

WILDLIFE TRENDS

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History, Population Status, Ecology, and Management of the Northern Bobwhite: Part Three

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*Editor's note: This third article in a 3-part series covers **management of bobwhite quail**.*

During the last 2 issues, we reviewed the history, status, ecology, and seasonal habitat requirements of bobwhite quail. Now, let's examine management practices that have been proven to restore or increase bobwhite populations.

Habitat Management

Loss of quality habitat remains the primary cause of the bobwhite population decline. Intensive habitat management produces positive population results, often approaching a covey or 2 per 40 acres on a sustained basis. However, detailed planning, significant effort, substantial resources, and personal commitment are essential ingredients to success.

The objective of habitat management is to provide a mosaic of early successional stage habitats that meet the bobwhite's seasonal needs mentioned in last month's article. In general, intersperse 1-3 year old food and cover types closely together in small, irregularly shaped patches, and provide soft edges and transition zones where patches join. For example, interspersing patches of corn or soybeans; weedy ditch banks and fencerows; open, burned pine forests; and 2 to 3 year old fallow fields should provide ideal habitat conditions. Then, maintain this mosaic through annual soil disturbances and vegetation manipulation practices.

Prescriptions and Practices

Include several practices in your management arsenal. Frequent soil disturbance is critical. Disking can 1) change the composition of plants and set back succession, removing dense grasses and favoring legume growth; 2) quadruple insect populations; 3) increase natural seed production at a fraction of the cost of cultivated plantings; and 4) provide better access for chicks and adults to move and feed. Strip disking is a practice that involves disking strips through a fallow field or open woods during the fall or spring. Disked strips should be 30 to 50 feet wide and separated by un-disked strips 60 to 100 feet wide. Use lengthy strips that follow the land's contour. Rotate the disking annually to a strip adjacent to the previously disked lane, leaving the previously disked strip fallow. Over time, a 1 to 3 year old bare ground and vegetation mosaic will develop.

Prescribed fire is often the most cost effective tool and should be used in pine or mixed pine/hardwood forests; old fields; pastures; fallow cropland; Conservation Reserve Program (CRP) and other farm bill program areas; and field borders. In addition to the listed benefits of disking, fire reduces dead plant material, returns nutrients to the soil, stimulates a separate suite of plant species, and top-kills undesirable hardwoods. Careful application of prescribed fire at 1-3 year intervals through the rotation is critical to maintaining bobwhite habitat in pine forests. Late winter burns are often safest, but late summer burns may increase legume production and offer the best control on hardwood sprouts. Create patchy, incomplete burn patterns by burning when only part of the forest or field will burn; create "ring-

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