

# the Upland GAZETTE



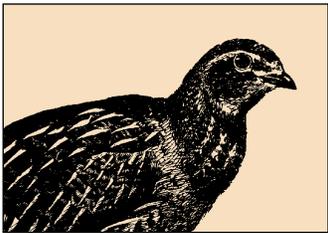
◆ North Carolina Small Game Notes ◆

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## Recent History from a Bobwhite's Perspective

**S**ometimes it is enlightening to view the world from a different perspective. What would a bobwhite (or an old time bird hunter) think were the most important historical milestones in North Carolina over the past 50 years? Keep in mind we are talking about a wild bobwhite, not one of his pudgy, pen-raised cousins. And I will warn you up front, the world can be pretty depressing from a bobwhite's perspective, so before you read further, promise me you won't go out and shoot your dog.



### The 1930s

Let's start our history of quail management in 1931, with the publication of Herbert Stoddard's seminal work *The Bobwhite Quail, Its Habits, Preservation, and Increase*. This book provides a scientific basis on which to manage bobwhites. Across our state during this decade, wildfires set back plant succession on over 200,000 acres annually, and inefficient crop fields yield less than 20 bushels of corn per acre. The resulting burned-over woodlands and weedy crop fields don't add much to the state's economy, but from the bobwhite's perspective, they produce an abundance of excellent food and cover.

### The 1940s

During this decade, mechanization comes to the farm and the number of farms in the state peaks at over 300,000. Annual lespedezas—the major hay crop—cover over one-half million acres. Small, diverse farms support an abundance of bobwhites. During the war years, North Carolina closes its state-supported game farm and ends the import of Mexican bobwhites. The North Carolina Wildlife Resources Commission forms in 1947.

### The 1950s

By 1950 the Commission has nine district wildlife biologists who provide technical guidance and recommend wildlife plantings to focus attention on the importance of habitat to bobwhites—a significant departure from the "game farm" philosophy. The Commission also implements its first hunter harvest survey in 1950, which provides long-term trend data on hunter effort and harvest. The survey estimates a harvest of 1,775,471 quail. By comparison, the estimated deer harvest is a meager 14,616 animals. Several years of summer drought in the middle of this decade cause quail populations to decline. Consequently, the Commission initiates annual summer bobwhite call counts in 1957 to provide an index to bobwhite abundance.

### The 1960s

Ahhh . . . the boom times for bobwhites. North Carolina's quail harvest peaks in

1965 at 2,826,640 birds, driven by a surge in idle cropland—to an apex of 2,165,486 acres. Unfortunately for the bobwhite, the peak in idle land signals a shift from a Piedmont landscape dominated by open farm fields to one dominated by forests. By the end of the decade, the extent of Piedmont farmland declines by half.

In 1966 the Breeding Bird Survey begins to collect long-term trend data on bird populations, including bobwhites. The survey subsequently documents parallel declines in the whole suite of birds dependent on grasslands and early-successional habitat and gives strength to a habitat-based approach to managing early-successional birds.

### The 1970s

Row crop farming continues its shift from the Piedmont to the Coastal Plain. Quail populations explode in eastern North Carolina as pocosin habitat is drained and

*" . . . well-distributed bits of bushy refuges not more than 100 yards apart over both open woodlands and fields are by far the best protection one can provide for the quail; then the cooper's hawks go hungry in a land of plenty, for the quail can easily elude them."*

— Herbert Stoddard

converted to farmland. A few years later, as landowners clear out the resulting windrows, populations drop. Land use continues to intensify. North Carolina's cattle inventory exceeds one million for the first time in 1975. Farmers adopt herbicide technology, and weedy crop fields disappear from the landscape, reducing quail food and cover.

### The 1980s

Soybean production peaks with a 2,100,000 acre crop in 1982. Concern over the impact of farming on water quality leads Congress to pass the first federal Farm Bill in 1985. The Farm Bill provides a mechanism for implementing conservation practices on private land. Also in 1985, concern over the declining quail population leads sportsmen to form Quail Unlimited, a private organization working for bobwhite conservation.

