in order to grow the most timber, have the best wildlife and provide other benefits you may want.

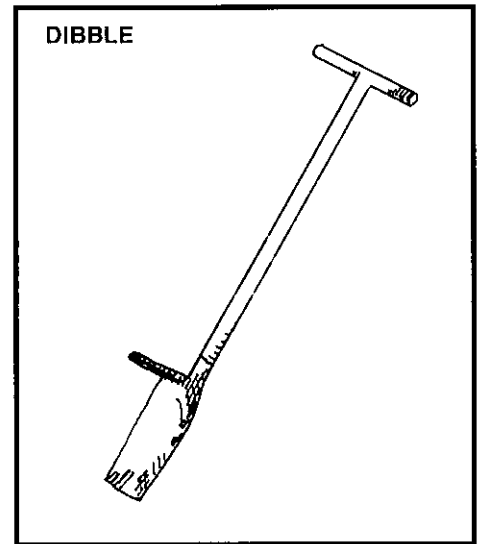
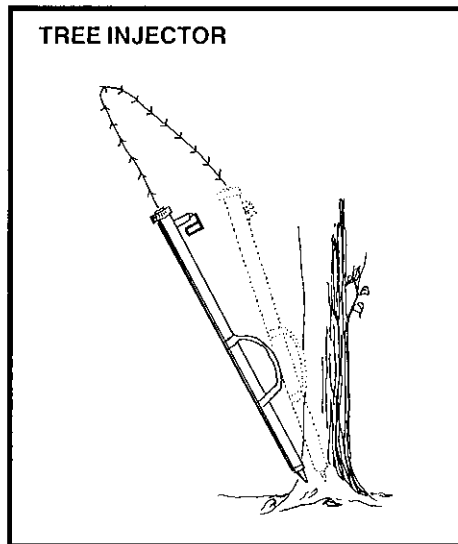
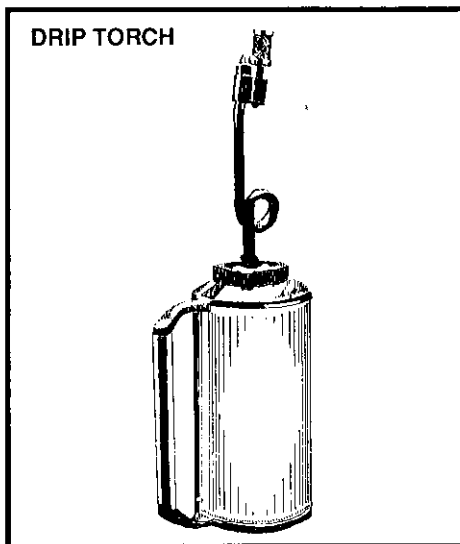
Once this plan is made and you understand the recommendations, then you are ready to use the tools mentioned previously and become a do-it-yourself forest landowner.

Drip Torch

The drip torch can have a great positive impact on your forest but can also be the most dangerous to you and your property. It is used to set *controlled* fires in your woodlands. The drip torch is generally an alumi-

num tank of one and one-quarter gallon capacity with a handle. The lid of the tank has a removable spout about 18 inches long with a wick on the end. Empty weight of the torch is just over five pounds. Fuel for the torch is diesel fuel or a mixture of two-thirds diesel and one-third gasoline. In operation, the wick of the torch is ignited and the torch then held at an angle that allows the fuel to run through the spout onto the wick and ignite. The ignited fuel drops from the wick as small droplets of fire and ignites the leaves and pine needles of the forest floor. The advantage of a drip torch is that a large area can be started to burn very quickly by one person carrying the torch.

Of course now we must make some explanation as to why, with all the publicity about how terrible forest wildfires are, we would ever want to burn our forests. There are two basic types of forest fires. One is a wildfire, and the other is controlled or prescribed fire. Wildfires are caused in many different ways and are destructive because their location, time and intensity are not controlled. A controlled or prescribed fire, which your for-



ester would recommend in your forest management plan, is quite different.

Prescribed fires are purposely set to forestland under certain weather conditions, fuel moisture, soil moisture and time of day that will accomplish specific forest management purposes. Controlled burning eliminates the accumulation of combustible debris on the forest floor which could lead to destructive wildfires. It is an invaluable tool in controlling unwanted hardwoods in pine stands. Normally, only pine forests are prescribed burned because the bark on their trunk (at age twelve) is thick enough to insulate the living tissue of the tree just under the bark. The insulation protects the tree from all but the very hottest fires. Hardwoods, trees that drop their leaves in the fall, do not have bark thick enough to protect them and, therefore, should not be burned unless you wish to eliminate them. Prescribed fire also encourages the growth of grasses and browse which attract wildlife. It even speeds the return of many nutrients to the soil.

Prescribed fires are contained and controlled by firebreaks. A firebreak is a strip of land that contains no combustible materials. These may include adequately sized streams, roads, or bulldozed firelanes. In most Alabama counties, firelanes can be plowed for forest landowners by the Alabama Forestry Commission for a nominal charge.

Prescribed burning is a complex tool and should be used only by those trained and experienced in its use. A prescribed fire can quickly become a dangerous wildfire if inadequate preparations are made. Landowners interested in its use to improve or protect their woodlands should consult a forester. Alabama does have very strict laws about the use of fire in the woods which requires a permit. Through several on-the-ground training sessions with a professional, most landowners can learn the proper methods to accomplish prescribed burning.

Tree Injector

The next forest management tool we will discuss is called a tree injector. A tree injector is normally used for eliminating hardwood trees in places you wish pines to grow. Foresters call their use "timber stand improvement" or TSI for short. This use is similar to one of the uses of prescribed fire, but an injector can be used in forest stands where the pines are too small to safely use fire. An injector is also used to eliminate very large hardwood trees that prescribed fire is usually unable to kill. Many times young pine trees begin to grow under the shade of large hardwood trees. If your objective is to grow pine trees, this shade must be removed since pines require almost full sunlight. The

hardwood tree must be removed without damaging the young pines. A tree injector is ideal for this use which foresters call "pine release," removing the trees that shade out young pine trees.

There are two basic types of tree injectors available. One is a tubular type and the other is a hatchet type. Both types are effective, making it your personal preference as to which you use.

The tubular type is about 56 inches long with the tube holding five pints of chemical. At the end of the tube is a chisel bit that is jammed into the trunk of the tree just above ground allowing penetration *through* the bark. While the bit is in the tree, a handle on the tube is pushed, forcing herbicide through the bit and into the sapwood of the tree. These injections should be spaced about every two inches around the tree, encircling it one time. This injector weighs about 12 pounds empty.

The hatchet injector works on the same basic principle as does the tubular type. The hatchet looks very similar to a regular handheld hatchet except that there is a plastic hose extending from the bottom of the handle. This hose is attached at one end to a quart-sized bottle that hangs from your belt. The other end of the hose runs through the hatchet handle to the head or bit. When you strike the tree with the hatchet at waist level, a plunger in the hatchet head forces herbicide from the hose, through the bit, and again into the sapwood of the tree. Again you must circle the tree with injections not more than one and one-half inches apart.

Herbicide, when placed into the sapwood of the tree, stops the life support process of the tree causing it to drop its leaves and eventually die. The tree then gradually falls apart limb by limb and causes little, if any, damage to young trees below. The remaining snag or tree trunk provides good nesting places for birds and small animals.

The most widely used herbicide for tree injection is TORDON RTU which can be used undiluted in the injectors. This herbicide may be used any time of year, however, use during the spring growing season seems to have the best results. Again, follow the recommendations of your forester.

We have talked at length about the use of prescribed fire and tree injection in the elimination of hardwood trees. Of course, neither of these systems should be used where you wish to grow and maintain hardwood trees. Hardwood trees in the proper location are very valuable and should be protected and managed. The use of fire and chemicals to eliminate hardwoods are really last resort methods since they cost the landowner money. Whenever possible these trees should be cut and sold as pulpwood or firewood.

Dibble

The final forest management tool we will discuss is a tree planting bar commonly referred to as a "dibble." A dibble is a very simple hand tool used to plant one-year old pine seedlings. Overall length of the dibble is about 39 inches. At the bottom end is a blade made of plate steel about three inches wide, eleven inches long and about three-quarters of an inch thick. This blade is attached to the long handle of the dibble. The handle is made of steel rod or iron pipe of one-half to one inch in diameter. The shaft of the handle is about 27 inches long welded to the top of the blade. On the top of the shaft is welded another piece of pipe about 14 inches long to form a handle in a "T" shape. On the top edge of the blade is welded a short piece of pipe that makes a foot rest. A dibble can be purchased, rented or easily made. Pieces of old water pipe and old truck leaf springs can be used to make very inexpensive dibles.

A dibble is used to plant pine seedlings where none or too few exist already. Pine seedlings do not require that you dig a hole like that required for a shade tree on your lawn. The dibble, when pushed into the ground opens a slot wide and deep enough to accept the root system of the seedling. After the tree is placed in the slot, the dibble is pushed in the ground again a few inches behind the seedling; the handle is pushed forward, thereby closing the slot around the seedling and making it firmly planted.

In Alabama, pine seedlings are planted during the months of December through March. Keep in mind that pine seedlings will not survive if planted in the shade of other trees. You also must take special care of the seedlings during the planting process so that they are not allowed to become dry or become too hot. If the seedling is planted too deep, the root will curl back toward the surface, called J rooting, and die; or if planted too shallow, it will be pushed out of the ground by frost.

Again, ask your forester for a quick lesson in the proper care and planting of pine seedlings.

We have briefly discussed the uses of three basic forest management tools. There are many other tools that you may hear about and you should explore their use as well.

The easiest tool of all for you to use, however, is your telephone or mailbox. Contact a local forester and have a forest management plan prepared. Forest management is a long-term process. Without professional guidance, you can quickly waste a lot of time and a lot of money. ♣

Firewood As a Business Venture— A Way to Improve Your Woodlot

By MIKE HINSON, CHIEF FOREST PRODUCTS UTILIZATION
JIM GOBER, SPECIALIST FOREST PRODUCTS UTILIZATION

RENEWED EMPHASIS ON WOOD for fuel creates an opportunity for timber owners, especially small landowners, to earn more money on their timberland investment and to improve their woodlot at the same time. For some enterprising timber owners, selling firewood could become a small business venture, depending on the amount of timberland owned and the local demand for firewood. However, there can be problems which forest landowners should carefully consider before going into such a venture. It should be remembered that only low-quality or undesirable trees and wood left after commercial harvest are recommended for firewood. Cutting growing stock such as pulpwood and sawtimber will reduce the future value of a stand.

Marketing Firewood

Alabama landowners are cutting and selling firewood in a number of ways and for a variety of purposes. Some owners thin stands, cut, sell and deliver wood themselves. Some sell the stumpage and let customers cut their own trees into truckloads. Other owners cut down trees, skid them to open fields and let people cut their own wood. Still others sell an entire tract on a lump sum basis. It is no easy matter to choose which method will earn the highest income and achieve the desired woodlot results with as few problems and as little cost as possible.

Owners may choose to cut trees, split and market the firewood themselves. To do this they need time, energy and the right equipment such as a chainsaw, splitting wedge, axe, truck, and a good local market. Depending on location, forest landowners can probably



Figure 1—These smaller understory trees are deprived of sunlight. Such suppressed trees, are also a source of firewood. Removing them improves the looks of your woodlot.

sell their firewood for \$30 to \$50 a pickup load, about one-half cord if stacked closely. While this sounds like a good income, when one puts down all cost and labor, the profit may be fairly small. Studies have shown that on the average, it takes a man about seven hours to cut, split, and deliver one cord of wood.

