

Prescribed Burning in Newly Planted Longleaf Pine

Alabama Guide Sheet No. AL 338A



Definition

Prescribed burning is an integral part of the longleaf pine ecosystem. A prescribed burn can be defined as a practice that uses controlled fire to reduce competition, control disease, provide for the establishment of native vegetation and wildlife habitat.

Benefits of Fire

Prescribed fire is essential for the establishment and maintenance of the longleaf pine ecosystem, which includes a whole community of native plants and wildlife. There are many objectives for the use of prescribed fire in longleaf stands. The regular application of prescribed fire can reduce the competition of low-value hardwood and shrub species that invade longleaf forests and take the moisture, nutrients, space, and light needed for pine regeneration. Prescribed fire controls brown spot disease in the young longleaf pine. The native plant community is restored and diversified with the proper use of prescribed fire. Prescribed fire helps provide many wildlife habitat benefits. Fire stimulates sprouting to provide readily available browse for wildlife, opens up brushy areas, and scarifies the seed of native legumes and other plants, which benefit wildlife. The accumulation of litter in unburned forest stands can be a source of fuel for wildfires. A periodic prescribed burn allows the fuel to be consumed in a planned and controlled manner and decreases the chances of loss to the overall value of the stand because of wildfire. Prescribed burning is an indispensable tool used to accomplish many vegetation management goals in longleaf forests.

When to Burn

An initial prescribed burn may be conducted within the first three years of planting. The initial burn should be conducted before the majority of seedlings initiate height growth. *This means burning when seedlings are in the grass stage or after the majority reaches three feet in height.* Burning outside of these situations could result in damage to the stand. Although longleaf pine can tolerate prescribed fire at a young age, reasonable care must be taken to select conditions and techniques that result in a burn that would not damage tree seedlings. Prescribed burns would normally be conducted during the winter months from December through February. There may be situations where there is not enough grass, weeds, and other material to carry the fire for the first few years. In these situations, the first prescribed fire could be delayed until the majority of the seedlings exceed three feet in height. A prescribed burn should not be conducted in situations that are unsuitable or outside of recommended burning conditions.

It is desirable to prescribe burn every three years to properly manage and maintain the stand. Since many variables play a role in prescribed burning, the burn should be performed under the supervision of a certified burning prescriptionist. The prescriptionist will be familiar with the proper weather conditions, amount of fuel, fuel moisture, and conditions necessary for a proper burn.

Burn Plan

The specifications for the burn plan should cover and accommodate the burning for each specific site. The

plan should be prepared by someone certified in the use of prescribed fire. For any additional information on the burn plan, refer to Alabama Guidesheet 338 — Prescribed Burning.

Burning Permit Required

Before a prescribed burn is conducted, a permit is required from the Alabama Forestry Commission (AFC). On the day of the burn, call the AFC to receive a permit (1-800-392-5679). The AFC will require the following information:

Type burn (fuel reduction); Section, Township and Range; number of acres; landowner name; person responsible (person conducting the burn); and a telephone number.

Safety precautions must always be used when conducting a prescribed burn. You must have adequate tools and labor. There is a potential liability and loss of human life and property if burning is not conducted properly. You must comply with all applicable laws. Only those trained and experienced in prescribed burning should conduct this practice. Notify adjacent landowners before the prescribed burn.

Effects on Wildlife

Much emphasis is placed on the prescribed burn and its affect on the surrounding wildlife species. The negative effects of prescribed burns include the destruction of nesting sites and/or animals trapped inside the fire. In most cases, this can be avoided by executing the burns when the nests are unoccupied. In the South, fires usually do not get hot enough or move fast enough to trap and kill wildlife species inhabiting the burn site. It is important to remember that a prescribed burn is different than a wildfire. The majority of effects of prescribed burning indirectly benefits the amount of food and cover for wildlife. The “edge habitat” and available browse is increased

which is favorable for deer and quail. Burning also provides the semi-open conditions that turkey and quail prefer. Vegetation along stream edges should be excluded from the burn.

Smoke Management

The smoke produced from prescribed fires can become a problem when weather conditions are not optimal. Smoke management is the concept of identifying potential problems related to the smoke from the burn and taking the proper steps to minimize its impact. Smoke management must be considered when developing the burn plan. The first step in smoke management is to locate the smoke sensitive areas near the burn site. This includes highways, hospitals, airports, livestock areas, populated sites, etc. Atmospheric conditions always deteriorate at night. Smoke will stay near the ground and drift down-slope and down-drainage, settling in low areas.

References

- Prescribed Burning in Alabama Forests (Circular ANR-331), Alabama Cooperative Extension System
- Mobley, H. E. et al. *A Guide for Prescribed Fire in Southern Forests*. U. S. Department of Agriculture Forest Service.
- Mobley, H. E., Forestry Consultant. *Smoke Management Guidelines for Prescribed Burning in the Southeast*, 1996.
- Schemnitz, S. D. ed. *Wildlife Management Techniques Manual*, 4th Ed.
- University of Georgia Forest Resource Web Site
- Conservation Practice Standard, Prescribed Burning (338-1)

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write the USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.