### The 1990s

In this decade, a billion fast-growing loblolly pine trees occupy over 2 million acres. Young pine plantations can be excellent quail habitat, but tiny seedlings quickly grow into trees that suppress quail food and cover plants. Farm productivity climbs as North Carolina corn yields average 95 bushels per acre. Yields have increased by 80 percent over 60 years, but the weeds that made the cornfield valuable to quail are a thing of the past. On a positive note, federal agencies approve "Roundup™ ready soybeans" which gives no-till farming a boost. Young bobwhites find abundant insects in no-till fields. The Commission's free wildlife plant materials program ends in 1994 and the agency's technical guidance focus shifts to providing for the year-round habitat requirements of bobwhites.

During the 1990s a series of cooperative quail research projects begin on farmland in eastern North Carolina. These projects, each one building upon the findings of previous projects, will provide the biological basis for the Commission's Cooperative Upland habitat Restoration and Enhancement (CURE) Program.

The Southeast Quail Study Group forms in 1995 to increase cooperation, communication and coordination among quail managers and researchers across the region. By mid-decade North Carolina quail and deer harvests are approximately equal, with 225,302 quail and 216,114 deer. Over thirty years, the bobwhite harvest has declined by 92 percent and the deer harvest has increased 543 percent. Over a 20-year period, the quail population has decreased by 8.5 percent annually in the Piedmont region—steeper than any other habitat across quail range.

### The 2000s

By the year 2000 North Carolina has only 56,000 farms, representing a decline of 81 percent over 50 years. Wildfires have burned an average of 23,000 acres of North Carolina woodlands each year over the previous decade, but this is 92 percent fewer acres than in the 1940s. Fire suppression has dramatically changed plant communities across the state. Without regular fire, forb-dominated plant communities have developed into closed-canopy woodlands or brush-dominated habitats suitable for deer and turkey, but no longer able to support viable quail populations.

The Commission initiates its CURE Program in 2000, and by 2003, fall bobwhite populations are stable or increasing on the three private-land cooperatives enrolled in the pilot. In 2002 the Northern Bobwhite Conservation Initiative (NBCI) implements a range wide plan for the recovery of the northern bobwhite. (See *NBCI Update*, pg. 3.)

### Into the Future

As this time line demonstrates, land use drives quail populations. The choices that

individual landowners make will determine the future of these birds. From a statewide perspective the task may seem insurmountable, but landowners, sportsmen, conservationists and biologists can make progress locally, restoring bobwhites.

So far our successes have been modest. Over the first three years of the CURE Program, quail populations increased on just three pilot areas, totaling a little over 15,000 acres. The emphasis on these coop-

eratives has been to work with small groups of landowners to put back some of the farm elements that benefit quail by conducting prescribed burns in wooded areas, planting field borders of native vege-

tation, and sowing pastures of native warm-season grasses. Bobwhites have evolved to hang on in plots of suitable habitat and to quickly take advantage of any favorable land-use changes. Our experience in the CURE areas confirms that belief.

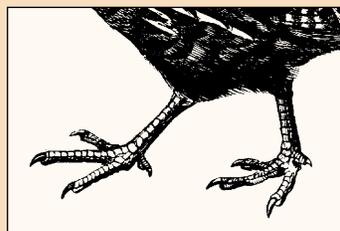
Recent wildlife-friendly initiatives by the farm and forestry community encourage optimism on a larger scale. U. S. Department of Agriculture programs, U.S. Fish and Wildlife Service Programs, and private conservation practices help willing landowners make wildlife part of the working landscape as never before.

I encourage each of you to join us by making your property part of the first step toward recovery. The second step is to encourage your neighbors to think like a bobwhite.

None of us want to return to 19 bushels-per-acre corn yields or let wildfires burn unabated. But when enough North Carolinians manage field edges and ditch banks for habitat and carefully thin and burn pine forests, we will see bobwhite population increases.

