



MANAGING HABITAT

WHAT TO DO IN THE SPRING AND SUMMER

By Alec Conrad and Scott Edwards

As we travel throughout Mississippi working with private landowners to improve wildlife habitat on their property, one of the busiest times of the year for us is early spring. Many landowners emerge from the fall/winter hunting season unsatisfied with their recent hunting experiences and are determined to have a better season next year. While sometimes the hunter's expectations can be unrealistic, we can make significant improvements to wildlife populations and hunting opportunities by improving habitat quality on the property. After all, wildlife live and grow in forests and fields, and will respond to habitat improvements that increase forage quality and quantity, provide adequate cover, and ensure a diversity of habitat types to meet wildlife needs year round. The following are some of our most commonly recommended habitat management practices that land managers can consider implementing on their property during this upcoming spring and summer.

Forest Inventory

Forest conditions (such as tree species, density, sizes, and merchantable products) determine the economic value of timber stands on a property, but they also have a profound influence in determining what species of wildlife can use them, when they use them, and if they are able to thrive, or just simply survive. Forest management techniques such as timber harvest, prescribed fire, and selective herbicide application are frequently used to manipulate these characteristics to improve financial gains from timber revenue, but they can also be tailored to improve habitat quality for a certain wildlife species or suite of species. But, to know what techniques are appropriate to use and the optimal timing to apply them to achieve specific management objectives, land managers need to have an idea about what is currently on the ground. One of the first tasks we recommend to forest landowners is to have their timber stands cruised by

a registered forester. This timber stand inventory will provide a better understanding regarding the different kinds of trees found on a property, as well as their product classes, sizes, and quality. All of these characteristics influence a timber stand's economic value. For the best results obtaining a quality timber cruise, we recommend contacting a professional forester who is registered (i.e., licensed) by the State of Mississippi. A list of registered foresters by county can be obtained at www.cfr.msstate.edu/borf. Additionally, landowners should consider contacting the Mississippi Forestry Commission about the Forest Stewardship Program, which helps develop a 10-year forest management plan for landowners. More information on Forest Stewardship can be found at www.mfc.ms.gov/stewardship.php.

Prescribed Fire

Prescribed fire in upland forests and fields is one of the best and most cost-effective habitat management practices available. Historically, fires were much more common across Mississippi's landscape than they are today, and some wildlife species suffer from the declining use of fire. Many landowners are hesitant to use fire as a management tool due to concerns regarding liability issues, as well as the cost of burning. Prescribed fire can be defined as the targeted use of fire to accomplish a specific purpose (i.e., fuel reduction, improvement of wildlife habitat, minimization of wildfire risk, etc.) and is applied skillfully by trained burners in predetermined locations and under exact weather conditions. When applied correctly, prescribed fires can be an effective, safe, and affordable habitat management tool.

Burning is most often conducted in the late winter and early spring, and these dormant season fires essentially prepare the land for the flush of vegetation growth during spring green-up. Frequent fire (i.e., burning every 2–3 years) maintains early stages of plant succession that bobwhite quail chicks and wild turkey poults require, and it produces tremendous growth of quality plants that provide deer forage and cover.

It often takes land managers several months to prepare their land for a burn, so spring is the best time to get started

making preparations for the next winter's burning season. Fire lanes will need to be installed completely around each timber stand or field that will be burned. These bare soil lanes are essential to help ensure the fire is contained within the burn unit. Consider installing fire lanes during the dry summer months. Often, a bulldozer is necessary to clear a sufficient lane (i.e., 6–10 feet wide) and then a tractor with a disk is needed to break the soil up. Always disk the firelanes again right before the burn to make sure there is no vegetation on the lane that could carry the fire across the lane.

Roadside Management

Most properties have one or more access roads, whether graveled roads or ATV trails through the woods, and usually there is very little if any open area between the road and the forest. Creating open space on either side of the road or trail can be an easy way to improve wildlife habitat in strategic locations. Many wildlife species, particularly deer and turkey, will use these trails as travel corridors, so it makes strategic sense to locate food and cover alongside preferred travel routes. This can easily be accomplished while timber thinning is occurring on a property by having the logger clear 20–30 yards along each side of the road. These open areas can be treated with a selective herbicide, if needed, to control undesirable brush from growing and favoring the growth of higher-quality forages that provide food and cover. If a thinning operation is not scheduled on your property, the hack-and-squirt method to selectively remove undesirable trees and create openings.