Although there may be many reasons and objectives for cutting firewood, the following are three typical situations that landowners might consider for their woodlots. This

discussion concerns hardwoods although pines could be used for firewood where hardwoods are not available. In Alabama, however, this is rarely the case because hardwoods can be found throughout much of the state.

Timber stand improvement: Many woodlots, for various reasons, have been mismanaged, overcut or neglected. Generally, past cutting practices left woodlands with an overabundance of crooked, diseased or undesirable species and otherwise unsaleable trees. Some acres may have come back to a nice stand of hardwoods 30-40 years ago, but nothing has been done to the stand since. To improve the woodlot, all trees competing with straight, good quality trees should be removed. (See FIGURE 1) This allows good trees to grow better and increases dollar return to the owner.

Cleaning up after a timber sale: This type operation follows a selective cutting or a clearcutting operation. Tops and defective or damaged trees are cut for firewood on the selectively harvested area, and everything left after a commercial clearcut may be also used for firewood. Cutting firewood after a selective harvest helps produce more income per acre and cleans up the woods for aesthetic purposes. On a clearcut area, firewood gathering increases per acre income and cleans the site. This also creates generally better planting conditions. In many cases, landowners net \$60 to \$80 or more per acre. Eliminating site preparation saves landowners \$50 to \$90 per acre even if they give the wood away.

One important point, however, for all forest landowners when making a timber sale is to develop and use a timber sale contract that spells out precisely what is being bought and sold. In putting timber up for bid, owners

should specify if tops are to be included, bid on separately, or left on the tract. Forest landowners fairly close to a metropolitan area probably have this option more often than rural owners.

Selling or cutting an entire stand for firewood: This type of operation has thus far been limited in Alabama and probably elsewhere. Small acreages of one to ten acres with low quality hardwoods near a town or city may be sold in this manner. If the landowner chooses not to do the cutting himself, a bid basis may be used, either by acre or for the entire tract. Landowners may find it convenient to take only a few bids, although the profit may be a little less. A good sales contract and money-in-hand before cutting should also be rules.

Conclusion

The forest landowner should remember that firewood is another potential product of the forest and that timber should be properly managed to achieve the highest return. Removing low quality wood from the forest will improve the quality and composition of the stand, with the added potential of increasing growth and volume. (See FIGURE 2). Depending on the condition of the forest and local firewood prices, cutting or selling this product could be a good business venture for the small forest landowner.

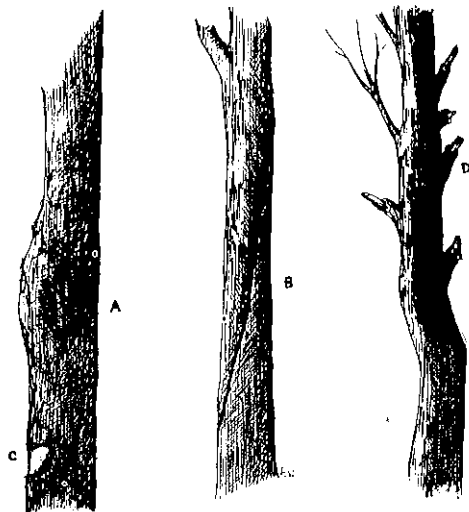


Figure 2—Crop trees should not have:
A. Swollen stems: B. Seams or breaks in the bark: C. Mechanical wounds caused by logging or other equipment: D. Poorly healed branch stubs. All of these defects indicate internal damage or disease. Such affected trees and crooked trees are best removed for firewood.

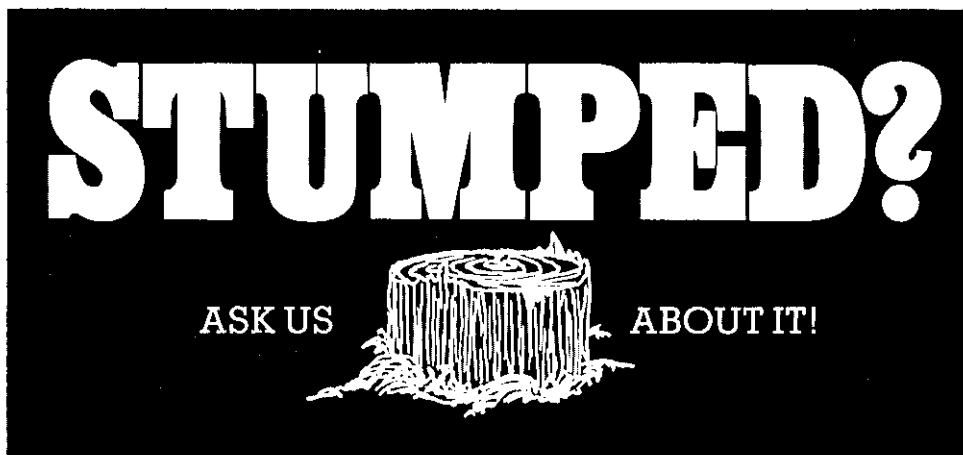
Drawings Courtesy of U.S.D.A. Forest Service

Standard Units of Measure For Firewood

Firewood volume is usually measured by the cord. A standard cord contains 128 cubic feet of volume, including wood, bark, and air spaces. A cord is generally defined as a stack of wood eight feet wide, four feet high, and four feet deep.

Generally speaking, however, four-foot logs are too long for home use, and most firewood is therefore cut in lengths from 16

to 24 inches. Wood sold in lengths shorter than four feet, but still closely stacked in a pile eight feet wide by four feet high, would be considered a face cord. A formula can be used to determine what percentage a face cord is of a standard cord. First, neatly stack the wood, then multiply the width of the pile by the height. Multiply this figure by the length of the logs in feet and divide by 128. For example, a pile is eight feet wide by four feet high and the length of the logs is two feet, then: $8 \times 4 \times 2 = 64 \div 128 = .50$ or your face cord would be one-half of a standard cord. ♣



Q. I have 200 acres of mature timber. Where do I begin to find a market for this timber?

A. First, consult a licensed forester to advise you on the sale. Your initial contact might be with the Alabama Forestry Commission to obtain a list of consulting foresters who can assist you with a total forest management plan.

Q. How can I attract more ducks to my beaver pond?

A. The Alabama Department of Conservation and Natural Resources has an excellent brochure on the management of beaver ponds for wood ducks. Write to them at 64 North Union Street, Montgomery, AL 36130.

Q. Trees are dying on my property. What should I do?

A. There are numerous reasons why trees die. Contact your county forester or ranger and he will visit your property, diagnose the situation, and make recommendations.

Q. I spent \$3000 this year on reforestation. Can I claim any portion of this as a tax exemption?

A. A law was passed in 1980 allowing for a 10% exemption in the year of the investment and a 7-year amortization. You should contact your public accountant, however, for specifics on what is allowable. You may also contact John Kelley, Alabama Forestry Commission, 513 Madison Avenue, Montgomery, AL 36130.

Q. I've heard our state forestry agency referred to as the Forestry Commission, the Division of Forestry, the Forestry Department, and the Forest Service. Which is correct?

A. Until 1970, there was a Division of Forestry under the Department of Conservation. Then, the Alabama Legislature passed an act to establish the Alabama Forestry Commission as a separate and complete agency governed by a seven-man commission who in turn appoints the state forester. Confusion generally comes about because there is also an Alabama Forestry Association, a privately funded organization which represents industry, private forestry groups, and landowners. In addition, there is the federal forestry branch called the U.S. Forest Service.

Q. I want to build a pond on my property. What do I need to do?

A. Contact your county Soil Conservation Service office.

Q. Will the Alabama Forestry Commission help me to prescribe burn my land?

A. The Alabama Forestry Commission will provide technical advice to anyone who wants to prescribe burn his land. This advice is free of charge. To actually perform the burn, a small fee will be charged. ♣

*Alabama's Forest Nurseries
Are Growing*

SUPER TREES

BY RAY COVIN, GENETICIST



The 17-acre first generation northern zone loblolly pine seed orchard located on the Tuskegee National Forest in Macon County, Alabama. The trees are 12 years old and are producing seed.

GROWING IN ALABAMA FORESTRY COMMISSION nurseries are millions of baby pine trees with the potential to grow faster, produce timber of higher quality and be more disease resistant. Known sometimes as "super trees" or more correctly as "improved trees," this new breed comes from parents originally chosen for their natural superiority in size, height, shape and other factors. When crossed with each other in a seed orchard, these naturally superior trees produce offspring that yield more and higher quality wood than ordinary trees and are more resistant to disease.

The origins of these trees can be traced to 1964 when the Alabama Forestry Commission, in cooperation with Auburn University's Department of Forestry, initiated a tree improvement program. This program's goals are to genetically produce an improved variety of trees and to provide the Commission's nurseries sufficient seed from these varieties to meet the needs of Alabama's forest landowners.

The Commission's program has five main phases: selection, seed orchard establishment, progeny or offspring testing, roguing and seed production.

During the selection phase, Commission foresters search forest lands in Alabama for mature trees with outstanding characteristics to serve as parent or breeding stock. The trees chosen for breeding stock are then

graded by a geneticist from Auburn University. The grader compares the tree with the best trees growing around it. The trees that pass the grading system are called "plus" trees and will be placed in the seed orchard as parents for the new variety.

Following the selection of parent stock, the Commission establishes seed orchards where the parents can grow and produce seed. The first Commission seed orchards were established in 1969. The Commission now has 352 acres of seed orchards.

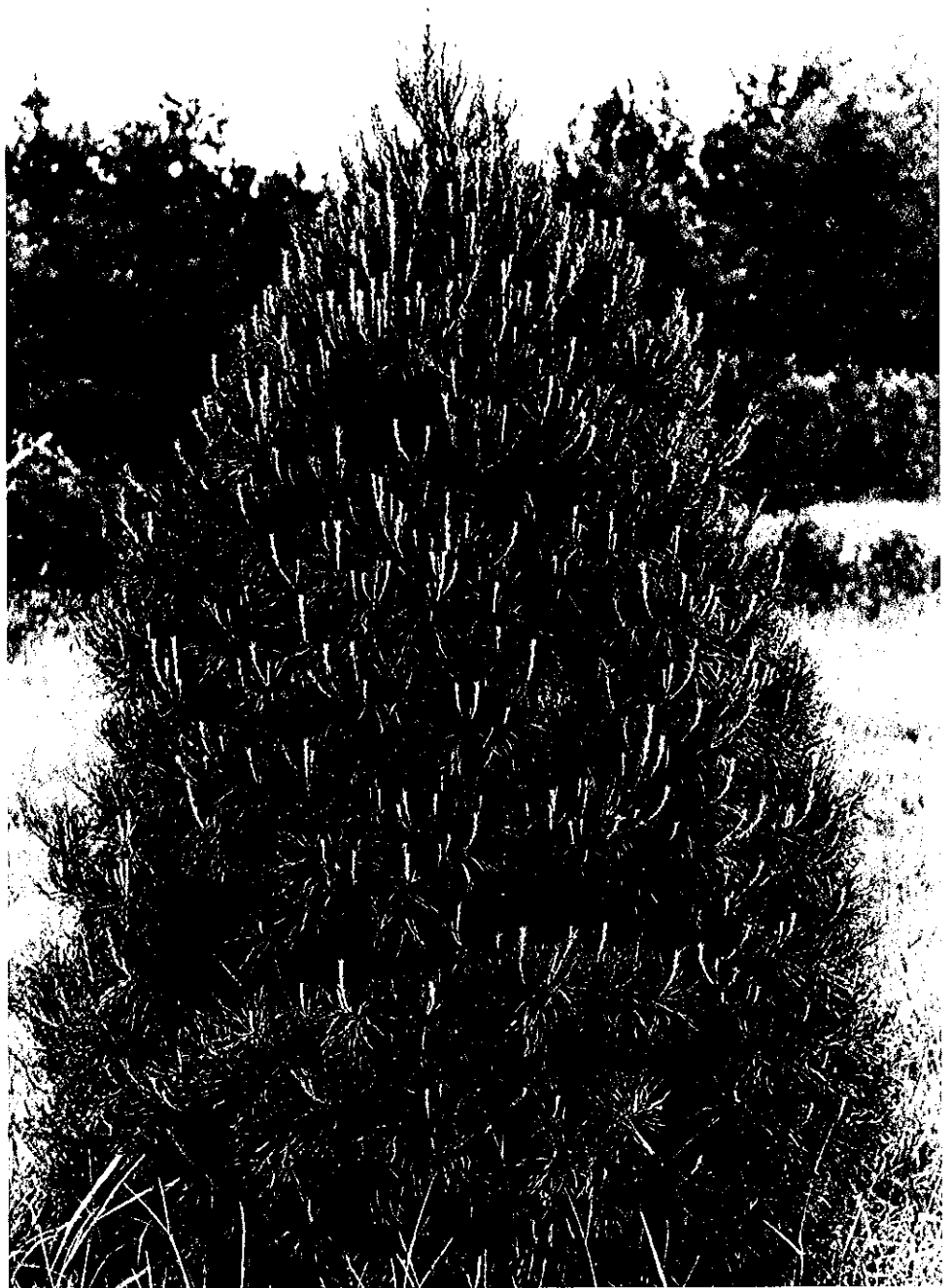
Orchards are established by shooting branches from the parent tree with a rifle. Cuttings from the branches, called scions, are grafted onto one-year-old seedling rootstock at the Commission's seed orchards. These grafted trees are, in effect, clones of the original plus trees and possess all of its outstanding characteristics.

