

2014 Quail Season Outlook

By

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This marks the 25th year that roadside quail surveys have been conducted in Oklahoma. Every year regional differences are seen in survey results due primarily to the effects of weather and land use such as livestock grazing that can affect quail nesting conditions. This year was the second model year in a row for rainfall and cooler temperatures during the spring and summer months. Great news is in and the 2014 statewide index increased 66% from the previous year and is up 76.3% from 2012. Five of the state's six quail survey regions showed significant increases in the population occurring in the North-central and Southeast (94%), Northwest (71%), Northeast (57%), and Southwest (50%) part of the state, compared with 2013. The number of quail in the South-central region decreased significantly, at 50%. However, the index is still 31% below the 25-year average (Table 1), but the index has been on the rise the past two years with improved conditions.

In 2011, the Oklahoma Department of Wildlife Conservation (ODWC) and Oklahoma State University (OSU) cooperative units initiated research in western Oklahoma. Research is being conducted at the Packsaddle and Beaver River Wildlife Management Areas. Some of the issues being addressed are quail population and habitat studies, historical perspectives on relationships between quail and weather, movement and survival of radio-marked adult quail and chicks, thermal modeling, refining methods of determining abundance, and vegetation monitoring relative to burning and grazing, several nesting aspects, aerial and terrestrial predators influencing useable space and GIS assessment, and possible effects of aflatoxins on quail and other wildlife species. Research conducted the first three years is being analyzed and results will be posted in the near future. However, research results are mirroring what the statewide index is seeing, and these results are showing that quail nesting, reproduction, population, habitat conditions and other biological aspects are increasing where habitat is favorable.

Weather plays an important role in quail production and habitat quality and quantity. Persistent drought has occurred throughout Oklahoma during the past several years, with the western part of the state particularly affected. During the years of (2011-2012), Oklahoma has had record heat and severe drought, and the quail population declined. The lack of rain also affected the amount of nesting cover available for the 2012 nesting season. Radio-collared birds in 2012, showed a high mortality in both Packsaddle and Beaver WMA's with most mortalities being attributed to avian and mammalian predators, due to the effects of this drought. The past two years (2013-2014), Oklahoma has had favorable winters, which helped with the carryover of birds into the nesting season. The relief in the drought included, much-needed moisture and ideal temperatures that allowed birds to have a chance for multiple nesting attempts and some late-season hatches, which are additive to the fall population. This has also allowed landowners a chance to perform prescribed burning that helps set back succession, which allows areas for quail and quail chicks to forage for much-needed insects and seed producing forbs for winter forage.

Western Oklahoma remains in the forefront when it comes to quail habitat in Oklahoma and will typically have the highest population of birds in the state. Precipitation in the western part of the state was good throughout the nesting season. The rainfall increased the amount of forbs that attract insects and provided good brooding cover. Research the past two years shows that quail had multiple nesting attempts, successful re-nests and second hatches. The previous two years, 2011 and 2012, the research showed that the birds shut down nesting in mid-summer and did not attempt re-nests or second attempts. This year the research also showed that radio-collared quail were still nesting into September, and some of these nests were successful. Northwest (71%) and Southwest (50%) Oklahoma is in the forefront for increased numbers across the state on average the past couple of years. The timely rains and cooler temperatures helped stabilize populations, as well as increase the population in these regions. Nesting cover, brooding areas, and escape cover benefited from the break in the drought and allowed for significant nesting opportunities and second attempts in these regions.

Central Oklahoma also received timely precipitation for the nesting season. This weather could have allowed for early-, mid-, and late-season nesting attempts that were successful. North-central (94%) had the biggest increase during the survey over 2013 which is the result of an increase of habitat caused by severe wild-fires in the summer of 2012 and the likelihood of birds being able to forage away from the roadside. The region also benefited from timely rains, cooler temperatures, and a chance for late-season nesting attempts and success. This whole region has areas scattered throughout that have quality quail habitat that can provide good hunting and, with the chance of a late-season hatch, there could be an opportunity to chase a few quail. However, South-central (50%) Oklahoma did see a decrease over the 2013 survey, which could be explained by increased cover, forbs, and late-season nesting attempts, but the coveys that were observed were large, had a variety of age classes, and were seen frequently in good habitat.

Much of eastern Oklahoma does not provide high-quality quail habitat due to extensive changes in land use that have been detrimental to quail, such as conversion of native prairie to exotic grasses and encroachment of timber due to lack of fire. Most of this region received timely rains as well, along with cooler temperatures. This would likely increase late nesting attempts as well in areas where native grass structure still persists. However, in areas where good habitat persists, there was an increase of 94.3% in the Southeast and a 57% increase in the Northeast, significantly up from the previous four years. Lack and loss of habitat is expected to result in low quail numbers in much of the eastern part of the state. However, there are areas where timber harvest and intense management for quail has taken place, resulting in some nesting success where quail numbers will provide some hunting opportunities.

The Oklahoma Department of Wildlife Conservation has conducted annual roadside surveys in August and October since 1990 to index quail populations across Oklahoma. Department employees survey 83, routes of 20 miles each in all counties except Oklahoma and Tulsa. Larger counties like Beaver, Ellis, Le Flore, McCurtain, Osage,

Pittsburg, and Roger Mills have two routes. Observers count the number of quail observed and classify the size of the young birds comprising broods to provide an index of quail abundance (number seen/20-mile route) and reproductive success and timing. This report combines the August and October surveys to provide a composite index of statewide quail abundance for individual state regions (Figure 1).

Reports from the field have been much better and significantly improved than the past few years, so the true test of reproductive success will come on Nov. 8 when the season begins and Oklahoma quail hunters take to the field to begin their own “survey efforts.”

Table 1. Average number of quail seen/20-mile route during the August and October roadside surveys.

Region	1990-2014 25-year average	2013	2014
Statewide	5.5	1.3	3.8
Northwest	8.0	2.2	7.6
North-central	3.1	0.2	3.4
Northeast	3.3	0.6	1.4
Southwest	12.9	3.8	7.4
South-central	2.2	1.2	0.6
Southeast	4.9	0.4	0.7

Figure 1

Regional boundaries for Oklahoma used for quail roadside surveys.









