GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

# Wild Turkey Production and Population Survey Results for 2015

The 2015 hunting season was the 37th year of our annual turkey population survey. The continuing cooperation between turkey hunters and staff has made the survey possible. Your assistance is vital to managing wild turkeys in Georgia. We appreciate this partnership.

**Turkey Production Index Survey**

Historically, this survey was conducted from May-August from 1978-1990. Beginning in 1991, the annual survey period was shortened to June-August. Field personnel of the Game Management and Fisheries management sections along with personnel from the Law Enforcement division participate in the survey. All observations of turkey broods, gobblers, and hens with and without poults are reported.

During the summer of 2015, 492 broods were observed, which represents a 42% increase from 2014 (347). The average brood size of 4.75 poults observed in 2015 was 9% less than 2014 (5.2) and 20% less than the 5 year average (6.0). The statewide production index poults/observer was 15.3, which was a 49% increase from 2014 (10.3) and 12% above the 5 year average (13.7). The production index 'poults + hens' was 4068 in 2015, which was 18% greater than 2014 (3457) and similar to the 5 year average (4070). Statewide, the average number of poults per hen was 1.4 in 2015, up 23.2% from 2014 (1.1), and the same as the 5-year average of 1.4. Recent years suggest that 2.0 poults per hen or slightly less have been able to maintain our current populations. A production index of 1.4 poults per hen is low, but better than what much of the state has experience the last few years.

Reproduction data does suggest that a couple areas in Georgia had better reproduction in 2015 than 2014, however, some did not. The Lower Coastal Plain had the highest poults/hen index (pph) of 2.04, which was a 38% increase from 2014. This areas of the state also saw 28% more broods, and 40% greater number of total poults+ hens. The Ridge and Valley area of the state also did well with 1.72 pph, which is about the same as 2014 and 2 years in a row of good reproduction. This region also saw a 43% increase in 'total poults+hens' and the number of broods observed increased 78%. The Upper Coastal plain had a 1.26 pph index. This was down 18.5% from 2014. This area also had a 21% decrease in the total poults+ hens observed, but saw a 15% increase in the total broods observed. The Piedmont continued to underperform with a poults/hen index of 1.18 in 2015, however, that is a 40% greater than 2014 (.85). On a positive note, this area experienced an 11% increase in the total poults+ hens observed and a 64% increase in the number of broods observed. Finally, the Blue Ridge lost ground again in 2015 with a poults//hen index of .81, which was a 9% decrease from 2014 (.90). Other indices for this

area were much better with total poults+hens observed increasing 110% and a 180% increase in the number of broods observed.

**Hunting Population Index Survey**

For the 2015 hunting season, usable hunt data was supplied by 523 cooperators (which is 9% above the 5-year average of 477 [2010-14]). Of these, 476 came from the permanent cooperator list and 47 from the DNR quota list which resulted in a reporting rate (after deleting wrong addresses, deceased, quit hunting, incorrect data collection, etc.) of 35.6% from the permanent and 8.1% from the DNR quota list, respectively. These cooperators reported spending a total of 19,891.8 hours hunting (which is 5% above last year [18,856.3 = 2014] and 15% above the 5-year average of 16,820.4). The average season hunter effort was 10.8 trips (which is nearly equal to last year [10.6] and 5% more than the 5-year average of 10.2) totaling 38.0 hours (which is nearly equal to last year [37.4 = 2014] and 7% more than the 5-year average of 35.2). They reported observing 9,926 turkeys (which is 16% less than last year [11,784 = 2014] and 2% less than the 5-year average of 10,176) and hearing 7,619 gobblers (which is 17% less than last year [9,139 = 2014] and 10% less than the 5-year average of 8,507). This represents the worst year since 2009 for both indices. The statewide population index (hours/turkey seen) of 2.0 was 20% greater than last year (1.6 = 2014) and the worst since 2002, and was 15% less than the 5-year average (1.7, a greater number means a worse year in that it took longer to see a turkey. The effort per gobbler heard of 2.6 was 19% worse than last year (2.1 = 2014) and the worst since 2002. It was also 23% worse than the 5-year average of 2.0. The effort per gobbler harvested was 27.1 which was 9% worse than last year (24.7) and the worst since 2009. This was also 18% worse than the 5-year average of 22. The least hunting effort per turkey seen occurred in the Ridge and Valley along with the Upper and Lower Coastal Plain (fourth year in a row for RV and LCP). The effort per gobbler heard was least in the Ridge and Valley followed by the Upper and Lower Coastal Plains and was greatest in the Blue Ridge Mountains.