They are planted in the orchard on a 15 x 30 foot spacing and are located in such a manner that each parent will have an equal opportunity to interbreed with all the other parents in the orchard. Not only does the orchard provide a place for crossing among the parents, but facilitates intensive management procedures such as fertilization, disease and insect control and seed collection.

Grafts in the orchard are intensively managed to enable them to reach the reproductive or seed producing stage as soon as possible after establishment in the orchard. Because the grafted trees have the same age as the parents, they begin relatively quickly—usually in three to seven years—to produce both male pollen and female cones. Most of the first seeds produced in the seed orchards are used for progeny testing. Progeny is another word for offspring. Seeds from each parent in the orchard are carefully collected, planted in the nursery and then outplanted at different locations throughout Alabama in scientifically designed progeny tests. The tests are then periodically remeasured. These tests will enable geneticists to determine which parent trees are really producing improved offspring. Clones of the unsatisfactory parents must be removed from the seed orchard. This removing of undesirable parents is called "rogueing." Following rogueing, clones left in the seed orchard should produce genetically improved tree seed.

The Commission has 17 progeny tests planted at various locations throughout Alabama. The oldest of these tests is only six years old. These tests will need to continue for several more years before final judgment can be made of the clones in the tests.

At approximately 10 to 12 years old, seed orchards are usually producing enough seed to begin furnishing seed to nurseries. One hundred thirty-nine acres of the Commission's



Superior Virginia Pine Christmas tree grown from seeds produced at the Commission's Virginia Pine seed orchard on the Tuskegee National Forest. These superior Virginia Pines possess traits that enable them to be used for Christmas trees with a minimum amount of pruning.

orchards are now in production. This acreage is divided by species as follows: loblolly pine, 69 acres; slash pine, 50 acres; Virginia pine, 20 acres.

During the 1981 seed collection season, 2537 pounds of seed were collected from the orchards. This seed will be used by Commission nurseries to produce approximately 12,000,000 improved trees. These trees will be available to Alabama's landowners for planting during the 1982-83 planting season. These improved trees cost a little more than regular seedlings. Improved loblolly and

slash pine seedlings will sell for \$20 per thousand and improved Virginia pine seedlings will sell for \$40 per thousand.

The improved Virginia pines are genetically improved for Christmas trees and not for timber production. These trees were selected for their ability to grow fast, straight, and possess a desirable shape for a Christmas tree with a minimum amount of pruning.

Are these improved trees worth the extra cost? You can bet they are a bargain! In genetics, it's a proven fact that the best parents usually produce the best offspring. ♣

BLACK WALNUT

By PAUL P. McCABE, BLACK WALNUT SPECIALIST

BLACK WALNUT IS CONSIDERED to be the most valuable tree species in the United States. Every county in Alabama has black walnut trees growing for lumber, veneer, gun stocks, furniture, pistol grips, nuts or shade. Studies over a 40-year period have shown yields of up to \$200 per acre per year. Choice veneer-quality logs can bring \$5 or more per board foot. Much of our black walnut is sold overseas and is considered an important commodity for the balance of trade.

Black walnut grows best on deep, moist, well-drained sandy-clay loam soils, preferably on a northern or eastern slope, a river floodplain or creek bottom, or in a cove. These sites are found in every area of Alabama.

Black walnut does not occur naturally in pure stands, unlike pines, yellow poplar, and other light-seeded pioneer species. Careful management is necessary for maximum dollar-value; this includes proper seed-handling, planting, weed control, pruning, fertilization, and control of harmful insects and disease.

The planting of black walnut can be done in several ways. If there are no squirrels in the planting area it is probably best to plant tested and treated seed. Collected in October, November, or December, the seeds are soaked in water with or without the husk, for about 24 hours. Seeds that float are discarded; the remaining viable seeds are immediately put into plastic bags, drained, and put into a cooler for 90 days at a temperature of 35°-40° F. The seeds are then planted, four per hole, twelve feet between holes, in rows twelve feet apart.

An alternative to this is to plant two seeds in six-inch pots and plant the germinated seedlings the following winter in the ground.

Another alternative is to broadcast the seed in trenches filled with organic matter such as bark, leaves, or sawdust. The trenches should be protected from squirrels and other rodents by one-half to one inch mesh weighted to the ground until germination begins the following spring (around April). The seedlings are lifted and transplanted before the tap roots have time to penetrate undisturbed soil.

Weeds and grasses must be controlled around each walnut seedling the first few years to improve survival and promote fast growth. Weed control is second in importance only to site selection in establishing walnut plantations. Weed control also de-

stroys rodent habitat, reducing another cause of seedling loss. However if all vegetation is controlled using herbicide, mechanical cultivation, or a combination of the two, erosion may become a serious problem, especially on sloping lands. An excellent combination treatment is to use herbicides around the seedlings and mow between the rows.

Herbicides control weeds and grasses best, but competing vegetation can also be controlled by cultivation, if care is taken not to damage the seedling by cultivation too close to the seedlings. Cultivation is very effective between the rows to supplement spot or strip herbicide treatment around the seedlings.

Cultivation can be used to destroy existing vegetation and prepare the site for planting. After the plantation is established, cultivation, mowing or mulching may be used. Mechanical control involves more work and is usually more expensive than chemical control. However if the landowner has equipment and labor available, mechanical methods may be the best alternative.

Strip spraying along the rows is an effective means of weed control. Strip spraying may be used in interplanting where spacing within the rows is too close to permit cross mowing or cultivation.

Two general types of herbicides are effective for controlling grasses and broadleaf weeds. (1) *Pre-emergence, soil-applied* chemicals are applied from late fall to early spring on unfrozen soil before weeds emerge.

All pre-emergence herbicides require rainfall or light tillage to incorporate the chemical into the soil, a good reason for treatment a week or so in advance of expected weed emergence. In established plantations, post-emergence herbicides must be used as directed sprays to avoid damage to the planted trees. SIMAZINE and ATHRAZINE are two effective pre-emergence herbicides.

(2) *Post-emergence* chemicals are applied to the foliage of established weeds which are not affected by pre-emergence herbicides. AMITROLE, DALAPON and 2-4-D AMINE are three effective post-emergence herbicides.

Where herbicide application is delayed until spring or early summer, a combination of post-emergence and pre-emergence herbicides can be used to kill established weeds and provide residual control of germinating seeds. In established plantations post-emergence herbicides must be used as directed to avoid damage to the planted trees or to the

CA CR

environment.

Corrective pruning during the first few years of the walnut plantation is a necessary expense. Stems broken before and during planting should be pruned immediately. All damaged stems should be cut off above a live bud.

To produce a stem free of knots it is necessary to remove a few lower branches periodically as the walnut tree increases in height until 17 feet of the trunk are free of limbs.

An adequate crown is necessary to produce good growth, so lower branches should not be removed too fast. At least one-half of the tree height should be in live crown. Removing too many limbs from young trees could concentrate too much growth at the terminal and cause the tree to bend over under its own weight. Limbs two inches in diameter or less should be pruned off. Axes should *not* be used for pruning! Only approved pruning saws, used properly, will prevent damage to the main stem, from which the valuable veneer is obtained.

Fertilizing black walnut trees is not practical; however, the planting of companion plants nearby, such as black locust, autumn olive, and lespedeza, helps improve the soil fertility.

The most prevalent of the insects attacking black walnut is the walnut caterpillar, which can usually be controlled by removing and burning infested leaves. An insecticidal formulation of the bacterium *Bacillus thuringiensis* can be used as a safe and effective natural control of caterpillars.

Walnut anthracnose is the major disease attacking black walnut. This disease infects the leaves and nuts causing a yellowing and early defoliation of the leaves and nuts which sometimes kills the tree. Control is not practical in large plantations, but individual trees can be sprayed with the fungicide ZINEB or MANEB at a rate of two pounds per 100 gallons of water. ♣

SHOP

CHRISTMAS TREES

By JOHN TYSON, CHRISTMAS TREE SPECIALIST

CHristmas trees are a forest product that is gaining importance in Alabama. Ten years ago there probably were less than a half-dozen growers in the state; now, there are an estimated 300 plus producers actively engaged in growing Christmas trees. While it is not surprising that the yule tree business has begun to move into our state, the speed with which this endeavor has grown is somewhat astounding.

The Virginia pine, which is native to the northern half of Alabama, is the species that is most often planted for Christmas tree production. Several other species are grown to a lesser extent. Red cedar, the traditional Southern Christmas tree, is probably the second most commonly grown species. However, because of its poor shipping qualities, it does not have nearly the popularity among commercial growers as does the versatile Virginia pine.

White pine is grown to a limited extent in north Alabama, and Arizona cypress is still occasionally planted. Sand pine, Spruce pine, Leland cypress, and Deodar cedar are all being tried by hopeful growers who do not object to taking a chance with an item of undetermined potential. Most growers and experts agree, however, that the Virginia pine is the favored species among commercial Christmas tree growers in the South today.

Christmas tree growers are a diverse lot—some growers are in their early twenties and others are over seventy. Some are retired, others are in business or are professional people, and some are farmers. For most, Christmas tree production is a part-time endeavor. Most of these people grow Christmas trees because they like to work with them and to make money.

The Alabama Christmas Tree Growers' Association was organized in the summer of 1978; there were about a dozen people at the organizational meeting. It has become an

active association with 153 paid members and is affiliated with the National Christmas Tree Growers' Association. The 1981 meeting was held in Selma; the annual meetings are a two-day affair and include a plantation tour. The president of the National Association has addressed the last two annual meetings. Members are enthusiastic about the future of the Christmas tree business in Alabama.

Most Alabama Christmas tree farms, due to the large amount of hand labor required, are fairly small. The average acreage for local Christmas tree operations is probably well under 10 acres. In many ways, growing Christmas trees is more like row crop farming than any other type of forestry enterprise.