Herbert Stoddard gave us the recipe for restoring bobwhites 73 years ago. Landowners who are applying the recipe are seeing populations increase. If we work together, we can make thinking like a bobwhite a more positive experience in the 21st century. ♦

—Terry Sharpe, Agricultural Liaison Biologist



Established 1996

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# More States Covey-up in Support of NBCI

## *Northern Bobwhite Conservation Initiative Update*

**N**orthern Bobwhite Conservation Initiative (NBCI) is generating enthusiasm at national, regional and state levels. Bobwhite conservation is coming rapidly to the forefront on state and federal agency agendas and in non-government conservation organization circles. The bobwhite quail is gaining deserved recognition as a “*National Priority and National Treasure!*”

An NBCI cornerstone is capitalizing on existing federal Farm Bill conservation programs, supplemented by state programs where they exist, to increase the amount and distribution of quail nesting and brood-rearing habitat. The grassy-weedy “idle” areas that were once widespread across our landscape are now in critically short supply. These areas have long been favorite quail haunts, and their absence is the major limiting factor for bobwhite populations today. Farm Bill programs are the best tool we have to restore habitat on a scale large enough to make a difference. Biologists are realizing more and more the critical importance of landscaping that restores habitat. Creating small and widely separated islands of habitat often doesn’t produce the desired results. Bobwhite populations respond better when large blocks of habitat are developed and when corridors of habitat connect the blocks.

Twenty-two states are now included in NBCI and have established habitat and population goals for bobwhites. Of course, having goals on paper and getting habitat on the ground are different propositions. It takes cooperation to make things happen on the ground—knowledgeable professionals working with landowners to improve habitat. Fish and wildlife agencies in 21 states, including North Carolina, employ statewide quail coordinators. North Carolina and nine other states also have full-time agricultural liaisons working with U.S. Department of Agriculture to capitalize on Farm Bill programs for enhancing habitat for quail and other wildlife. Three other states have part-time liaisons. Seven state fish and wildlife agen-



*Bobwhite quail naturally lay about 15 eggs.*

cies have cost-share biologist positions with the USDA Natural Resources Conservation Service (NRCS), and several more, including North Carolina, are in the process of establishing agreements through the Technical Service Provider provision of the 2002 Farm Bill. Three state fish and wildlife agencies are cost-sharing to hire Quail Unlimited Regional Directors dedicated to their states—in my opinion this is where much more collaboration is needed.

Five states have completed statewide or focal-area quail recovery plans based on the NBCI, and at least eight others are

The Northern Bobwhite Conservation Initiative (NBCI) is a range-wide plan to restore habitat and recover bobwhite populations through collaboration between state and federal agencies, conservation organizations and private landowners. The NBCI is the brainchild of the Southeastern Association of Fish and Wildlife Agencies, through the Southeast Quail Study Group, a coalition of dedicated quail biologists, managers and researchers. Although the plan originated in the Southeast, it will eventually encompass most or all historic bobwhite states.

For more information visit <http://www.qu.org/seqsg/nbci/nbci.cfm>.

# Quail's Habitat Cousins: Grassland Birds

**A**long with the bobwhite quail (*Colinus virginianus*), other grassland birds have been declining in population across the United States. While North Carolina has relatively few true

While the song of the meadowlark is sweet and melodious, you can easily mistake the grasshopper sparrow's song for the buzz of a grasshopper. These birds sing in a variety of grassland settings but are most

The Bachman's sparrow (*Aimophila aestivalis*) is a grassland bird that paradoxically lives in the woods. Not just any woods, mind you, but open piney woods with a lush grass understory, habitat now found predominantly in frequently-burned longleaf pine forests in the Sandhills and Southern Coastal Plain. With the decline of open pine forests, some Bachman's sparrows have begun nesting in clearcuts, old fields, and power line rights-of-way. This drab and secretive bird has a beautiful song—a clear whistle followed by trills—that is the best clue to its presence.

During the winter, North Carolina is inundated with large numbers of savanna sparrows (*Passerculus sandwichensis*). The savanna sparrow is an unremarkable-looking little brown bird whose most distinguishing field mark is a pale yellowish coloring above its eye. They forage in loose flocks in pastures and row crop fields with crop stubble. Savanna sparrows leave the state in the spring to breed in grasslands farther north and west.

