

Bobwhite Quail Management

Alabama Guide Sheet No. AL645



Habitat Management Practices

Habitat management for quail consists mostly of creating or managing suitable cover and food. For food and cover to be suitable for quail, they must be present in sufficient quantities, be of high quality, and be readily available.

Native plants are those which are naturally present in an area and will readily grow there. It is much easier and more economical to manage native cover than to establish new plantings for habitat. In most cases, these native plants can be encouraged by practices such as disking or prescribed burning. When a combination of these practices is properly applied to the land, suitable conditions for quail will be the result.

Creating Natural Foods and Maintaining Habitat

Prescribed Burning

Fire is among the most valuable and cost effective tools available for managing bobwhite quail 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 the quail. Benefits include: reducing plant litter (the accumulation of which makes walking and food foraging difficult), controlling woody plants, releasing dormant seeds, and increasing the number of small insects attracted to the new vegetation.

Burning in late winter or early spring removes litter and grass thatch and encourages butterfly pea, lespedezas, milkpeas, partridge peas, and beggar lice. Burn a field once every 2-3 years or burn about one-third of the field in any given year. This creates a mosaic of different-aged burns in a relatively small area. Areas that are left alone will advance into less desirable stages of succession and produce unfavorable habitat for quail. Do not burn from late April through August, since this is quail nesting season.

Any land user should either undergo training or 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.

Water

Although quail use free water when it is available, drinking water is usually not essential. Water needs are normally satisfied by drinking dew and eating berries or insects.

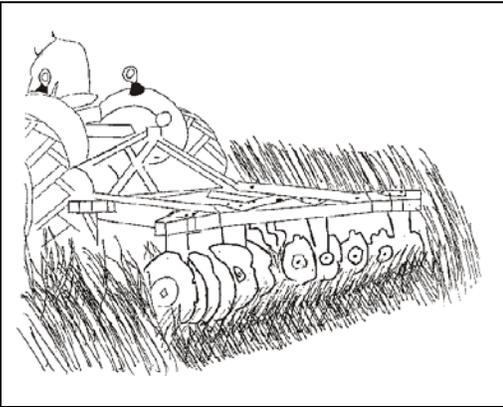
Maintaining Habitat

Productive quail habitat consists of a distribution of small fields separated by open pine woodland and a dispersion of thicket cover. At least 25 percent of the quail range should be in small fields of 3-5 acres in size. A field 100 yards wide and 200 yards long is adequate. Woodlands should be open canopy, and shrub thickets should be available across the range, particularly near feeding areas.

Leaving field edges uncultivated provides a transition zone from agricultural fields to woodlands. Maintain this zone by periodically disking, burning, or mowing. Stands of natural quail food should be located near suitable quail cover. Protect food and cover from wildfire and overgrazing by livestock. Keep most of the cover open enough that quail can walk freely through it. Maintain woodland openings by periodic mowing, disking, burning, or other means. Habitat land managed for quail must also be protected from erosion.

Cut bicolor near ground level in late winter following its second growing season and apply appropriate fertilizer. Apply 800 pounds of 0-24-24 or its equivalent per acre. Cut and fertilize bicolor every 3-5 years thereafter.

Mowing can be detrimental to quail if conducted during the nesting season. Bobwhites usually nest in Alabama from mid March until late August, depending upon weather conditions. Carefully plan mowing, or other ground disturbing activities, to avoid destroying nests.



Strip disking is a great way to maintain the native plants and ensure quality quail habitats.

Strip Disking

The purpose of strip disking is to maintain old field environments in a fallow condition that will encourage the growth of plants and insects that provide key bobwhite food and cover resources. The best way to improve an old field is to disk strips through the field during the fall or spring. Disking sets back plant succession, creates open ground, and stimulates early plant successional stages. Light but thorough disking in late winter encourages annual lespedezas and partridge peas. Winter disking encourages common ragweed and partridge pea.