Virginia pine Christmas trees are usually harvested when they are from four to six years old. During the years that they are in the plantation, they normally require around 50 man-hours of labor per acre per year.

In the beginning, the land must be prepared before the seedlings are planted. This is usually done by disking or spraying the existing vegetation with an herbicide. The seedlings can be planted as close as six feet apart. Weeds and other competing vegetation must be controlled; however, many growers plant the trees far enough apart so that machinery can be maneuvered between them. If the weeds are being controlled by mowings, the plantation usually has to be mowed at least three times during the summer. This depends to some extent on the weather and other variable factors.

Competing vegetation must be controlled in Christmas tree stands because it can cause the trees to be poorly formed, and there is no market for low quality trees. Most species will not take the desired Christmas tree shape unless they are trained to do so by pruning and shearing. Virginia pines should be shaped twice each growing season. Most growers shape their trees with pruning shears or a long shearing knife.

During the long Alabama summer, Christmas tree plantations are constantly under threat of an insect attack. Several different species of the crawly little rascals afflict Christmas trees, but the tip moth is by far the most serious pest on Alabama Christmas tree farms. The grower may have to use insecti-

cides as many as five times in a single growing season in order to protect his trees. Quite a bit of time and expense goes into producing a Christmas tree for the holiday market season. Even though the retail price of a family tree may seem steep, the truth is that the grower is not making an excessive profit.

The Christmas tree grower markets his trees in several different ways. He can sell them at wholesale prices to a dealer or merchant who will resell them to the consumer. He can set up his own lot or stand and retail them directly to the public. Some producers have select-and-cut operations. In the latter type business, the consumer comes to the farm, selects his own tree from the plantation, and cuts it himself. All of these systems have their own built-in advantages and disadvantages. Each grower must decide what marketing system is best suited to his own potential.

Christmas trees have some needs that are unique. It is a good idea to locate a plantation within sight of an occupied house. If not, many trees may be lost to thieves. A lot of people who would not think of stealing anything else, will help themselves to a Christmas tree.

A Christmas tree farm also needs a good system of field roads because the trees will normally be harvested during November and December when bad weather is likely to occur. Ideally, every tree in the plantation should be within 100 feet of a road. This is because the growers' major cost is labor and the further the newly cut tree has to be carried to the truck, the more time is involved in harvesting each tree, and the fewer trees can be cut each day. If the trees are within 100 feet of the truck, however, little time is spent in carrying them to the vehicle and daily production levels go up.

People often ask if there is really any money in Christmas trees. Usually the answer is, "Yes, there is money in growing Christmas trees IF you 1) Produce quality trees 2) Produce those trees at a competitive price 3) Develop an active, aggressive marketing program 4) Get into the business with the intention of staying through the ups and downs of the market." If any of these four things is omitted, the profit may be lessened. However, if the new grower does these four things he can make money in the long run. ♣

Know Annosus Root Rot and React Quickly!

By ROBERT KUCERA, PEST MANAGEMENT SPECIALIST

ANNOSUS ROOT ROT IS A SERIOUS FUNGAL DISEASE on pines in Alabama. All southern pines are susceptible to growth loss and mortality from the disease. Annosus root rot has received high priority from the Alabama Forestry Commission (AFC) both because it is a major problem and because the problem can be minimized through knowledgeable forest management practices.

Annosus root rot can be detected in pine stands when the symptoms appear. Symptoms include dead and windthrown trees, live trees with sparse, off-color foliage, and red needles at the time of death. Examining the roots will show that the wood is decayed, stringy, and white. Roots also become resin-soaked in their attempt to stop the advance of the disease. Dying trees often make a large crop of cones which hang on the branches after the trees have died and the needles have fallen off. Positive identification of this disease problem comes from finding the conks which the causal fungus commonly produces at the base of affected trees. If the conks cannot be found, the fungus can be seen growing out of wood from the tree and identified. Assistance in identification and management of diseased stands is available from the Alabama Forestry Commission.

Thinned stands are very susceptible to annosus root rot. Fungal spores land on stumps, and decay can move through root grafts and contact points into adjacent, healthy trees. The spores can also filter through the soil and directly infect the roots, especially those damaged by machinery, drought, or windshake.

An AFC survey of 24 thinned stands infected with annosus root rot showed that about one third of the dollar value of the area cruised was dead and dying from annosus root rot. The worst stand cruised showed 52% of the stand value was in dead trees. This is especially serious in a stand which has been recently thinned because the infected trees are those which were selected to be left to grow to more valuable sawtimber and pole products. Diseased stands are difficult to manage for inexpensive natural regeneration. Although annosus root rot may be encountered statewide, the most seriously affected stands

known at this time are in Dallas, Elmore, Macon, and Pike Counties.

Jim Hyland, the AFC Pest Control Section Chief, notes that annosus root rot is also especially damaging because it has been consistently associated with southern pine beetle and Ips bark beetle spots. The disease weakens trees making them likely targets for insect attacks.

In general, disease control can be achieved by managing forest stands correctly so as to have healthy trees that will be less susceptible to disease. This is true for annosus root rot control. Good silvicultural management will go a long way to prevent problems. Correct choice of species for the area and site and thinning before growth slows appreciably will keep pine stands in good condition.

Research has shown that soil texture can be evaluated to get an indication of the hazard of annosus root rot following a thinning or other partial cut. Although annosus root rot can occur in any stand, it is most likely to be a major problem in well-drained, sandy soils. Knowing this, the landowner can use some means of prevention on these high hazard soils. The best method is to apply borax to the stumps as soon as the trees are cut. A less common means of prevention is the application of a competing fungus which does not allow annosus root rot to become established in the stump.

Another method of prevention which may be used during thinning or other partial cuts is to adjust the timing, cutting from April through August when high temperatures destroy the causal fungus. Adjusting the timing of the cut is risky because the stumps could be shaded or the weather could turn cooler while the stand is being cut and infection would not be prevented by high temperatures.

Planting hardwoods will prevent problems on high hazard sites. Longleaf pine may also be considered in its natural range because it resists damage from this disease. Hazard rating and prevention are by far the most effective means for minimizing losses to annosus root rot. Hazard ratings for annosus root rot should be included when a forester

makes a management plan or cruises timber for a sale.

If annosus root rot infection does occur in a stand, the prevention alternatives are lost and the individual making forest management decisions needs to determine when to clearcut the stand or the diseased portion of the stand. Thinnings and other selective cuts of any kind will only aggravate the condition. By measuring growth rates, tree size, and rate of mortality it can be determined whether to clearcut the stand immediately or whether the losses can be absorbed while the remainder of the stand grows to a more valuable product size.

The Alabama Forestry Commission is active in protecting against annosus root rot through detection, evaluation and management assistance, and coordinating research efforts with other agencies. AFC personnel in each county are always on the look-out for stands showing symptoms of the disease. If it is detected, the landowner is informed and offered assistance in managing the stand.

Presently the AFC is conducting a statewide survey to determine the extent of the problem. This information will help in hazard rating, making management decisions, and determining the amount and type of research that would be appropriate to apply to the problem. The AFC is a member of the Integrated Forest Pest Management Cooperative which is researching means which will be directly applicable to annosus root rot prevention and control. The AFC, Virginia Polytechnic Institute and State University, and the U.S. Forest Service Research and State and Private Forestry Divisions are currently cooperating on annosus root rot research studies in Alabama, developing more information which will be useful in managing the disease.

Annosus root rot is a problem which can be economically minimized through prevention, control, and good forest management. This disease, in the past, may have been allowed to increase because it is a slow and unspectacular killer. The forest landowner will have security in the very near future as prevention and control of annosus root rot are incorporated as standard forest management practices. ♣

ACTIVITIES

Landowner Forums Focus On Forestry Benefits

WHAT DO YOU THINK CAN BE DONE TO INCREASE THE BENEFITS FROM YOUR FORESTLAND? The Alabama Legislative Forestry Study Committee wanted to know how landowners felt about this question and set about conducting two forums to find out—one in Cullman (North Alabama) and the other in Montgomery (South Alabama).



The thirteen member agencies of the Alabama Forestry Planning Committee, Alabama Farm Bureau, and the Alabama Forestry Association coordinated and conducted these forums which were attended by approximately 150 landowners. Answers to the above question were sought in a democratic manner. Landowners who had been transported to the meetings were divided into smaller subgroups with about eight participants each. These groups had a facilitator and a recorder. Only names were attached to these group leaders and agency affiliations were withheld until the conclusion of the meeting. Additionally, these leaders were not permitted to try to influence the thinking of the group.

Each group identified areas which they felt were most important. All group recommendations were then listed and distributed to each forum participant. Each landowner then rated the personal importance of the recommendations. After this final vote, those suggestions receiving the highest number of points were then revealed to the group. While some major differences were apparent between the northern and southern groups, the majority of the recommendations reflected common concerns. The following are the top ideas from each group.

North

1. Better information and education
2. Forestry advice about how to harvest and manage timber.
3. Need for additional and better markets.
4. Professional forestry advice and assistance.
5. More forestry education for youths.
6. Support of current use tax laws.
7. More available forestry information.
8. Markets for hardwoods.
9. Need for forest management planning for landowners.
10. Education pertaining to management and marketing.
11. Timber stand improvement.
12. Marketing of timber.
13. Property tax relief.

South

1. Fair property tax.
2. Improve tax laws to benefit forest production.
3. Better forest management.
4. Information and assistance in reforestation.
5. Educate landowners about marketing timber.
6. Whole tree utilization.
7. Fire protection.
8. Greater use of hardwood.
9. Encourage industry and market for chipping biomass of unwanted trees.
10. Control undesirable growth.
11. Advice available to landowners from professionals.
12. Better harvesting practices.

The average age of the forum attendees was 55. Women made up 12 percent of the group. Participants owned an average of 430 acres of land. Only about one-third of the group had ever consulted with a professional forester, but over 80 percent had harvested timber.

The Forestry Study Committee feels that this information will be beneficial to the Alabama Legislature in passing bills which will encourage better management of our forest resources. ♣

Forester's Conclave

by Sharon Clark

THE AUBURN FORESTRY CLUB held its third annual Summer Mini-Conclave at the Solon Dixon Forestry Center near Andalusia on July 24th. Purpose of the event was to introduce students attending their first summer forestry camp to activities of the Auburn Forestry Club.

A festival of sorts, the program of a Mini-Conclave includes contests by which students may test a variety of woodsmen skills while enjoying an atmosphere of camaraderie enhanced by bluegrass music, good food and story-telling. This year's event was attended by more than 100 students, alumnae and visitors—including six students from Mississippi State University's forestry school who participated in the competition. A Florida TV station sent a camera crew to cover the conclave.

Walnut plaques were awarded 1st place winners in the "Speed Chop," "Ax Throwing," "Knife Throwing," "Bow Sawing," "DBH Estimation" and "Crosscut" contests. Ricky Nelms of Mississippi State was awarded 1st place recognition as "All Around Lumberjack," with Ralph Gornto and Kenny Betts, both of Auburn University, placing second and third respectively.



CALENDAR

November 3-4, 1982, Annual Meeting of the Alabama Division—Southeastern Society of American Foresters. Birmingham, Alabama-Ramada Inn, Homewood.

The South Is Changing!
How Can Foresters Respond?

For further information contact Tom Newman (205)967-1671

October 29, 1982, Forestry Field Day - Tuscaloosa - Manning Farm
For more information contact Wayne Strawbridge - 345-1786



Hardwood seedlings ready for lifting.