The loggerhead shrike (*Lanius ludovicianus*) nests in trees but does most of its foraging over short-grass areas. Shrikes feed on large insects, mice, lizards, snakes and even small songbirds. Lacking the strong talons of raptors, shrikes will impale their prey on barbed wire or thorns, allowing the shrikes to tear off the flesh with their hooked beaks. Shrikes will benefit from the planting of thorny trees and thickets near short-grass areas, or by erecting "shrike posts." These 8 to 10-foot posts, with barbed wire loosely wrapped around the top, placed in the middle of larger openings, expand the foraging range of shrikes and kestrels (which do not prey on quail) and provide singing posts for songbirds. The barbed wire and location away from woodland edges discourages use by predators of quail like the Cooper's hawk (*Accipiter cooperii*).

All of these birds, with the exception of the shrike, build their nests on or near the ground. The female weaves a nest cup out of grasses and other fine materials and tucks it under a grass clump. Like quail,



**The loggerhead shrike** was nicknamed "butcher bird" by early settlers. It does not prey on quail.

grassland bird specialists compared to other regions of the country, we still have ample opportunities to enjoy and help protect several of these "habitat cousins" of quail.

If you wish to see grassland birds, you have to be willing to work for the reward. Several of our grassland specialists, particularly the sparrows, are notoriously difficult to observe and identify. Many have the habit of flying low over the grasses when flushed, then dropping like a rock to the ground. If you run to the spot where you saw the bird land, it will often not flush or let itself be seen again, as many grassland sparrows will run along the ground and then hold tight under a clump of broomstraw.

Two of the most widespread breeding grassland birds in the state are the grasshopper sparrow (*Ammodramus savaannarum*) and eastern meadowlark (*Sturnella magna*).

abundant in regions with a lot of pasture land. They tend to like shorter and patchier grasses than quail and they can even be successful in properly managed fescue. Light to moderate grazing is an excellent way to maintain suitable meadowlark and grasshopper sparrow habitat. Mowing and cutting hay can also maintain short-grass conditions, but many nests are lost to mowing during the late-April to mid-August breeding season.

One of the grassland species that generates much conservation interest is the Henslow's sparrow (*Ammodramus henslowii*). In North Carolina, this bird breeds almost exclusively at two large grassland areas associated with Voice of America radio towers in eastern North Carolina. The sheer size of these grasslands, many hundreds of acres each, is the primary reason for the presence of this olive-brown bird with a song reminiscent of a hiccup. During winter, Henslow's are found in longleaf savannas in states south of here, but to what extent they use North Carolina's longleaf savannas in winter is not well known.

# Pass It Along...

We are working to expand our mailing list to include other interested landowners and sportsmen. Please pass along your copy to friends who may be interested. Send names of others who may find the information useful to

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(Note: Hunters who participated in last season's Avid Quail and Grouse Hunter Survey will automatically be included in further mailings and do not need to reply.)

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grassland songbirds will often build a dome over the top of the nest, making it very hard to see from above. Predators still manage to find a good number of nests and the adults will re-nest several times throughout the summer. Unlike quail, the young stay in the nest after hatching, where they are fed insects by their parents. The young can fly shortly after leaving the nest.

All of these birds are area sensitive, meaning that they will not use habitat patches smaller than a certain size. Twenty acres is about the minimum patch size for grasshopper sparrows and meadowlarks, although Henslow's sparrows may need more than 100 contiguous acres of habitat. Nevertheless, many of these birds will respond to small patches of suitable habitat located within a larger opening. Creating a five-acre grassland may not be a waste of time if you locate it in the middle of a larger crop field. Thinning the edges of woodlands surrounding fields is another way to increase the effective size of a habitat patch.

Many of these species will benefit from sound quail habitat management. Quail managers who wish to further benefit grassland birds can establish larger grassland openings, arrange openings closer together and manage some areas for shorter, sparser grasses than is typically done for quail. ♦

—Jeff Marcus, *Piedmont Faunal Diversity Biologist*

## NCWRC Staffer is Biologist of the Year 2003 Southeast Quail Study Group Awards

### *Biologist of the Year Award*

**Terry Sharpe, N.C. Wildlife Resource Commission** At their 2003 annual meeting, the Southeast Quail Study Group declared Terry Sharpe Biologist of the Year. Terry has worked with quail and other small game for much of his 27 years with the N.C. Wildlife Resources Commission. A graduate of both N.C. State University and Louisiana State University, Terry started with the Commission in 1976 as a district biologist and worked in several positions over the years until he became the Commission's Agricultural Liaison Biologist in 2001.

