

Quail Come Home to Fraser fir Christmas Tree Farms

If you go to the valley where Robert Woodie and his father Richard raise Christmas trees, there is a good chance that you will hear the “bob white” call of the northern quail. This is a sound that has been absent from the area for a long time. The presence of quail on the Woodie farm is no coincidence; rather it is the realization of a family goal to see their return. Several factors have come together to make it possible on a regional scale.

Until the Woodies and other Fraser fir Christmas tree growers started growing clover and birdsfoot trefoil around their Fraser fir trees, their farms weren't very good habitat for quail. But now you could flush coveys anywhere on their own farm and further down the creek on their neighbors' farms. “Christmas tree farms have become the solution to establishing quail instead of being part of the problem,” added Robert.

Loss of Habitat

“My granddaddy used to quail hunt and almost always limit out around here in Alleghany County,” Robert Woodie said as he looked out across the valleys and mountains of western North Carolina from his dining room window. “I used to see coveys when I was a kid and hunted myself. But it's been a long time, maybe ten – fifteen years since I'd heard their call much.”

The quail disappeared along with changes in agriculture. “The cattle farmers used to raise small grain but now they buy their grain. All the land around here is used for cattle pasture or Christmas trees,” Robert said. Until new practices were developed, Christmas trees were managed for bare ground, a habitat with little natural food. Beyond changes in the type of agriculture, many farms have been broken into smaller parcels or turned into housing developments even in this rural county. Either way, fencerows and field edges are lost. Many small landowners want their places to look neat - wild spaces don't always fit in.

A Success Story on the Woodie Farm

Robert Woodie wanted to hear quail while he worked in his Fraser fir Christmas trees. He wanted to be able to train his pointers close to home. He chose to ignore local convention that quail couldn't be successfully reintroduced to try it for himself. In 2001 in the third week in September, Robert introduced 75 sixteen-week-old, flight-conditioned birds from Quail Valley Farm in Indian Trail, NC to his farm.

“Within two weeks, I would see them over about a 60 to 70 acre spread,” Robert recalled. “Now I see and hear coveys calling more than a mile down the creek. My neighbors all see quail again when they hadn't for years. As far as I know, they are all from those 75 birds. When I take my dogs out for an afternoon walk, I will always bust out 2 or 3 coveys.”

Releasing flight-conditioned stock in the fall gave the birds some advantage against resident predators that include coyotes, foxes, feral cats, and hawks. “They had a chance

to settle in before winter,” Robert recalled. “And they were wild enough the following spring to keep their brood alive.”

Putting Together the Habitat Package

To prepare for the intended arrival of his quail in 2001, Robert established about one acre of sunflower, sorghum, and corn planted in three different wildlife plots. Robert maintained them for two years. But in 2003, Robert was too busy establishing a new Christmas tree seedling nursery. It turned out that the quail subsisted just fine on the natural food provided in the groundcover and weeds growing among the Christmas trees.

At the same time Robert re-introduced quail to their 53 acre farm, he and his dad were making some major changes in how they grew their Christmas trees. They changed how they used herbicides, going from a kill-all-weeds approach to establishing a managed ground cover surrounding their Christmas trees. By using very low rates of Roundup herbicide, they stunted weeds as opposed to killing them. Summer annuals, such as ragweed, pigweed, and foxtail grass, still produced seed but the height that didn't harm the Christmas tree crop.

Over just two years, the endemic white clover became a dominant component of a broadleaf ground cover - one that supported a host of insects. The legume did so well, that the Woodies have sown Dutch white clover and birdsfoot trefoil on farms where clover was absent. Even the sown ground covers were managed with low rates of Roundup once they germinated.

When Robert looked for his quail, he found them in the forest edges, in Christmas tree field margins, and among the trees. The Christmas trees provided thick shelter that confounds most predators when the quail scatter. Duff under the trees provided safe bedding for the young. Clover, birdsfoot trefoil, and other weeds hosted a range of insects to feed both adults and young broods. Field edges provided a number of different types of soft mass including blackberry, barberry, ragweed, and dogwood. The woods included a mixture of mature timber and a dogwood understory. With the diverse habitats present on his farm, each stage of quail development was provided for.

As he manages habitat now, the Christmas tree ground covers fall into regular annual maintenance. Brushy edge areas require some planning as well because they quickly turn into young forest. Periodic bushhogging work can insure that mixed stages of growth are maintained. Robert also plans for small areas of bare ground for the quail to take dust baths. Each year, it takes some planning to insure that all habitat requirements are provided for.

A Little More about Christmas Tree Ground Covers

While the ground cover management practices were developed specifically for Fraser fir Christmas tree production, some readers may want more details on what growers actually do to achieve this balanced weed growth. Growers have reduced the rate of Roundup to the point that they can actually hit green foliage on their Christmas trees with the spray without damage. Conventional rates of Roundup used to kill weeds range from 1 pint to 2

quarts, but here one cup or less is being used over an entire acre. Of course, you shouldn't try this around any trees of your own unless you know when and how to do it and you properly calibrated your sprayer.

Robert learned about suppressing his weeds from his local County Cooperative Extension Center. While information was presented at several meetings, it wasn't until the local Integrated Pest Management Technician, Bryan Davis, came out to the farm, that Robert developed the confidence to try these new weed suppression practices. Recommended rates from four to eight ounces of Roundup per acre seemed too low to work. But with two or three applications of this very low rate the weeds are kept in check. Treatments are typically made in May, June, and July. Usually within one year, there is a shift in weeds to more tolerant perennial broad leaf vegetation. Currently, more than 10,000 acres are managed with this practice in NC.

When Christmas tree growers jump-start their ground cover by sowing Dutch white clover or birdsfoot trefoil, they generally use 10 to 15 pounds to the acre. The seeding rate is high because it is hand-sown on undisturbed soil. As little as 3 to 5 pounds would be adequate if it were applied to disked, drilled, or otherwise disturbed soil.

Establishment always goes better if the legume seed is inoculated with nitrogen fixing bacteria. For each gallon of clover seed, Robert uses 1 ½ tablespoons of regular Coke with ¼ cup of inoculant to make the seed sticky and the inoculant adhere to it. The seed is easily distributed through an EarthWay 3100 spreader.

Final Thoughts

As is so often the case, a decision that the Woodies made in one aspect of their farm business helped to achieve success in a completely separate goal – the reintroduction of northern bobwhite. The changes they made in weed management would have occurred independently of Robert's quail introduction as it did on most other Christmas tree farms in the area. Weed suppression with Roundup has taken off regionally because it costs less, saves time, and helps to protect the soil on a farm. Most farmers didn't look beyond the benefit to the crop, their land, or their wallet. It took Robert's interest in quail to drive home the potential benefit to wildlife. Just as it took a concerted educational effort to promote weed suppression initially, growers will need to learn about quail reintroduction.

At this point the Woodies' success serves as a case study or testimonial that other growers can follow. Robert Woodie and Bryan Davis have presented their results to groups of Fraser fir Christmas tree growers at county and state meetings. The word is starting to get out. Releasing quail may catch on among growers who already feel good about the way their farms look with tree fields green with clover.