Seedlings By The Millions

Commission's Nurseries Give Nature a Helping Hand

By WILLIAM O. PADGETT, NURSERY SECTION CHIEF

THE ALABAMA FORESTRY COMMISSION in its Third Annual Report for calendar year 1926, reports on the establishment of the first state-operated forest tree nursery. This establishment was in cooperation with the U. S. Forest Service. The report lists total production for 1926 at 27,000 seedlings—9000 white ash and 18,000 catalpa. No charges were made for the trees. Free distribution of seedlings ended in 1927.

From this meager beginning the Alabama Forestry Commission presently has three forest tree nurseries producing approximately 70,000,000 seedlings annually. Pine seedlings make up the majority of production with hardwood seedlings making up a small percentage.

In the production of a seedling crop of this magnitude considerable manpower and technical expertise must be committed. The land has to be prepared which entails cultivation and fumigation. The fumigation is done through the application of 350-400 pounds of methyl bromide directly to the soil under a continuous plastic tarp. The methyl bromide and the tarp are applied in one operation by machine. Soil temperature has to be 50°F or above to get the best fumigation possible. Also, if the soil is too wet, then the process has to be delayed until conditions are conducive to getting good fumigation. The soil fumigation gives protection against certain soil-borne fungi, nematodes and some weed control. (The cost of doing the fumigation is \$600-800 per acre when done by nursery personnel.) The seedbeds have to be prepared at their proper width of 48-52 inches so that the 8-drill seeder will be able to plant the seed correctly.

The importance that good seed play in producing a seedling crop is often overlooked. Seed from seed orchards have improved seedling quality. Seed of uniform size and high germination percentage reduces the hazards of having a wide variation of seedling densities in the seedbeds. The grading process is easier when the seedlings are of uniform size. The cull percentage is reduced and a corresponding increase in the number of seedlings lifted and packed are realized from high quality seed. Poor quality seed will negate the best efforts to improve nursery management. It is necessary to have a minimum of a three-year supply of seed on hand to meet the demand for seedlings in poor seed production years. Hardwood seed are collected annually for planting.

Once the seed are planted, germination is accomplished in about seven days. It is necessary that the soil be kept moist during the critical days following germination. Once the seedling roots have reached a length of over five inches, the irrigation is less de-

manding. However, the seedlings have to be closely watched so that they will not suffer damage from lack of water. During periods of extreme heat and drought, irrigation is necessary to reduce seedling losses.

There are several diseases that cause problems in a nursery. Damping-off, a disease caused by certain fungi of several forms cause heavy losses each year in southern nurseries. Damping-off is quite difficult to control because in most instances the disease occurs before it is detected. Control is difficult and uncertain. The artificial environment that is found in the nurseries of high organic material, fertilization, and humidity associated with irrigation lends itself to damping-off problems. Also, each nursery is peculiar or unique in its own way. Damping-off seems to be higher in those seedlings produced from poor quality seed.

One of the most devastating diseases in the nurseries is fusiform rust. The southern pines are susceptible, except for shortleaf, to infection from this disease from the time the seed germinates until late June. New chemicals that are now being used have proven to be more effective and to take fewer applications to protect pine seedlings against this disease. The infections on seedlings are not apparent until lifting in the fall. Infections from fusiform rust increase the cull percentage and reduce the number of seedlings packed in a day because removing the infected seedlings slows the grading process. Infection rates of one-half of one percent are acceptable, but anything above this is not acceptable. Also, infected seedlings that are sent to the field for outplanting seldom survive for more than a year and reduce good plantation establishment.

Weeds and grasses compete with seedlings for moisture, nutrients, space and light. If weeds are allowed to go unchecked they can decrease the seedling stand and increase the number of culls in the harvested seedlings. The most difficult weed to control in southern nurseries is nutgrass. One of the reasons for this is the bulbs are difficult to penetrate with fumigants. The grass can be spread by cultivation and must be controlled before it spreads regardless of the cost. Continuous cultivation to get the bulbs above ground so they will dry out helps when the land is being fallowed. Cover crops when used properly can help to decrease a number of the weeds that plague nurserymen. The chemicals that are now being used help to control weeds plus reduce the amount of hand labor needed to do the weeding. However, some hand weeding continues to be needed when the weeds begin to compete with the seedlings or show resistance to chemicals being used.

Soil management is essential to the success



Fertilizer application to pine seedlings.

of a forest tree nursery. If the soil is not properly maintained, seedling quality may be reduced significantly and southern pine seedlings are valuable. (Values of \$15,000 to \$20,000 per nursery acre are not uncommon, with only a small percentage of the cost allowed for soil maintenance.)

The addition of organic matter directly to the soil through the use of sawdust, wood chips, bark, pole peelings or a combination of these has proven beneficial. However, the supply of these items is rather limited plus the cost of material is increasing. Cover crops are valuable in increasing the organic matter of the soil once they are turned under. The search is ongoing to use the cover crop that will give the greatest amount of organic material possible. Sorghum, corn, millet and soybeans are being used. Soybeans are losing favor because they do encourage other management problems. In all cases, mineral fertilizers have to be used to supplement the organic matter additions.

The lifting process, which begins in December, is one of the greatest responsibilities in nursery operations. The object is to keep damage to the seedlings at a minimum and furnish the landowner with the highest quality product possible. Depending upon the individual situation the seedlings may be lifted by hand or a variety of lifters. Once the

seedlings are lifted they are transported to the packing shed for further processing.

The grading process is accomplished by personnel, along with a conveyor belt, and seedlings which are broken, too small, too large, diseased, or damaged in any manner are removed. This procedure helps to ensure that a quality product reaches the landowner, plus it indicates how well nursery operations were carried out during the season.

Packing of seedlings for shipment requires packing material that will retain moisture to keep the seedling roots wet. The material used most often is sphagnum moss. However, many other materials are being used to replace the moss because of its cost.

The wrapping paper should be of sufficient strength to take rough handling, prevent moisture loss, and provide ease of wrapping. The seedling bales contain 1000 seedlings and are finished with strapping around each end of the bale.

The completed bale weighs approximately 70 pounds. This can be handled rather easily for shipping. The wrapped seedlings are stored in the packing shed and kept moist until picked up by the landowner.

The continuous updating of nursery procedures enables the Alabama Forestry Commission to provide the Alabama landowners with a quality product at a reasonable price.



LANDOWNERS LEGISLATIVE ALERT

NATIONAL By J. K. MYERS, LEGISLATIVE AFFAIRS STAFF, FOREST SERVICE, USDA

THE CURRENT CONGRESS (1981-1982), contrary to the actions of those Congresses of the recent past, has not considered much legislation that would directly affect the nonindustrial private forest landowner. The significant laws enacted in 1978 that strengthened the Federal-State cooperative forestry programs carried out by the Alabama Forestry Commission and initiated a forestry extension program through the Cooperative Extension Service mark Congress' most recent effort to assist forest landowners in technical assistance, resource protection, cost-sharing, and education. A less direct, but equally significant, form of assistance was provided in 1980 with the enactment of a law that provided tax credits and deductions for tree-planting, and another law that excluded cost-share payments under the Forestry Incentives Program from income taxes. The Economic Recovery Tax Act of 1981 made improvements in the estate tax provisions of the Internal Revenue Code and lowered Federal income tax rates over the following three years.

The few bills that have been introduced in this Congress continue the emphasis on the financial side of forest landowner assistance. These bills and their current status are as follows:

H.R. 2497.—This is the "Forestry Loan Act" introduced by Congressman Jerry

Huckaby of Louisiana. The bill would authorize a five-year pilot program of guaranteed loans to be paid to landowners on an annual or periodic basis. The annual payment would represent an appropriate portion of the anticipated future harvest value of the timber. The bill has not been acted upon by the House Agriculture Committee. There does not appear to be much support for this legislation in this Congress.

S. 1824.—A bill by Senator Bob Packwood of Oregon would amend the 1980 law (also sponsored by Senator Packwood) that provides tax deductions and credits for tree-planting by increasing the maximum amount of annual deduction allowed from \$10,000 to \$25,000. This bill was added to a House-passed revenue bill and passed the Senate in December 1981. Since the House and Senate bills are different, a conference committee must resolve the differences. This conference has not yet met.

H.R. 2515.—This bill has the title "Soil and Water Conservation Incentives Act". It was introduced by Congressman Evans of Iowa. It, and similar Senate bills by Senators Grassley and Jepsen of Iowa, would provide tax benefits to landowners for qualified "land conservation expenditures", including prevention of soil erosion and the planting of trees for windbreaks. Its purpose is similar to the 1980 legislation providing tax benefits

for tree planting. The bill has not been acted upon.

S. 2163.—This bill, by Senator Mitchell of Maine, and several other similar bills in the House and Senate, would extend the income tax credit for certain residential energy conservation measures to include the purchase and installation of wood stoves. If enacted into law, the legislation could have an effect on the harvest of timber for fuelwood. The bill has not been acted upon.

On a larger scale, the Congress has under active consideration renewals and amendments to the major environmental laws that have been enacted in the last ten years, including the Clean Water Act, and Clean Air Act, and the Endangered Species Act. These acts have a general effect on the management of private lands, affecting to some extent the actions which landowners may take. Actions by Congress in revising these laws are still underway but it appears now that the laws will not be amended in ways that would adversely affect nonindustrial private forest lands.

The 97th Congress faces a heavy workload for the remainder of the session on matters relating to the budget, appropriations, national defense, and others. It is not likely that any new legislation affecting private forest landowners, except possibly S. 1824, will be enacted.

THE 1982 REGULAR SESSION of the Alabama Legislature adjourned near dawn on April 27. The forest landowner and forest industry fared well in this Session. No punitive legislation was passed, while there were several beneficial pieces of legislation which became law and will be of interest to the forest community:

CURRENT USE—After three years of futile efforts to persuade the Revenue Department to implement “current use” provisions of the Lid Bill and two unsuccessful attempts to get legislative relief, a “current use” law (Act No. 82-302) was passed over the Governor’s veto on April 20, 1982.

The new law provides formulas for determining the current use value of cropland, pastureland, and timberland. The current use values of forestland under Act No. 82-302 this year are \$361 an acre for good forestland (above average productivity); \$275 an acre for average forestland; and \$196 an acre for poor forestland (below average productivity). There are two variables in the formula for forestland. One is the statewide average pulpwood stumpage price and the other is the capitalization rate. As the pulpwood price increases, the current use value increases. As the capitalization rate increases, the current use value decreases. These variables will change each year, therefore, the current use value will change. However, no matter what the formula calls for, the current use value is subject to a maximum increase of 3% per year.

Subsequent to passage of the current use law, the Revenue Department issued a direc-

tive to the 67 tax assessors detailing how current use would be implemented. They were instructed to grant current use only to those taxpayers who had applied prior to January 1, 1982. By the time this directive had been issued, the Legislature had convened into a Special Session. During this session, the Legislature passed a bill extending the deadline for current use application to June 30, 1982. The Governor surprised many by signing this bill into law.

About this time, many counties started mailing out reappraisal notices. The large increases surprised many taxpayers and legislators. When the Governor called a second Special Session to deal with retirement system reform, property taxes seemed to be the major topic of concern. During the second Special Session, the Legislature approved three more property tax bills. The first called for a one-year delay in implementation of the reappraisal. Governor James vetoed this bill, but was overridden by the Legislature. A few days after its passage, this law was thrown out by the Federal Court.

A second bill gave the counties the option of increasing the homestead exemption from \$2,000 to \$4,000. The Governor signed this Act which the Legislature had named “The Joe McCorquodale Tax Relief Act.” A third bill was pocket vetoed by the Governor which would have limited the increase in assessed value to 15% in any one year.

