USDA NRCS
Natural Resources Conservation Service

White-Tailed Deer Management

Alabama Guide Sheet No. AL 645A

Herd Management

Deer hunting has become the most popular form of hunting in Alabama. Many landowners and hunters take an active role in deer management on the properties they own or hunt.

In deciding whether to manage land for deer, an important decision must be made. You must decide whether to control the herd so that the number of deer will not exceed carrying capacity, or to increase carrying capacity so that a larger herd can be supported. The first choice is usually better.

During most of the hunting season in Alabama, it is legal to harvest only bucks with antlers visible above the natural hairline. When only bucks are harvested, less than 10 percent of the fall population will usually be taken each year. Such low harvest is satisfactory on areas with good habitat and few deer. But it can be disastrous where deer populations are about to reach carrying capacity or have already done so. On the latter areas, about one-third of the fall population, including about equal numbers of both sexes, should be harvested each year. If not, deer frequently become overpopulated, due to the low numbers of natural predators which would otherwise keep herd size under control. The best known way to harvest one-third of a deer population every year and thus prevent overpopulation, is to have a well regulated either-sex hunting season. Alabama has such a season, which results in high sustained annual yields of desirable deer for both recreation and food and prevents overpopulation.

Characteristics Of An Overpopulated Area

- Choice deer foods are eliminated
- The fawn crop is smaller
- Mortality is higher, especially among fawns and older deer
- Average weight in various age classes decreases
- Bucks have smaller antlers
- Harvestable bucks make up a smaller percentage of the herd
- In farming areas, crop damage is more serious
- Parasites and diseases of deer are more prevalent
- Forest reproduction is heavily browsed

Carrying Capacity

The number of deer an area can support is usually determined by the quality and quantity of winter food available within 4.5 feet of the ground. In general, upland areas may support one deer on every 25 acres during winter, the least favorable season. Lowlands may support one on every 8-12 acres. It appears that these numbers can be supported year after year without damage to deer habitat.

Deer populations should be maintained at densities somewhat below carrying capacity. The best known way of doing this is to have a well regulated either-sex hunting season. Such a season results in high sustained annual yields of desirable deer for both recreation and food and prevents overpopulation.

The Alabama Cooperative Deer Management Assistance Program (DMP) was developed in 1984 to

assist those who wish to intensify deer management on their land. The DMP is managed by the Alabama Department of Conservation and Natural Resources. Over 2,100 landowners and clubs covering 4 million acres are enrolled as DMP cooperators. Wildlife biologists are assigned to help cooperators develop deer management plans and harvest strategies. Cooperators collect biological information from deer taken on their lands each year. Analysis of the data results in a status report and deer management recommendations which are provided to each cooperator before the following hunting season.

Habitat Management Practices

Retaining Present Cover and Food

Retain woodland, especially woodland with an abundance of tender undergrowth, within 4.5 feet of the ground. On each acre of woodland, retain five or more acorn-bearing oaks, preferably with diameters of 16 inches or more. Retain trees including several species of oaks from both white and red oak groups. If one species fails to mast, others will likely succeed. Ideal cover contains equal parts of mature hardwood forest, cropland, brushland and pastureland. The best being mixed forest stand, especially bottomland hardwoods with scattered openings and abundance of tender growth. The number of deer that an area can support is usually determined by the quantity and quality of winter food available within 4.5 feet of the ground.

Riparian Areas

Riparian areas are valuable to wildlife, especially in heavily farmed areas. Woody vegetation along streambanks tie together fence rows, brushy drainage ways, and scattered woodlots. In doing so, the vegetation forms a network of trees, shrubs, and vines which ensures variety in areas often dominated by row crops and pastures. This diversity provides suitable cover near food plots and provides food in the form of acorns, browse, and fruits. Riparian areas are helpful in controlling streambank erosion and protecting streams from sediment and other pollutants such as pesticides and fertilizers.

Manage Edge Vegetation

Pine plantation edge habitat—where the forest meets the field—has extra value for certain game such as deer. Beginning around 1988, the Conservation Reserve Program (CRP) paid landowners to convert cropland to planted pines. Now these pines are approaching the size where they will benefit from timber management practices such as thinning and fire, which in turn benefit white-tailed deer. Do not farm to the edge of the pines. Allow the edge to advance somewhat into the field to make a border. Manage this border by mowing, disking, thinning, planting, and cutting.

- Allow trees to volunteer in among the pines along the edge. Remove unwanted trees in the edge so as to put the growth on preferred ones.
- Allow the vegetation to grow tall next to the pines. Mow or disk a strip of this medium height vegetation every 2-3 years. Mow strip on a rotation, so as to skip sections each year.
- Mow or disk a second strip 15-20 feet out from the edge of the pines. This will maintain young plants for forage.
- Plant preferred wildlife forages and seed plants in the disked strip and fruit or nut trees along the edge.
- Thin pines heavily along the edge of the plantation to broaden the edge. An abrupt edge where dense forest meets open field is called a “high contrast” edge. A feathered edge with scattered pines produces a more gradual change from dense to open over a wider zone. This is a “low contrast” edge, and is better for wildlife species.

Creating Habitat and Natural Foods

Tree canopy should be open enough to allow sunlight to reach the forest floor. Any woodland practice, including prescribed burning, which opens the canopy and either creates or maintains desirable undergrowth within 4.5 feet of the floor is satisfactory.

