

HOW FIRE TOLERANT IS LONGLEAF PINE?

Seedling and sapling longleaf pines can tolerate intense fires that move quickly through very flammable fine fuels comprised of grasses, forbs, and low brush.



Although scorched sapling longleaf pines might at first appear to be a total loss, a thick bark, new terminal shoots that have a large girth, dense tufts of needles that protect the new buds, and a physiology that rapidly replaces dead foliage results in longleaf pine being more tolerant of fire than other woody plants.



Reapplying fire every 2 or 3 years keeps dead fuels from accumulating and maintains a cover of desirable fine fuels.



WHAT CAN HAPPEN IF FIRE IS DELAYED?

As the period between fires lengthens, pine litter and woody debris accumulates. These fuels burn hotter than grass and forb fuels, and with more fuel available for combustion, fires can reach lethal temperatures. Extensive longleaf pine mortality can result. Even if the stem is not obviously killed, prolonged combustion of fuels that accumulated around the base of trees can girdle the stem or



mortality of shallow roots growing beneath and within the litter layer may lead to death. Even if the tree is not killed, injured stem and roots often attract harmful insects that can spread pathogens. Special care must be taken if burning where litter has accumulated.

Disclaimer: The application of fire is a practice that requires much skill and knowledge of local fuel conditions. A licensed or certified burner with local experience should plan and execute the prescribed burn.

For More Information Scan Here!

Website: <http://www.srs.fs.usda.gov/longleaf>



Or Contact

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PRESCRIBED FIRE – A NECESSARY MANAGEMENT TOOL FOR LONGLEAF PINE



RESTORING AND MANAGING LONGLEAF PINE ECOSYSTEMS

THE LONGLEAF PINE/BLUESTEM RANGE

...once extended from northwestern Florida and southern Alabama to eastern Texas and included about 10 million acres in 1935. Uncontrolled harvesting denuded most of this range, and wild-fires, overgrazing by livestock, and foraging by feral hogs kept natural pine regeneration from restocking these lands. Longleaf pine management became possible only after feral hogs were controlled, other livestock placed under management, and fire use restrained.



Where a seed source was available, longleaf pine was now able to regenerate naturally, and the seedlings grew where prescribed fires were routinely applied.



THE FIRE ADVANTAGE

Prescribed fire was applied in the bluestem range to remove stubble, reduce brush cover, and provide cattle with fresh, high quality grass forage. Fire was reapplied every few years to sustain range quality. Fires favored longleaf pine because it killed the regeneration of other pine species, kept brush in check, removed litter that smothered young



longleaf pine seedlings, and helped control brown-spot needle blight disease that stunted seedling growth. The reapplication of prescribed fire allowed the longleaf pine seedlings to bolt from the grass-stage sooner than they would without fire and overtop the competing vegetation. This advantage meant that pure longleaf pine stands could be established with few midstory trees and shrubs. The rich and productive understories were mostly grasses, a multitude of composites, legumes and other forbs, and low scattered woody plants.



WHAT HAPPENS IF FIRE IS NOT APPLIED?

Without fire, even well-established grass cover will be smothered by encroaching woody vegetation that establishes from seed or roots. This process does not take long in the southeastern United States. Within less than a decade, falling litter and shading by rapidly growing understory trees and shrubs all but eliminate herbaceous vegetation. If nothing is done, a natural mixed pine—



hardwood overstory and midstory develops with an understory of hardwood trees and shrubs and a few shade tolerant herbs.