During his career Terry has struggled with the problem of declining quail numbers in North Carolina and sought solutions. He has worked to improve and implement federal Farm Bill conservation programs, participated in research programs to evaluate ways to benefit wildlife on working farms, promoted controlled burning, and built many partnerships throughout the Southeast to accomplish other far-reaching goals.

"Terry has always been innovative to find ways to make things happen and get projects off the ground," said Don Hayes, private lands coordinator.

Recently, his career efforts have culminated in the creation of North Carolina's Cooperative Upland Habitat Restoration and Enhancement (CURE) program. CURE blends game and non-game management, addressing the objectives of both the Northern Bobwhite Conservation Initiative and Partners in Flight Conservation Plans by managing early-successional habitat on a landscape scale.

During the award presentation Mark Gudlin, of the Tennessee Wildlife Resources Agency, noted that "While the rest of us were looking for a cure (to declining quail numbers) Terry was implementing one."



**Terry Sharpe (left) receives a plaque from Mark Gudlin of the Tennessee Wildlife Resources Agency.**

### **Small Game Awards**

#### **Lawrence G. Diedrick Award for Excellence in Small Game Management—Organization**

**Bennett Brothers Partnership, Northampton County** As staunch supporters of the goals of the Commission's CURE program, the Bennett Brothers have done much to make their land wildlife-friendly while maintaining a productive farm. Ninety percent of the farm is no-till. They have left field edges to grow in native vegetation, planted odd-shaped areas with milo or sunflowers and use Best Management Practices for weed and pest control. The property also has five waterfowl impoundments and multiple wildlife openings cleared in the forested areas. Wildlife habitat on the Bennett property totals 150 acres.

#### **Lawrence G. Diedrick Award for Excellence in Small Game Management—Individual**

**Charles Grantham, Northampton County** Charles Grantham is a strong believer in wildlife management and has invested a great deal of time and effort to integrate habitat on his Northampton farm. He has 130 acres of crop land converted to wildlife habitat, 29 acres of Conservation Reserve program field borders and impoundments, many acres planted for wildlife food and cover, and an active forest management program of burning, thinning and planting to revitalize forest habitat in both pine and hardwood stands. ♦

# Highs and Lows at the Turnersburg Cooperative

Challenges, excitement, frustration—it's all part of a typical day's work on the CURE Cooperative at Turnersburg. With a mix of pasture, forest and crops, Turnersburg offers a variety of management options, even more so than at the other two cooperatives. However, it is arguably the most urban of the three cooperatives and has many more individual landowners involved. In the complex arena that is Turnersburg, there is never a dull moment.

Burning provides a good example. A management tool used at all the CURE cooperatives, prescribed burning is important for maintaining grassy areas and managing forests. Given the relatively high human density around Turnersburg and the historically low use of prescribed fire, biologist David Sawyer was very pleased to find local landowners enthusiastic about

burning, offering more acres than expected. However, the weather and urban conditions have stalled progress. Two wet winters in a row created less-than-ideal conditions for prescribed burns. When dry



## Spotlight on C·U·R·E

days come along, too often the wind is blowing in the wrong direction, ready to carry heavy smoke across busy rural highways. The Turnersburg team has to stay on its toes, drip torches at the ready, waiting for all the right factors to align. Unfortunately, such a state of readiness is unsustainable and a few opportunities have been lost.

Exotic plants also challenge the success of management practices at Turnersburg. A habitat cornerstone for all the cooperatives is the cultivation of wildlife-friendly strips of land that we call field borders around crops and pastures. What makes these areas wildlife-friendly is the plant composition—warm season grasses like little bluestem, Indian-grass, and broom straw, mixed with

particularly fescue, Bermuda and crab-grass invading the field borders, crowding out the native plants that provide food and shelter for wildlife. Sawyer has found these grasses particularly troublesome in narrow field borders (15 feet) which are too shaded by the adjacent trees, creating a condition that favors the exotic grasses and limits the growth of sun-loving plants. These narrow strips also have less plant structure and cover for ground-nesting birds, possibly increasing their vulnerability to predators. Sawyer favors wider field borders, at least 30 feet wide, to increase available habitat and reduce competition from exotic grasses.

