

# **2015 Quail Season Outlook**

*By*

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This marks the 26th 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 and thermal conditions. Oklahoma's quail reproduction started turning around in July of 2013. The summer started hot and dry, but cooler temperatures and some much needed rainfall started coming through the state. Before that happened, Oklahoma had been in a record drought for three plus years! This year marks the second ideal year in a row for rainfall and cooler temperatures during the spring and summer months. Great news is in and the 2015 statewide index increased 59.5% from the previous year and is up 353.9% from 2013. Four of the state's six quail survey regions showed significant increases in the population occurring in the Southeast (62.9%), Northwest (101.4%), Southwest (78.4%), and the Northeast (50.4%) part of the state, compared with 2014. The number of quail in the South-central and North-central regions decreased significantly, at 83.3% and 17.8% respectively. However, the statewide index is now 6.9% higher than the 26-year average (Table 1) and the index has risen significantly the past three 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, possibly due to the effects of the drought. The past three years (2013-2015), 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 habitat management activities that are preferable for quail, such activities include: proper grazing management, prescribed burning, timber thinning, and various other landscape objectives that increase useable space and 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 the United States and will typically have the highest population of birds in the state, as well as in the country. 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 three 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 (101.4%) and Southwest (78.4%) 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, third, and multiple brooding attempts in these regions.

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 62.9% in the Southeast and a 50.5% increase in the Northeast, significantly up from the previous five 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.

Overall, North-central was down (17.8%) over the 2014 survey, but is up (19.4%) from the 26 year average. South-central region is down (83.3%) over the 2014 survey, and is also down (95.3%) for the 26 year average. However, these regions endured severe flooding events throughout the month of May, followed by dry and hot conditions over the next three months. The months of June, July and August are the most important for reproduction and chick development. These months usually have an increase of cover, forbs, and late-season nesting attempts, but the coveys that were observed were smaller, had a variety of age classes, and were seen frequently in good habitat. This weather could have allowed for mid- and late-season nesting attempts that may have been successful however, clutch sizes were smaller as the summer progressed. These two regions have

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.

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 84, 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 November 14th 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        | 1990-2015<br>26-year<br>average | 2014 | 2015 |
|---------------|---------------------------------|------|------|
| Statewide     | 5.52                            | 3.7  | 5.9  |
| Northwest     | 8.3                             | 7.4  | 14.9 |
| North-central | 3.1                             | 4.5  | 3.7  |
| Northeast     | 3.2                             | 0.93 | 1.4  |
| Southwest     | 13.1                            | 7.4  | 13.2 |
| South-central | 2.14                            | 0.6  | 0.1  |
| Southeast     | 4.8                             | 0.7  | 1.14 |

Figure 1.

**Regional boundaries for Oklahoma used for quail roadside surveys.**