ONE STOP PERMITTING—In an effort to facilitate obtaining the necessary permits for new and expanding industry, several permitting authorities were consolidated into

one state agency by Act No. 82-612. On October 1, 1982, the Alabama Department of Environmental Management will take over the functions and personnel of the Water Improvement Commission, Air Pollution Control Commission, Water Wells Standards Board, Board of Certification of Water and Waste Water Systems personnel, and the Environmental Health Administration Laboratory. Also, the hazardous waste management, public water systems, and solid wastes disposal functions of the State Health Department will be transferred. In addition, the permitting, regulatory, and enforcement functions of the Coastal Area Board will be transferred to the Department of Environmental Management. The remaining functions of the Coastal Area Board will be transferred to the Office of State Planning and Federal Programs.

BOARD OF REGISTRATION FOR FORESTERS—Under the Sunset Act, all state agencies are subject to review by the Legislature periodically. This year, the Legislature reviewed the Board of Registration for Foresters and recommended that it be continued. Act No. 82-136 provides for the continuance of this Board.

MOBILE COUNTY ACREAGE ASSESSMENT FOR FIRE CONTROL—Act No. 82-311 authorizes the Mobile County Commission to assess timberland in the county at a rate of 10¢ per acre. The money would be used for fire control. This act is identical to those in effect in almost half of Alabama’s counties. ♣

BACKGROUND By STEPHEN A. GUY, FORESTER, ALABAMA FARM BUREAU

FOR SEVERAL YEARS there has been a growing realization that property taxes in Alabama were and have been inequitably assessed between counties, between kinds of property, and between individual property owners. This was not a new condition but one which had grown up over a long period and could not be attributed to any one person or group of persons. For the tax years 1964, 1965 and 1966, The Louisville and Nashville Railroad Company appealed ad valorem tax assessments on the grounds that its property was assessed at a higher ratio of assessed value to market value than the general level of assessments in the state. The court held that the higher assessments against the railroads were discriminatory and unconstitutional and should be reduced. The court kept the case

open for further action which the court could take in the event property taxes were not equalized within a reasonable time.

Subsequent to the decision in the L & N Railroad case before further orders were issued by the Montgomery County circuit court in that case, **The Federal District Court, Middle District of Alabama**, was asked to order equalization of property taxes in the state. This action was based upon the claim of certain school children that the failure of the state to require uniform collection of the fixed percentages of ad valorem taxes which are distributed to public school districts had deprived them of monies for their education to which they are entitled and by certain corporate taxpayers who claimed that the inequality of property tax assessments had

resulted in their being required to pay an inequitable ad valorem tax. Both classes of complainants claimed that unequal treatment to them was in violation of the due process and equal protection provisions of the Fourteenth Amendment of the United States Constitution. The court agreed with the complainants and on **June 29, 1971**, ordered the Commissioner of Revenue to equalize the assessment of all property in the state. This court order became known as the Weissinger Case.

As felt by many, the existing law did not provide the means of appraising all of the property in the state at its current market value so that taxes could be equalized within a period which would be acceptable to the court. Therefore, when the legislature, which

was in regular session when the order was issued by the court, failed to provide the Commissioner of Revenue and the counties with the machinery to adequately equalize taxes in compliance with the order, Governor George C. Wallace called the legislature into special session specifically for this purpose and to deal with other problems which would grow out of an equalization program. The legislature on **January 12, 1972**, passed Act No. 160, approved by Governor Wallace on **January 19, 1972**, which sets up the machinery for equalizing property taxes.

As a part of the overall plan and included in the tax package, the legislature also passed a system of classifying all property, taxing it according to class groups. Each class of property supposedly would bear its proportional share of the cost of government. The amendment established three classes of property for taxation rather than the existing single classification. Those classes were Utility Property, assessed at 30% of its appraised value; Business Property, assessed at 25% of its appraised value; and Agricultural, Forestry, Residential and Historic Buildings, assessed at 15% of its appraised value. This plan was approved by the voters of this state on **May 30, 1972**, in a statewide referendum.

Current Use In Alabama

In early 1978, it became apparent that the recent federal court-ordered state reappraisal program would cause excessive increases in ad valorem taxes. It was not the intent of the legislature to add an additional burden on the tax payer when a classification system of taxation was adopted to provide for an effective and uniform system of assessing property.

Therefore, a bill was passed by the legislature and approved by the voters on **November 7, 1978**, in a statewide referendum to allow for adjustments to affect any substantial increase in taxes to the taxpayer. The new law, commonly called the "*Lid Bill*" provided for a mechanism to support the needs of government, particularly county and local governments, and yet not to windfall to such governments. Sponsors of the original "*Lid Bill*" set out to put a 20% cap on ad valorem tax increases. But when the final bill was passed it was not a lid at all but simply changed some of the assessment ratios and created a fourth class of property. The "*Lid Bill*" reduced Class II Business Property from an assessment of 25% to 20%, reduced residential property from 15% to 10%, it extended the homestead exemption to the county millage and it created a fourth class—automobiles—and assessed them at 15% of their appraised value rather than the 25%

they had been assessed under the business property category.

The new law also contained a provision of valuing farmland and forest property on the *current use value* rather than speculative or inflationary values.

On **March 26, 1979**, the federal district court upheld the constitutionality of current use provisions and all portions of the "*Lid Bill*" except for the provision for a tax credit to the counties that had completed the reappraisal earlier than the remainder of the counties. On **July 16, 1981**, the United States Court of Appeals for the Fifth Circuit upheld the decision of the federal district court.

However, subsequent to the decision in the U.S. district court, involving the constitutionality of the property tax law (*Lid Bill*),



the **Alabama Supreme Court 1980** was asked to rule on the constitutionality of certain aspects of the property tax law (*Lid Bill*), namely the application of the law as applied to residential property. The Alabama Supreme Court upheld the constitutionality of the law.

The current use provisions of the "*Lid Bill*" stated that upon request by the owner of agricultural or forest land, the tax assessor should base his appraisal of the value of the property on its current use and not on its fair and reasonable market value. The law also stated that the Department of Revenue would prescribe all needful rules and regulations for implementation of the law. However, the Department of Revenue failed to issue any guidelines or regulations.

Consequently, on May 24, 1979, the Alabama Legislature passed House Joint Resolution No. 153 providing that landowners who elected to have their property taxed under the "*Lid Bill*'s" current use provisions would have the current use value of their agricultural and forest property determined from the net income approach. The joint resolution established ten soil groups with accompanying suggested net incomes per acre. The resolution specified that this net income be capitalized at a percentage based on the most recent five year average of the interest rates on long-term U.S. Government bonds. The State Department of Revenue again failed to provide any regulations or guidelines except to advise county tax assessors to use their discretion in applying the current use provisions of the *Lid Bill*.

It became necessary to pass additional legislation to prescribe the criteria for determining the current use value of farm and forest land. This legislation was passed on **April 20, 1982**. This current use legislation specified the formula to be used to determine the property value based on the net return to the land from its crop. As provided in the law, the value of the land is based on ten soil groups and productivity ratings. The current use values for 1982 are as follows:

Agricultural (Crop & Pasture)		Soil Groups*
Good	\$532.00	1, 2, 8
Average	\$443.00	3, 4, 5
Poor	\$310.00	6, 9
Non-Productive	\$110.00	7, 10
Forest land		
Good	\$361.00	1, 2, 8
Average	\$275.00	3, 4, 5, 6, 9
Poor	\$196.00	7
Non-Productive	\$157.00	10

*Soil groups as defined in Act 82-302.

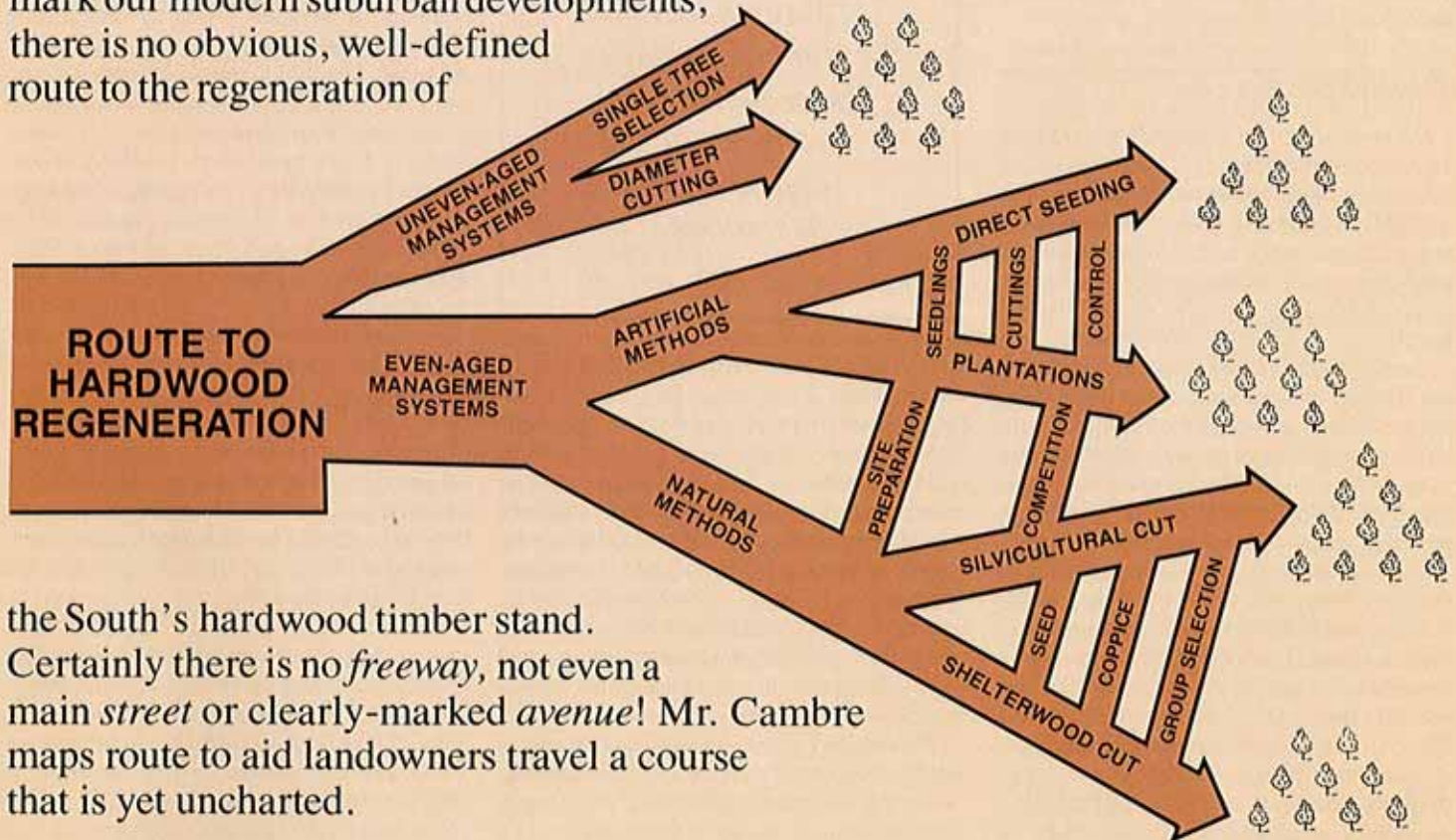
The values may fluctuate from year to year but can never increase more than three percent in any one year. Landowners need only apply for current use once except in cases where additional land is purchased. However, if a landowner does not apply for current use the property will be appraised on its fair and reasonable market value. Once the landowner has applied for current use, the tax assessor will notify the owner of the current use values placed on the property. The owner then has 30 days after receiving this notice to submit to the assessor any challenge of the values. The assessor may review any challenge and may require the property owner to submit evidence to indicate the proper soil group applicable to the property.