One area where Sawyer has tackled these exotic grasses head-on is in the pasture. In years past, pasture plants were primarily soybean or cowpea, small grain and lespedeza hay. Nowadays, the predominant pasture plant is fescue, a cool-season grass introduced from Europe. This grass grows extremely well in North Carolina and produces adequate forage and hay for livestock. Alas, for small game

and wild birds, fescue might as well be concrete. It does not provide seeds for food, it grows too short to cover the birds, and it grows so thick that small creatures cannot find their way through it.

The Turnersburg management plans call for the conversion of several fescue fields back to native warm-season grasses. It is a labor-intensive effort to kill the fescue, disk or burn, and then plant the native grass seeds, often using a special drill for the purpose. Fields need to be maintained with an occasional prescribed burn or disking, mostly to remove dead material, regenerate

the grasses, and stifle the growth of woody plants and tree saplings. All of this effort is well worth the return in value, both in



*Controlled burns reintroduce fire in fire-dependent ecosystems.*

wildflowers and legumes like ragweed, goldenrod and partridge pea. Turnersburg has a problem with non-native grasses,

terms of wildlife habitat and livestock forage. The Turnersburg team has found that the CURE program gives them the time and tools to work intensely with landowners on projects like this. Their success rate has increased as a result.

Turnersburg has done well to leverage federal dollars available through

#### Quick facts about Turnersburg

- Located in Iredell County
- 24 cooperators
- 5,820 acres
- Supported by local chapter of Quail Unlimited

the Natural Resource Conservation Service's Wildlife Habitat Incentives Program (WHIP) to establish several management practices. One of these is stream-side fencing. Turnersburg is the only cooperative to use this practice and it has provided multiple wildlife and environmental benefits. Fences were placed about 15–20 feet from the top of eroding stream banks. With the cattle fenced out this buffer area will regenerate native forbs and shrubs, which stabilize the stream bank and provide habitat for wildlife, particularly shrub-nesting birds. In addition, water quality will improve because of the reduced siltation and organic enrichment.

The experience at Turnersburg reminds us why CURE is a pilot program. Some management tools integrate well into the working farm landscape and some do not. Some techniques will be successful at generating habitat, and others will be, well, not so successful. We can make all the assumptions we want, but we are not going to really know how to increase wildlife populations on working farms until the work is done. A pilot program allows us to learn as we go, make adjustments as necessary, and finally draw conclusions at the end of the pilot phase. ♦

—Kate Pipkin,  
Public Information Biologist



### Land Managers' TOOLBOX

## Spray it!

*“Cover is controlled by controlling the plant succession in the right direction at the right time and place. Cow, plow, axe, and fire reverse the succession. Fencing, fire protection, and planting advance it.”*

—Aldo Leopold in *Game Management*, 1933.

If Leopold was alive today he might add one more tool to his list. Herbicides are powerful tools that can compliment the cow, plow, axe and fire to set back succession. Technological advances in herbicides and application techniques give modern land managers the ability to selectively remove or increase certain plants or groups of plants.

#### Herbicides as Management Tool

Like all management tools, herbicides can have positive or negative impacts on wildlife, depending upon their use. Herbicides can greatly increase crop productivity by eliminating plants that compete with the crop. Unfortunately, the resulting plant communities in and around farm fields are less complex, offering less habitat for wildlife. In fact, the use of herbicides is one of the many factors that played an important role in range-wide declines of game birds including bobwhite quail, pheasants and gray partridge. But today many landowners are taking advantage of herbicides to create game-bird habitat and reduce management costs.

#### Landowner Benefits

I remember well a South Carolina land manager's herbicide endorsement. His hand crews complained to him that they didn't have time to go back and treat the stumps of all the hardwood trees they cut from the right-of-way. His reply? They didn't have time not to treat the stumps. He recognized that an untreated stump requires cutting at frequent intervals. Had herbicides killed the root system, his crews would never have had to return to that particular tree.