Management of roadsides will be necessary to prevent them from growing too rank with woody shrubs and sapling trees. The simplest management practice to maintain quality plant and grass growth is to disk the roadsides every other year. Essentially, you can disk one side of the road one year and the other side during the following year. Fall is the best time period to disk that will favor forb and legume growth the following growing season. Roadsides adjoining forest stands that will receive a prescribed burn can also be burned to reduce the fuel load and stimulate desirable plant growth. These managed roadsides

will provide excellent forage for deer, and will attract an abundance of insects that provides great foraging and brooding cover for turkey and quail.

Hack and Squirt

In most hardwood stands, light reaching the forest floor is insufficient to allow development of understory plants that many wildlife species depend on to meet their requirements for food and cover. Most of the available light is captured by the upper canopy, but sometimes a significant portion is intercepted by shade-tolerant trees in the mid-story. This is especially true in stands that are over-mature or those where small canopy gaps have been created by storms, flooding, or light harvesting in recent decades. Because mid-story trees are rarely merchantable, the most practical method of removing these trees is the hack-and-squirt, or stem injection, method. This method can be used to selectively remove trees by using a hatchet to make a small cut and then applying a small amount of herbicide in the cut area with a common spray bottle. Hack-and-squirt is more effective than mechanical methods and more appropriate than other herbicide application methods for mid-story control in hardwood stands because little chemical is wasted, risk to non-target species is negligible, and it is effective regardless of tree size. Hack-and-squirt is also useful for controlling invasive species such as Chinese tallow tree or Chinaberry, creating thickets along forest edges and roadsides. When used in conjunction with partial timber harvests, this method is also effective for encouraging the development of valuable timber species like the oaks. Hack-and-squirt using the chemical imazapyr (Arsenal AC or the generic Polaris AC) is effective most times of the year, with the exception of winter when trees are completely dormant.

Food Plots

From a habitat management perspective, the utility of food plots really lies in the ability to supply an abundance of high-quality food during times when animals are stressed. Late winter and early spring is a particularly stressful time for wildlife before spring green-up, and the summer months can be stressful for wildlife as many species' females must carry,



Spraying food plots



Forest Inventory



Managed Roadside

give birth, and care for their young. If you want to increase the benefits that food plots can have on your property, consider planting some warm-season plots this spring.

Establishing successful warm-season food plots begins with selecting fertile sites and performing soil tests to get specific liming and fertilizer requirements. Do not skip this step! Soil testing is cheap (i.e., approximately \$6 per sample) when you consider the costs of wasting fertilizer resulting from improper soil pH and over-application. Also, realize that large plots, at least 2–5 acres, are often required to prevent deer from over-browsing the forages during establishment of warm season plots.

When deciding what to plant, consider a legume like soybeans and iron clay cowpeas. Both are highly preferred deer forages that are high in protein, produce seeds that are readily eaten by wild turkeys and bobwhite quail, and are adapted to a variety of site conditions. We recommend using forage rather than production varieties because they have a more vine-like growth habit and can better withstand deer browsing pressure. Iron clay cowpeas are more browse resistant than most other legumes, are extremely

drought tolerant, and may perform better than soybeans on drier sites. When planting legumes, remember to inoculate seeds with the appropriate strain of bacterium. Also, legumes may benefit greatly from fertilization of phosphorous and potassium but can be damaged by excessive nitrogen fertilization.

Single species plantings allow the greatest flexibility for controlling weed competition. A pre-emergent herbicide application is almost certainly needed to insure successful establishment for summer annual forages. Planting a mixture narrows the list of suitable herbicides. If you want to plant a mix, sunflowers or corn can be planted at low rates in both soybeans and cowpeas. Their vertical structure adds a cover component to plots and can improve forage production as soybeans and cowpeas vines climb their stalks. Always plant seeds on a well-prepared seedbed at the proper depths required for each plant. When planting mixtures, it is beneficial to sow plants that differ by rate and seed-depth requirements separately. The Mississippi State University Extension Service Publication, Supplemental Wildlife Food Planting Manual for the Southeast, is a good reference to obtain specific instruc-

tions for soil testing, seedbed preparation, seeding rates, herbicide application, and other warm-season planting options. This publication is available at www.msucare.com.

Conclusion

Land managers who make the greatest impact on their properties conduct some form of habitat management activity virtually every month during the year. It often takes multiple steps before some practices can be implemented, such as in the case of clearing and preparing fire lanes before a prescribed fire can be administered. Thus, spring is a great time of year to start planning ahead for activities that will improve wildlife habitat on your property and hopefully make a positive impact on your future hunting opportunities. For more information on habitat management or to contact your regional MDWFP Private Lands Habitat Program Biologist, please visit www.mdwfp.com/habitat.

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