There's No Freeway To

HARDWOOD REGENERATION

By TOM CAMBRE, HARDWOOD SPECIALIST

Like a maze of *drives, courts, ways, places, and plazas* that mark our modern suburban developments, there is no obvious, well-defined route to the regeneration of



the South's hardwood timber stand. Certainly there is no *freeway*, not even a main *street* or clearly-marked *avenue*! Mr. Cambre maps route to aid landowners travel a course that is yet uncharted.

HARDWOOD REGENERATION *continued*

Unlike the case with pine, renewal of the South's hardwood forest has not yet reached a state of science where methods may be readily prescribed. Instead of being able to implement practices tested and proven, each landowner or manager must choose from numerous options those methods that may be best suited to his particular site and meet his individual management objectives.

For example, the landowner must first decide whether he wants an *even-aged* or *uneven-aged* management program. That is, does he prefer to manage so that his timber stand consists of trees mainly in the same age classification (*even-age*), or does he want at least three age classes intermingled intimately (*uneven-aged*)? An even-aged system should allow application of modern "clear-cut-and-plant" technology similar to that used so successfully in southern pine. An uneven-aged system would preclude the use of such techniques and dictate less efficient regeneration and harvesting methodology.

Each system has its advantages and disadvantages, as do the various methods by which these management systems may be implemented. The discussions that follow will, hopefully, assist landowners or managers in selecting those systems and methods which will help them best to achieve their individual objectives.

Uneven-Aged Systems

Diameter-Limit Method: This is perhaps the method most commonly used throughout the South and, unfortunately, is the least desirable in almost all cases. The landowner may decide to make a cut either because he needs the money, or simply because he is in the habit of selling something every 10 to 15 years.

Trees to be cut are selected by their diameter. The landowner says, "Cut everything bigger than 14 inches at the stump," or the buyer or logger is allowed to select his own trees. Where this method is used, the regeneration resulting is usually made up of slow-growing, shade-tolerant species.

The landowner may view the smaller stems—those less than 14 inches at the stump—as stocking for his next crop, but these may not be of a desirable species. Furthermore, those trees left after such a cutting are often the same age as those that were cut. They are smaller because they have been suppressed by poor growing conditions, particularly due to a lack of sunlight. Also, having been suppressed they tend to be susceptible to insect and disease attack and thus may produce timber of a lower quality. Each successive cut will yield a lower grade product and less volume per acre. In too

many cases the only reasons markets exist at all for these materials is due to improved utilization technology.

Single-Tree Selection Method: This option is recommended sometimes where the landowner has a small tract and there is a need to spread out income from timber over a longer time period, but the single-tree selection method fails to provide the quick and orderly removal of overhead competition that is required to promote efficient use of the site. Instead, the method encourages development of shade-tolerant species—many of which may not be desirable from the viewpoint of marketability.

Even-Aged Systems

Artificial Regeneration: Surely, among the best methods by which a landowner may achieve even-aged management objectives on his hardwood timberland is via artificial regeneration. However, it is equally certain that, to be successful, he must make a strong commitment to the method selected. Too many hardwood stands growing in the South

"Young hardwood plantations must be protected from livestock grazing and deer herd depredation"

today reflect the result of half-hearted attempts made 20 years ago to establish hardwood plantations! In most instances these unsuccessful results have not come from planted seedlings, but have their origin in uncontrolled natural regeneration. The trees could have sprung up from seeds blown in by wind, or brought in via animals' droppings, or they may have regenerated through sprouting. This is especially true of many of the yellow-poplar "plantations" established across the South in years past. Most are not plantations in the true sense of the word.

Plantation Establishment: The first step in establishing any plantation should be to determine the site's suitability for the species a landowner may desire to grow. At today's costs, establishing a hardwood plantation can be a bargain at \$300 per acre! Reasonable effort spent in advance to match site with species could prevent costly failures! Tech-

nical help is available and should be utilized.

Site Preparation: A second step to assure a successful hardwood plantation is preparation of the site ahead of the actual planting. All salable materials—sawlogs, pulpwood, even energy wood where a market exists—must be removed in a clear-cut harvest operation. Its completion should be timed so that site preparation can be accomplished during the summer and fall prior to planting. Many hardwood sites, particularly those in flood plains of larger streams, are too wet during winter for site preparation work to be done properly.

All standing trees and stumps should be sheared at, or slightly below, the ground line. The site must be root raked, debris piled and burned, and the land disked with a heavy-duty bush and bog harrow. If this work is completed too early in the summer, it may be necessary to disk it a second time to prevent development of a grass sod.

Where the planting site has been used as pasture or cultivated for crops, it is generally advisable to break up the established pan by sub-soiling. Old pastures should be deeply plowed to break up the sod. In general, the more thorough the pre-planting preparation, the less the expense of planting and subsequent cultivation.

Planting can begin as soon as seedlings are fully dormant and can be lifted from the nursery. Seedlings should be graded and only those 24 inches and longer with a minimum root collar diameter of three-eighths of an inch should be utilized. It is very important to keep seedlings in a cool, moist environment prior to planting. Also, seedlings should be protected from freezing. Plant each seedling to a depth that conforms with its original root collar. Cottonwood cuttings should be 20 inches long and planted with the big end down and two inches remaining above the surface.

Spacing recommendations may vary, depending upon the species and products desired at the harvest. In any case, sufficient space should be allowed so that the crop can be cultivated in two directions. Most hardwood plantations are 10' x 10', 12' x 12', or a combination thereof.

Cultivation requirements may vary from two to five times per year for two to four years, depending on species and site conditions. Cottonwood, sycamore, green ash, and willow begin height growth almost immediately after planting and may become too tall to permit cultivation beyond the second year. Most of the oaks, however, do not begin height growth until well into the second, or perhaps early into the third year, and may require cultivation for up to four years.

Young hardwood plantations must be

protected from livestock grazing and deer herd depredation where there is overstocking. Fencing will exclude cattle, but deer can be a problem. One solution is the brush fence. Where the site is forested prior to planting, a brush fence can be constructed during the site preparation work by bulldozing debris into a giant windrow around the perimeter of the plantation. To form an effective barrier against deer, the windrow should be approximately 10 to 12 feet in height and about 20 feet wide at its base. Entrances must be fenced.

Direct Seeding: Here is another method of artificial regeneration that perhaps deserves to be used more widely than is presently the case, particularly where the landowner wishes to increase the oak component in his hardwood stands.

USDA's Southern Hardwood Laboratory at Stoneville, Mississippi, has sponsored considerable research in direct seeding of various oaks with notable results using cherrybark, Shumard and Nuttall acorns. Research has indicated that rodent depredation can be a problem when acorns are sown in small openings, but few problems have been encountered when openings as large as three acres were sown. The rodent problem can be severe when acorns are sown on plots as small as 40 x 90 feet.

Not much is known about acorn planting methods. Stoneville research has shown that acorns covered as deep as six inches may germinate and produce seedlings, but the best results have come from covering one- to two-inch depths.

Direct seeding will not result in a pure stand of oak, but may be used to increase the oak component of the future stand. How much that increase may be will depend on how much the landowner is willing to spend controlling its competition.

Natural Regeneration Techniques

Southern landowners will find natural regeneration methods relatively easy and inexpensive when compared to those artificial means described above. Difficulty and cost become important factors, however, in terms of controlling the species and timing of regeneration.

Natural hardwood regeneration may result from three principal sources: 1) seed, 2) advanced regeneration, and 3) stump and root sprouts—coppice. By managing his site in ways to control these sources, a landowner should be able to enhance hardwood production.

Silvicultural Clear-Cut: This can be a very efficient method of regenerating hardwood stands, but there is a significant difference between a *commercial* clear-cut and a *silvicultural* one.

The latter is perhaps best described as a commercial clear-cut followed by site preparation. First, all salable materials are removed. The remaining unmerchantable and cull materials are then injected or felled. Desirable species are left undisturbed. If a bulldozer equipped with shearing blade is used, special effort should be made to keep the blade near the soil surface so that the soil is disturbed as little as possible. All stems two inches and larger should be eliminated. It is not necessary to windrow and burn debris. Stump height must be kept low (six inches or less from soil surface) to assure quality of sprouts.

Silvicultural clear-cuts produce even-aged stands that favor intolerant, fast-growing species composition of the new stand. On good upland sites, seedlings of fast-growing species such as yellow-poplar, ash, black locust, black cherry, and birch along with sprouts from the oaks, red maple, and others usually predominate. On the lowlands, seedlings and sprouts from sweetgum, ash, sycamore, the oaks, willow, cottonwood, and others predominate. The poorest sites in the uplands are more easily regenerated to the oaks, but on the better sites, oaks are more difficult and expensive to establish.

A silvicultural clear-cut should not be used as a means to regenerate a fully stocked and over-mature stand. In this instance, the practice may result in total failure as a means of obtaining desirable regeneration naturally. Such stands should be given a shelterwood cut five to ten years prior to the silvicultural clear-cut (see shelterwood below).

Group Selection: This method is often recommended where a landowner desires to lessen impact on wildlife and other resources. The size of the area to be cut may vary, depending on the landowner's wish, but should not be smaller than one acre. The ideal opening created when using the group selection method is probably between eight and ten acres. Site preparation requirements are the same as those recommended for silvicultural clear-cuts. A chief disadvantage of the group selection method is that many small stands are created, causing the woodland to be more difficult to map and administer.

Shelterwood Method: This method is commonly used in the Northeast when the objective is the more shade-tolerant species such as beech and sugar maple. Here in the South, it has been recommended as one that "may work" when the objective is to increase the oak component of the future stand. However, oaks must be present in the understory as advanced regeneration (stems at least one inch diameter at the root collar and 54 inches tall) prior to the final cut.

The acorn crop can vary greatly, both tree

to tree and year to year, with the result that natural establishment of oak seedlings can also vary significantly. In some parts of the southern Appalachians, bumper crops have been produced every four years by white oak and every five years by northern red oak. Even in the good years, most acorns are destroyed by animals, birds and insects.

Once oak seedlings have become established, they require direct overhead sunlight for at least two hours daily to maintain height growth in the understory. However, an oak seedling may die back and resprout many times before the root system dies. Small oak seedlings in the understory have been found to have root systems 20 to 30 years old.

Once a satisfactory number of seedlings have established themselves in the understory, it is necessary to gradually open up the stand's canopy to allow enough sunlight into the forest floor to maintain height growth on the oak seedlings, but keep down growth on the competition.

A three-step shelterwood cut is considered by many specialists as most favorable to southern conditions. The first cut should reduce the overhead stand to 70 to 80 percent stocking, followed two years later by another cut to reduce stocking to 40 to 60 percent, and a final cut five years after the first wherein all stems two inches and up should be removed. If a two-step shelterwood procedure is used, the first cut should reduce stocking to 40 to 60 percent, followed no later than three years by the final cut.

Like artificially regenerated stands, naturally regenerated stands must be protected from domestic grazing and over-sized deer herds. Also, in some upland areas grapevines may totally dominate a regenerated stand. Grapevines should be cut at or near the soil surface at least three years prior to removing the canopy. Their root systems will then die from the lack of sunlight before the canopy is opened. Grapevines rarely present a major problem in bottomlands.