Openings can be created by cutting trees from the site. They should be 1-5 acres in size, at least 200 feet wide, and well distributed. One opening for every 20 acres of woodland is usually enough for high deer populations.

Water

Construct small water holes if water is scarce or absent. Wildlife ponds should have a surface area of at least 1/2 acre. Deer should have to travel no farther than one-half mile to get water.

Establishment of Suitable Food Plots

Deer require a varied diet. At one time, they were thought to feed almost entirely on browse or the leaves and twigs of woody plants. Recent studies

show, however, that many grasses, weeds, fruits mushrooms and other fungi, agricultural crops, flowers and other foods are also important in their diet. Deer select foods that provide nutrients that they need at certain times of the year. Therefore, a variety of plantings is better than a single crop.

During spring, summer and early fall, deer eat succulent grasses, legumes, forbs, fruits, various agricultural crops, and the tender growth of shrubs, trees, and vines. During late fall and winter, they feed on acorns, grasses, fruits, forage in improved pastures, various agricultural crops, green stems of dogwood, greenbrier, and other woody plants. Acorns are especially important because they help condition deer for the relatively lean winter months. The ideal size of a winter food plot is 1-3 acres. Locate your winter plots in sites that are already open. This will decrease the initial establishment cost and minimize the amount of timber revenue you or the landowner will lose by putting the land in wildlife food plantings. Small grains and clovers are usually planted as cool season foods. Mixes are often planted to spread the production over a longer period of time. Plots should be well distributed and located near woodland. They should be large enough that deer will not overbrowse them. Feeding hay or grain during cold weather is not recommended.

Suitable Food Plot Crops for Management of Deer

Warm Season Crops	***Avg. Cost Per Acre***	***Seeding Rate Per Acre***
Cowpea	59.50	120 lbs broadcast
Jointvetch	103.20	20 lbs
Sericea lespedeza	108.10	30 lbs broadcast
Kobe lespedeza	76.30	30 lbs
Soybean	64.70	40 lbs rows
Cool Season Crops*	***Avg. Cost Per Acre***	***Seeding Rate Per Acre***
Alfalfa	107.20	30 lbs
Crimson Clover	53.00	25 lbs broadcast
Ladino Clover	47.26	3 lbs broadcast
Red Clover	55.60	15 lbs
Oats	90.76	60-90 lbs
Rye	93.16	60-90 lbs
Ryegrass	88.07	40 lbs broadcast
Wheat	93.37	60-90 lbs broadcast

* *Recommendations for"Deer Plots for Cool-Season Forage crops (Circular ANR-592), ACES, By Dr. Lee Stribling*

Small Grain And Clover Mixes

Mix #1	Mix #2	Mix #3	Mix #4
2 bu wheat 1 bu oats 5 lb crimson clover 7 lb red clover	1 bu wheat 1 bu rye 1 bu oats 5 lb crimson clover 7 lb red clover	2 bu rye 5 lb ladino clover	15 lb red clover 10 lb crimson clover

*Amounts are for planting a 1-acre food plot

Mix #1 and #2 are adapted to a wide variety of soil types and conditions and will have to be replanted annually. Mix #3 will do best on soils that have good moisture retention capabilities, but are not wet. Examples are moist bottomlands or blackbelt soils. This mix can persist for 5 years or longer once established. Mix #4 will produce on sites that become too dry for ladino clovers, and will persist for 1-2 years and then should be replanted.

Proper land preparation is essential for the establishment of clovers. This includes plowing, application of lime and fertilizer, seedbed preparation, innoculant, planting date, and planting method.

If the planting goal is to facilitate harvest, then forages should be used that are highly palatable to deer, produce well, and are cost-effective from early autumn through winter. If year round supplemental feeding is the objective of a planting, preferred forages that provide an adequate quantity of cost effective, high protein forage during specific time periods should be used.

Seed cost varies by season and generally is higher for warm season forages. Wheat, oats, and rye are the most cost-effective for attracting deer during hunting season. Also, ryegrass and crimson clover are cost-effective for supplying forage during hunting season and winter stress if they are planted on good soils that support reseeding and perennial growth. From spring through summer, ladino and red clovers are very cost-effective, especially when planted on sites that facilitate perennial growth. Because there is little difference in production, nutritional quality and deer preference among different varieties of most forages, seed availability and cost should determine choice of a forage variety.

Good Locations For Annual Food Plots

- Woodlands
- Utility rights-of-way (with permission from utility)
- Idle crop fields
- Old logging decks
- Fire breaks

Maintenance

Protect areas from wildfire and overgrazing by livestock. Manage woodland in such way that an uneven-aged stand of many kinds of trees are present, including five or more acorn-bearing oaks per acre. An abundance of tender undergrowth over at least half of the woodland is desirable. Maintain low-growing vegetation in woodland openings by mowing, disking, burning, or by other means.

Prescribed Burning

Fire is among the most valuable and cost-effective tools available for managing habitat, yet is probably the least understood. A prescribed burn removes vegetation from only part of the total area. Additionally, the recovery of burned areas is swift and the resulting new vegetation and conditions on the ground are much more “user friendly” for wildlife. Some benefits of burning include improving browse and controlling woody brush. Burning is preferred in late winter or early spring. Burn a tract once every 2-3 years, or burn about one-third of the forest in any given year. This creates a mosaic of different-aged burns in a relatively small area. Land users should either undergo training to become certified in the use of prescribed fire or retain a professional who has training and experience in prescribed burning. It is essential to have proper equipment and permits to plan and conduct a controlled fire.

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