

Virginia's Quail Action Plan: Helping Landowners Restore Northern Bobwhite Quail Habitat

By: David Richert, Virginia Department of Forestry

As a member of the Virginia Department of Forestry team, I frequently recommend landowner participation in a variety of natural resource management cost-share and incentives programs. These programs encourage Virginia's private landowners to sustainably manage forest resources, stabilize soil and reduce erosion, improve water quality, conserve land, and create or maintain high quality wildlife habitat. In the past year, I found myself on the opposite side of the coin, as a private landowner on the receiving end of expert technical advice and generous financial incentives. The following is an account of my personal involvement in a recently established incentive program through Virginia's Quail Action Plan.

My wife and I own a small parcel of land in Wythe County, of which 13 acres is open pasture land—a mix of mostly fescue and other cool season-type grasses. Although fescue is not without its merits, fescue and many of the cool season-type grasses form a thick sod that is virtually impenetrable to Northern bobwhite quail, and is generally considered to be of lower value for wildlife. Our aim was to attempt to replace the fescue with something a bit more wildlife-friendly.

Enter the Virginia Quail Action Plan, a comprehensive plan to reverse the declining numbers of Northern bobwhite quail in Virginia by addressing habitat loss and degradation. Among other goals, Virginia's Quail Action Plan seeks to establish quail and early succession wildlife focus areas throughout Virginia. Six pilot quail focus areas are currently underway across the Commonwealth, in partnership with Soil and Water Conservation Districts (SWCDs). Participating SWCDs include Three Rivers, Chowan Basin, Halifax, Culpeper, Headwaters, and Big Walker. Fortunately for us, we were eligible to enroll our 13 acres of fescue pasture into the program because Wythe County is part of the Big Walker SWCD quail focus area.

These pilot quail focus areas provide landowner incentives for choosing pasture/land management practices that favor quail and other early successional wildlife. Under this program, landowners can receive incentive payments for establishing field borders, managing idle land as early successional habitat, and converting fescue pasture to native warm season grasses. Although participating landowners commit to following particular management guidelines, participating land does not necessarily have to be completely removed from agricultural production.

We chose to replace our fescue pasture with native warm season grasses. Native to Virginia, these grasses offer a number of benefits for both wildlife and agricultural production. From a quail management perspective, native warm season grasses are preferable to cool season grasses because they do not form an impenetrable turf, but instead form small bunches (clumps) that provide excellent escape cover for young quail chicks. (A variety of publications are available online and in print on the benefits of native warm season grasses for wildlife and forage—visit <http://www.dgif.virginia.gov/quail/beyond-the-food-patch.asp> for details).

The establishment process started more than a year ago, the fall prior to planting. The existing cover of fescue was bush-hogged in mid-September, just as the hot summer temperatures were starting to subside. In early October, once the fescue had added several inches of lush regrowth, the field was treated with herbicide (32 ounces of glyphosate per acre). Our goal was to eliminate the fescue sod and create some bare soil for sowing the native warm season grasses in the following spring.

The following April the results of our herbicide treatment were apparent. As the neighboring fescue fields turned bright green, our field stayed brown, and a quick evaluation with a shovel indicated that the kill had gone clear to the roots. A controlled burn (after 4 p.m. to comply with Virginia's 4 p.m. Burn Law) in late April cleaned off the remaining thatch, leaving a seedbed nearly ready for planting. A second herbicide treatment (12 ounces of Imazapic and 16 ounces of glyphosate per acre) in early May was applied to help eliminate any other vegetation and ensure successful establishment of the native warm season grasses.

There are nearly a dozen native warm season grasses that a Virginia landowner could choose to provide beneficial habitat for bobwhite quail—we chose big bluestem and indiagrass. We planted during the very last week of May, and were assisted by Andy Rosenburger, a biologist and local representative for Virginia's Quail Action Plan, and Joe Watson, with the Virginia Department of Game and Inland Fisheries. We planted these native warm season grasses using a specialized no-till drill designed to accommodate the small, fluffy native warm season grass seed. On a recommendation from Andy Rosenburger, we planted the field in a "back and forth" pattern (as opposed to a circular pattern) to maximize the eventual benefit to bobwhite quail chicks.

The waiting process was slow, and my patience was tested. Despite several long periods without rain, we were fortunate to receive adequate moisture to successfully germinate the stand.

At first, very little top growth was evident, as these seedlings invested their energy in abundant root growth (a physiological feature that helps them resist drought). In late August, seemingly overnight, the native warm season grasses made significant upward growth, and some of the tallest big bluestem and indiagrass seedheads eventually measured in excess of 6 feet tall. It should be noted that these results are not typical, and that many native warm season grass plantings may take two to three growing seasons to achieve the same results.

Our experience with the incentives offered by Virginia's Quail Action Plan was positive. As this stand of native warm season grasses becomes fully established, we have the option to use this forage for grazing or for hay, provided we comply with program guidelines for timing and frequency of haying or grazing.

The establishment of native warm season grasses is just one of many habitat modifications that a landowner may choose to benefit Northern bobwhite quail. These habitat improvements can be especially beneficial to quail when established on a landscape scale—i.e., in conjunction with several or dozens of adjacent landowners. Virginia's Quail Action Plan partners anticipate that with successful habitat improvements such as this one, Virginia's population of Northern bobwhite quail will eventually stabilize at a robust number.



First year warm season grass seedlings mid-summer (top) and late summer (bottom). Photos by: David Richert, VDOF.

The Virginia Department of Forestry protects and develops healthy, sustainable forest resources for Virginians. Headquartered in Charlottesville, there are Forestry staff members assigned to every county to provide service to citizens of the Commonwealth. VDOF is an equal opportunity provider.

With nearly 16 million acres of forest land and more than 144,000 Virginians employed in the forest products industry, Virginia forests provide more than \$27.5 Billion annually in benefits to the Commonwealth.

Please contact the Virginia Department of Game and Inland Fisheries (www.dgif.virginia.gov/quail/) for more information about Virginia's Quail Action Plan.

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