Summary

The uneven-aged management system generally employs hardwood regeneration techniques that favor slower growing, shade tolerant species. The even-aged management system uses regeneration methods that encourage fast-growing, intolerant species. The silvicultural clear-cut and group selection methods are relatively easy to apply and are reliable. The shelterwood method is usually recommended when a landowner wishes to increase the oak component of the future stand. Hardwood plantations are a reliable way to regenerate hardwoods, but can be the most expensive method. ♣

BEEF PRODUCTION IN ALABAMA WOODLANDS—IS IT FOR YOU?



By DAVID PEARCE, RANGE MANAGEMENT SPECIALIST

FORESTLAND GRAZING IN ALABAMA can provide the landowner with the economic flexibility to survive poor market conditions. The production of both beef and timber can produce higher profit than single resource management. This is accomplished through management techniques and planning that coordinate forestry activities such as thinnings and harvests to produce forage for the cattle. This increase in forage production also benefits many wildlife species.

Before considering a beef-timber operation, it must be determined if a grazing potential exists. Forage production in southern forests is controlled by many factors. The best soils produce higher forage yields. Leaf and needle accumulations decrease forage production. The greatest effect on forage is the amount of light received by the forest floor. In open areas and widely spaced pine stands, forage production is highest. To obtain a general idea of the forage available, the landowner should walk over the property and estimate the percent of ground that is covered by native grasses. If the estimate is 25 percent or more, a good grazing potential exists. There also must be a large enough land base, 50 acres or more, before a beef-timber operation should be considered.

If a grazing potential exists, the next consideration should be whether a cattle operation can meet the landowner's objectives for the land. Cattle production requires considerable hours of labor and could interfere with

other management objectives such as camping or quail hunting.

Another consideration for the beef-timber operation is whether the fencing, gates, water, and supplemental feeding can be provided within the landowner's economic framework. Investments in both timber and beef production are long-term investments requiring several years to recover.

Once the landowner decides to produce beef, the number of cattle he should graze must be determined. The following table will provide a general idea of how many cattle can be grazed in a given timber stand. It is assumed that the cattle will be grazed nine months, March through November, and moved to improved pasture for winter.

Table 1—Livestock Production in Southern Pine Forests

Stand Size	Acres per Cow
Open Seedling & Sapling Stage	10
Saplings up to 6" Diameter	15
Poles & Young Sawtimber	30
Sawtimber	30

If we have 25 acres of each stand type, a total of 100 acres, six cattle could be supported. This seems low, but it can be increased by lowering stand density and using prescribed burning and other activities to increase forage production.

There are several ways to increase forage production. When pines are to be planted, prescribed burning should be carried out the summer before to eliminate the hardwoods in the understory. When site preparation is used, light site preparation methods work best. Drum chopping or chemical methods produce more grasses than heavy site preparation such as shearing and windrowing.

Pines should be planted on wider than normal spacing. An 8' x 12' spacing produces higher forage yields later in the pine rotation than do closer spacings, without significant loss of timber production. The cattle should be removed from the pine plantation after frost during the first year of growth to prevent seedling damage.

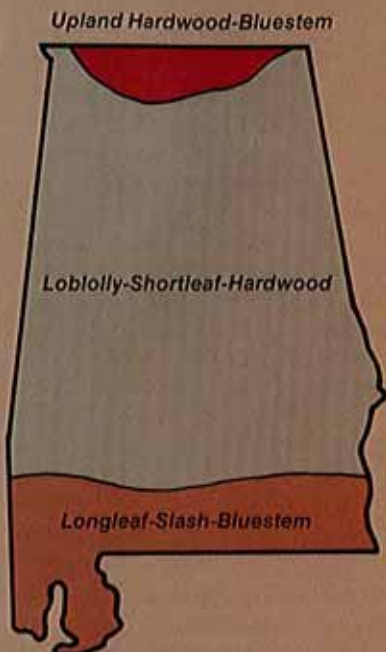
Prescribed burning is an excellent tool to increase forage production. Late winter burns increase both the quantity of forage and its nutrient content. Burning should begin when the trees are ten to fifteen years old and should be done every two to three years.

Improved grasses, primarily bahia or fescue, can be seeded when pines are planted or on fire lanes and road right-of-ways to increase forage. These areas provide grazing and nutrients that cattle require which native forage cannot provide, especially during the winter months.

Cattle that are primarily grazed in woodlands require some supplemental feeding. Liquid supplements or cottonseed cake provides a needed nutrient and protein source

during the winter months. Mineral blocks should also be available to the cattle all year.

Alabama can be divided into three distinct range types. The map indicates the boundaries of each type.



Each range type requires certain techniques and timing of activities to maximize forage and timber production. This is critical to insure a profit and to recover the initial investment in the beef-timber operation.

Under the present unfavorable economic conditions, heavy investments in fences, cattle and equipment are nearly impossible to recover. This is primarily due to high interest rates and the high rate of return other investments can provide. If however, the landowner has fences and/or equipment available and the cattle management will not compete with other activities for the landowner's time, a beef-timber operation can be substantially profitable.

By using multiple-use management techniques and judicious business methods, the Alabama landowner can take advantage of a little used potential the woodlands offer and produce a profit while providing wildlife and environmental protection for our treasured forests. For more information on woodland grazing, contact your local Alabama Forestry Commission representative.

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Practicing What We Preach

State-Owned Woodlands Demonstrate Multiple-Use Management Objective

By LOUIS HYMAN, CHIEF STATE LANDS MANAGEMENT

RECENTLY, THE ALABAMA FORESTRY COMMISSION has started a major new thrust in encouraging good forest resource management on state-owned lands. This thrust, called the Stewardship Program, is designed to develop good multiple use management on lands owned by the Forestry Commission and by other state agencies.

The Stewardship Program can be explained as the careful management of state-owned lands to produce the maximum benefit to the citizens of Alabama in a multiple use forest management system. Presently the program is being implemented on Commission woodlands, state parks, state fishing lakes, and state prison property. About 60,000 acres are presently under cooperative management.

The goal of the program is to develop all state-owned forests into demonstration forests showing good resource management techniques, while at the same time generating a steady stream of income to pay for operations. These goals will be reached under the TREASURE Forest system of forest management.

On commission state forests, timber management is the major focus. But this work is done in a way so as to enhance the other resources of the forest.

Alabama's Forestry Commission state forests are nearly self-sufficient. Anticipated revenues for 1982 are about \$135,000. Most of this money is being spent on improving the

forests themselves. This year 62 acres were planted to pine and 655 acres were prescribed burned on the commission state forests.

Choccolocco State Forest, near Anniston, is the location of a demonstration project on kudzu control. The infested areas were prescribed burned last winter. The areas were then treated with TORDON 10-K pellets at the rate of 50 pounds per acre. The areas will be burned again this fall and spot treated with TORDON next spring. The sites will then be planted to improved loblolly seedlings in the early spring of 1984. The total estimated cost of this operation is estimated at \$230 per acre, including planting.



The major emphases of the Stewardship Program are on natural regeneration and enhancement of other forest resources. Wildlife and aesthetics are helped by prescribed burning and other methods. The primary emphasis of the program varies by owner-agency. Forests

on state parks are primarily managed for recreation and aesthetics, while lands around state fishing lakes are managed for water quality and aesthetics. State forests owned by the forestry commission have the dual aim of revenue production and education. All of these lands are managed for these goals in a way compatible to multiple use management principles. ♣



EDITOR'S UNDERSTORY

By CYNTHIA PAGE

BUMPING ALONG A COUNTRY ROAD and seeing the dust rise in glints of the sun's rays took me back twenty years to a care-free time when frolicking through a pine thicket and kicking rocks along a dirt road were favorite pastimes. The strong-framed elderly man sitting beside me pointed out where cabins and hog pens had once been, and I thought as I listened to him, "Here is a living example of how most people remember their grandfather—witty, gentle, good through and through."

As W. Kelly Mosley opened the door to the lodge to allow my entrance first, every odor, sound, and visual object stimulated my senses once more and made the mental transfer to earlier times complete. A petite, white-haired woman greeted our group with a warm, sincere smile. Theodosia, a newly-wed by most standards, fit into the surroundings like a comfortable shoe fits the foot that's worn it for many years. Oscillating fans frequently guided the odor of her homemade blueberry muffins in my direction.

Of course, you've not really been welcomed to a country home until cokes and iced tea have been set before you, and they soon were as we settled around a large table in straight-backed chairs.

Listening to Kelly Mosley talk about Pineland was much like hearing a proud father tell about the antics of a child. But Pineland isn't his whole life. Besides his family, there's Auburn University! If only all fans could be as dedicated as this one! No wall has escaped a photograph reflecting some event associated with Auburn. As Coach Shug Jordan once said, "Kelly, if you hang just one more picture, you're going to have to build another room!"

After spending more than an hour just "getting a feel" for the Mosleys and Pineland, dinner was ready. (Now, in the rural South, "dinner" comes in the middle of the day.)

Once more those childhood memories overtook me and I briefly forgot that calories mean more than they did twenty years ago. New potatoes, tuna salad with fresh tomatoes, blueberry muffins, and homemade pound cake—"a light meal" according to Theodosia. If I hadn't been brought up with a little bit of manners, the three remaining blueberry muffins would have been stuffed into my pockets for the return trip.

Following "dinner" a stroll outside revealed the origin of the fresh vegetables. A lush, weedless garden was a stone's throw from the lodge and just beyond there was the blueberry patch covered by wire to ward off hungry birds.

The tour of the Mosley's land was equally as delightful as the rest of the day had been. And there seemed to be some real pleasure in Mr. Mosley's insistence that this Alabama

graduate photograph the sign that marked "War Eagle Lane".

Close to the end of the tour we encountered Matthew, a dedicated black friend whose hook hand is by no means a handicap, walking along a pathway. At the offer of a ride back to the lodge, Matthew said, "Just let me get my lunch sack!" As I watched him take the brightly colored cloth sack from the tree branch, I asked why he had put it there. "To keep the crows from getting it!" he replied just like that was something everyone was supposed to know.

After we had toured pine sites, hardwood bottoms, game plots, and lake sites, we drove back to the lodge where Theodosia was preparing poles for an afternoon of fishing. As we were driving away, the Mosleys gave the common Southern departure, "Ya'll come back!" I somehow suspected that this was more than an expression and was sincerely spoken.

We often hear people speak of having an affection for the land, but Kelly Mosley knows what that means. He unselfishly and diligently has dedicated himself to managing his land to achieve the maximum benefits, but not just for himself. At age 80 he cannot realistically expect to reap monetary gains from the trees he is planting now. He can enjoy the recreation, beauty, and the pleasure he receives in allowing others to enjoy his land. He has devoted himself to improving forestry by spreading his wealth to others through grants and environmental achievement awards. He has a Tree Farm and a TREASURE Forest, and he is a treasure himself.

I'm glad I met Kelly and Theodosia Mosley.



A Pineland welcome . . .

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DISTRICT 10—David L. Duckett, District Forester, 2181 Federal Dr., Montgomery 36109, 832-6580; **Bullock County**—W. J. Green, Box 392, Union Springs 36089, 738-3040; **Elmore County**—C. R. Carpenter, Rt. 4, Box 70, Wetumpka 36092, 567-5486; **Lee County**—J. B. Coker, Box 502, Opelika 36801, 745-6824; **Lowndes County**—William C. Davis, Box 206, Hayneville 36040, 548-2402; **Macon County**—Benny Faulkner, Rt. 1, Box 204, Tuskegee 36083, 727-3783; **Montgomery County**—F. Bruce Johnson, 2181 Federal Dr., Montgomery 36109, 832-6580; **Russell County**—Melvin Phelps, Route 2, Box 4-N, Seale 36875, 855-3302.

