Photo by John Pirtle

Why Do We Burn?

By *Swamp Fox*

From the days of our youth, we are warned about the hazards of fire. Through sometimes painful experience, we learn about it firsthand. Smokey Bear brought us the same message concerning fire in the forest. Wildfires that destroy homes as well as timber show us that Smokey had a valid message; but as we know, fire has a positive side, too.

Fire is a natural part of many ecosystems. Before man appeared on the scene in North America, fires burned through many areas periodically, with most of these fires being started from lightning strikes. These fires influenced vegetation and wildlife found in an area, and the vegetation and wildlife sometimes influenced the fire regimen.

Native Americans observed these patterns and intentionally set fires to achieve different goals on the lands where they lived. Early settlers used fire in forest areas as well. These efforts sometimes had less than desirable results.

Over the years, through trial and error as well as research, prescribed burning has been developed into a science and an art. Today, planned, controlled burning is one of the most useful tools we have for land management, and it can be used to achieve multiple goals. Although prescribed burning is a valuable tool, it should not be attempted without careful planning, desired conditions, a burn permit, and experienced personnel and equipment to carry out and contain the burn.

Possibly the most important use for prescribed burning is to reduce hazardous fuels. When fire is excluded from an area – especially pine forests – fuel builds up rapidly in the form of pine needles, fallen branches, and understory vegetation. After several years of fuel accumulation, if a wildfire breaks out – whether by natural causes, accident, or arson – the fire can burn very intensely. The fire can do great damage to timber in the stand, as well as spread to surrounding areas.

Prescribed burning can be used periodically to keep these fuel levels low, with burning intervals determined by fuel buildup. If a wildfire does break out between controlled burns, the fire burns with less intensity, does less damage to timber, and is easier to contain and extinguish.

Regenerating southern pine often involves some form of controlled burning. For direct seeding or natural regeneration, fire can be used to expose mineral soil to ensure a good seed catch. For mechanical or hand planting, fire can be used to reduce debris for better access by machinery or hand-planting crews. Along with other mechanical or herbicide site prep treatments, fire may be

(Continued on page 8)

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(Continued from page 7)

used to help control competing vegetation until seedlings can get a head start.

Once the pine stand is established and of adequate age and size, prescribed burning may be needed to help control competing understory hardwoods. Fire is most effective when used to control small diameter hardwoods. A series of burns at different seasons may be required to obtain the best results. In a particularly rank hardwood understory, it may be necessary to team fire with selective herbicides to achieve control.

An often overlooked use of prescribed burning is disease control. Brownspot disease in longleaf pine, as well as root rot, are controlled or lessened with fire.

Trying to wade through an understory thicket of greenbrier, blackberry, and hardwood brush will make clear how useful prescribed fire can be to improve access by burning off underbrush. The improved access will greatly aid in marketing timber products, or just provide pleasant walking conditions through the forest.

Prescribed fire is useful for more than timber management alone. As stated earlier, fire is a natural part of many ecosystems. It actually helps to create and shape wildlife habitat by influencing the types of vegetation that occur in an area. The vegetation types influence the wildlife species, both game and nongame, that will occur in an area.

Among the wildlife species in the southeastern U.S. that use or depend on areas maintained by fire are quail, doves, turkey, deer, gopher tortoise, red-cockaded woodpecker, and numerous songbirds. As with other uses for prescribed fire, burning to enhance wildlife habitat calls for a well thought-out plan geared to the needs of the wildlife species being considered.

Another use for prescribed fire that often occurs as a byproduct of burning for other reasons – but could be a primary purpose – is to improve aesthetics . . . enhance the view. As discussed before, burning can remove dense underbrush, creating open understory pine forests. These open understory conditions often result in more herbaceous vegetation and wildflowers, more wildlife species, easier access, and greater visibility.

Just as prescribed burning can improve understory vegetation conditions for wildlife, the same can hold true for grazing conditions when cattle are allowed to graze in pine stands. The growth that follows a burn is usually more desirable to cattle and has a higher nutrient quality.

One of the best attributes of prescribed burning is that a burn carried out primarily for one purpose may actually achieve a number of other desirable results at the same time. Fire used to control understory hardwoods may also reduce fuel, enhance wildlife habitat, and improve access and aesthetics. With proper planning, experienced personnel, and exacting conditions, it is one of the best tools we have for land management. For more information on prescribed burning, contact the Alabama Forestry Commission office in your county.

Editor's Note: Be sure and watch for the next story by Swamp Fox about ivory bill woodpeckers, "Listen for the Double Knock," in an upcoming issue of ***Alabama's TREASURED Forests.***

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