#### Wildlife Benefits

Hardwood-sprout-dominated plant communities frequently occur on ditch banks and field edges, as well as in forested areas. Unfortunately, some of these problem hardwoods sprout readily when treated with the cow, plow, axe or fire. Hardwood-sprout-dominated plant communities produce few quail foods and frequently do not have enough cover to support quail after leaf fall. A properly timed and applied herbicide treatment can be an important part of an integrated approach to converting brush-choked woodlands, overgrown fence lines and forest edges into quality quail habitat of grasses and shrubs. Though initial expense is often high—\$40 to \$80 per acre including application—the benefits, especially when used in combination with burning, can last for years.

#### Maintenance of Grassy Areas

Herbicides can also assist landowners in converting sod-forming perennial grasses into productive cover. Often disking or burning perennial grasses produces an initially encouraging response of volunteer or planted vegetation. However, unless the land manager kills the sod forming grasses, they quickly retake the site. Initial costs are often high, but long-term, herbicide treatment is more cost-effective than repeated soil disturbance.

Frequent burning is essential to maintaining quail habitat in open woodlands or native grasslands. The heart of an effective burning program is a system of easily-maintained permanent fire lines. One trip around the fire lines to spray problem areas with a backpack or directed herbicide sprayer during the growing season can eliminate difficult-to-maintain grassy areas or brush encroaching the fire line. This advance action can make fire line preparation easier and burning safer the following winter or spring.

#### Choosing a Herbicide

Each situation requires individual evaluation to determine the best herbicide prescription from a broad array of possibilities. For herbicide recommendations specific to your goals, contact the Cooperative Extension Service in your county. Always read and follow label directions. ♦

#### Checklist for developing a herbicide prescription:

- What do you want to accomplish?
- Extent, distribution, and species of target vegetation
- Adjacent crops
- Time of year/weather
- Soil type
- Proximity to standing water
- Presence of desirable plants
- Desired plant community
- Availability of application equipment
- Cost
- Mode of action and safety issues of herbicide under consideration
- Other treatments planned (cutting, burning, etc.)

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in the process. Multi-organizational state quail task forces are operational in two states, two more are in the early stages, and at least five states are considering forming task forces. State quail task forces will be vital to helping involved state agencies garner the political support necessary to implement effective bobwhite recovery programs. This is where citizens interested in quail and songbird conservation will need to be active!

In August of 2003, Memorandums of Understanding were signed between the NRCS, Quail Unlimited, the Southeastern Association of Fish and Wildlife Agencies and Mississippi State University to meet the intent of the 2002 Farm Bill to move the goals of the NBCI forward. Specifically, NRCS will make available \$1.5 million over the next three years to evaluate the performance of Farm Bill programs in es-

tablishing quail habitat on the landscape. Other universities and research organizations will be able soon to apply for these funds and the knowledge gained from these studies will be important when a new Farm Bill is written in 2007.

A very significant and exciting development occurred when the Quail Unlimited Board of Directors approved establishment of an NBCI Cooperative Habitat Fund, separate from other Quail Unlimited funds and governed by a broad-based review committee. Corporate support for this fund will be sought to create a meaningful funding base for large-scale projects. Quail Unlimited will also create a high profile awards program for agencies, organizations and individuals making significant contributions to the NBCI.

So what is in store for the immediate future? I am convinced that the momen-

tum of the NBCI will continue to build. States not included already will develop bobwhite habitat and population goals. State quail task forces will continue to activate and Farm Bill programs will continue to account for the needs of bobwhites and all their associated grassland and shrub-scrub loving cohorts. The character of our rural landscape will change, and this time for the benefit of our favorite bird. The bobwhite quail will assume its rightful place as a "National Treasure and National Priority!" ♦

—Breck Carmichael,  
NBCI Program Coordinator

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*Special thanks to Mark Gudlin, Tennessee Wildlife Resources Agency, for compiling much of the information used in this update. Reprinted with permission from Quail Unlimited magazine.*