Strips should be 30-50 feet wide, on the contour and as long as possible. Leave similar sized undisked areas in between strips. The adjacent areas will provide nesting habitat, while the disked areas will provide a habitat rich in seeds and insects. After a year, disk the previously undisked areas and let the disked areas grow for

1-2 years. The key is to maintain a mosaic of vegetation that is 0-1, 1-2 and 2-3 years old. Areas should not be left undisked for more than 3 years.

Establishment of Suitable Plants

In some cases habitat must be created. This may be true when large, open fields are being developed for quail habitat. In other cases, the establishment of new habitat provides an excellent mix for properly managed native habitat. The following information gives guidance as to which crops and shrubs are most suitable for the maintenance of bobwhite quail.

Suitable Perennial Shrubs

The purpose of hedgerows or plots of hedges is primarily to provide some overhead cover for quail. This will help to protect them from predators. Hedgerows or plots of hedges should be used as part of an overall plan to provide the habitat needs for the quail. Some of these plants provide food as well as cover.

Autumn Olive	Wild Plums
Shrub Lespedeza	Wax Myrtle
Eastern Redcedar (alkaline soils)	Crab Apple

Plants such as bicolor lespedeza and plums yield cover as well as food. Plots should be at least 15 feet wide. All plots except bicolor should be 1/4 acre or more in size. For ease of hunting, bicolor plots should be no wider than 15-20 feet and no longer than 330 feet. It is usually best to plant a plot of shrubs with an adjoining plot of recommended food crop. One annual food plot for each 12 acres usually supports high quail populations. It is best to plant near suitable quail cover.

Suitable Annual Plants for Management of Quail

Annual plants have a place in the management of quail habitat. They should be used in conjunction with other habitat development activities. In many cases it is desirable to rotate the location of annual plots.



Grasses, shrubs, and trees are all important in maintaining quail habitat, but they must be established in suitable areas and in plots of proper size.

Plant	Planting Dates	Seeding Rate/Acre
Annual lespedezas	Feb.15-March 31	25-30 lbs.
Browntop millet	April 1-Aug. 15	10 lbs. rows
Clover	Sept. 1- Oct. 31	4-15 lbs.
Corn	March 15-May 1	7-10 lbs.
Cowpeas	July 15- Aug. 15	30-40 lbs.
Fla. beggarweed	Last cultivation of corn	10-12 lbs.
Partridge pea	Feb. 1-March 31	16 lbs.
Pearl millet	April 1- Aug. 15	25 lbs.
Soybeans	May 15- July 15	40 lbs. rows
Wheat	Sept. 1- Nov. 15	60-90 lbs. grain

Good Locations for Annual Plantings

- Field or woodland borders
- Utility line rights-of-way (with approval of utility)
- Idle fields
- Along hedgerows
- Open woodland areas
- Access roads

Worksheet for Woody Plant Materials		
Species	Suggested Spacing	Preferred Site
Autumn Olive	8 x 8	Well drained
Shrub Lespedeza	1.5 x 3	Well drained
Crab Apple	6 x 6	Well drained to moist
Eastern Redcedar	6 x 6	Well drained to moist (Alkaline Blackbelt soils only)
Wild Plum	3 x 4	Well drained
Longleaf Pine	10 x 10	Well drained to moist (Limited to historical range of the Longleaf)
Wax Myrtle	10 x 10	Well drained to moist

Temporary Storage Instructions

Dormant planting stock may be stored temporarily in a cooler or a protected area. For stock that is expected to begin growth before planting, dig a V-shaped trench sufficiently deep and bury seedlings so that all roots are covered by soil. Pack the soil firmly and water thoroughly.

Site Preparation

Remove debris and control competing vegetation to allow enough spots or sites for planting equipment. Replace dead or dying tree and shrub stock and continue control of competing vegetation to allow proper establishment.

References

Waters, R.E. "Some Things You Should Know About Wildlife in Alabama," Alabama Forestry Planning Committee, p. 84-90

Stewart, Stan. "Bobwhite Quail Habitat Development," Alabama Game and Fish Division

USDA JOB SHEET 39, "Riparian Forest Buffer"

Virginia Wildlife, "A Road Map for Quail Restoration," March 1997, Vol. 58 No.3, p12-18

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