This was the third season we asked cooperators to report gobblers and hens seen separately. From this, we observed that statewide the hen:gobbler ratio was 1.3 down slightly down from last year (1.5), whereas during the reproductive season 2014 it was 1.8. This ratio varied from 1.1 (Upper Coastal Plain) – 1.5 (Ridge and Valley and Lower Coastal Plain) hens:gobbler across the 5 physiographic regions. You would expect fewer hens to be seen during the harvest season because as the season progresses hens leave the gobblers to nest. Statewide hours hunted per gobbler seen was 4.7 (4.0 in 2014), while it took 3.5 hours (2.7 in 2014) to see a. Hours per gobbler seen varied from 3.0 (Lower Coastal Plain – second year being the lowest) – 6.4 (Piedmont – second year being the highest) across the regions. Hours per hen seen varied from 2.0 (Lower Coastal Plain – second year being the lowest) – 4.6 (Piedmont – second year being the highest) across the regions.

Statewide peak gobbling activity (1.7 & 1.8 gobblers heard per trip) occurred during the youth (March 14-15) and first (March 21-22) weekends, but were much less than last year (2.7 & 2.6, respectively). This season statewide there were no periods with greater than or equal to 2.0 gobblers heard per trip which was the worst since 1999 (from 2000-2014 there were anywhere between 1-6 periods with 2.0 or better). This year as in most years, the greatest gobbling activity was the first 7 days of the season. Regionally, for 2.0 gobblers heard per trip or greater we observed the following for each region: Ridge and Valley – youth, first and fourth weekend;

Blue Ridge Mountains – first and fourth weekends; Piedmont, Upper and Lower Coastal Plains experienced no periods with 2.0 or better. The youth weekend numbers are deceiving because there was very little data across the state for that weekend. Gobblers heard per trip compared to last year was the same for the Ridge and Valley, up for Blue Ridge Mountains, and down for the Piedmont, Upper and Lower Coastal Plains.

The statewide gobbler harvest during the first seven days (excluding the youth weekend) of the season amounted to 27% of the total season harvest (which is less than the 5-year average of 30%). Peak seven-day harvest by region was: Ridge and Valley April 13-19, Blue Ridge Mountains = April 20-26, Piedmont and Upper Coastal Plain = March 21-27; and Lower Coastal Plain = March 28 – April 3.

Similar to previous seasons and coinciding with the harvest data, the greatest number of trips made was during the first seven days (excluding the youth weekend) of the season, except for the Blue Ridge Mountains (April 18-24) and Lower Coastal Plain (March 28 – April 3).

Statewide (excluding the youth weekend) the best 2 periods were the first (March 21-22) and second (March 28-29) weekends for gobbler harvest per trip. The best two periods for Ridge and Valley was the fourth week through the fifth weekend (April 13-19), Blue Ridge Mountains was the first weekend (March 21-22) and sixth week (April 27-May 1), Piedmont was the first weekend (March 21-22) and second week (March 30-April 3), Upper Coastal Plain was the first (March 21-22) and second (March 28-29) weekends and the Lower Coastal Plain was the first weekend (March 21-22) and the seventh week (May 4-8).

Hunter success (60.2 %) was the worst since 2001, with 315 of 523 hunters reported taking or assisting in taking at least one gobbler. Of the successful hunters, 135 (25.8 %, 5 year average was 23.6 %) took or assisted in taking one bird, 70 (13.4 %, 5 year average was 17.7 %) took or assisted in taking two birds, and 110 (21.0%, 5 year average was 25.0 %) took or assisted in taking three birds. Cooperators reported 227 gobblers harvested by companions, which was close to last year (233) and the 5-year average of 205.

The new predictive model analysis uses Poults/Observer of the previous reproductive season + Turkeys seen/Hour from the previous harvest to predict the following years harvest season population index of Hours Hunted/Turkey Seen, where the predictor model (1978-2014) is:

**1/(Constant + (Slope X 2014 Poults/Observe) + (Slope X 2014 Turkeys Seen/Hour) = 2015 Hours Hunted/Turkey Seen**

Therefore:
**1/(0.1066 + (0.0107*10.26) + (0.51757*0.6250 )= 1.85 Hours Hunted/Turkey Seen in 2015.**

After the reproduction+population data from 2014 was entered in the model, the prediction for the 2015 harvest season was 1.85 hours hunted per turkey seen. However, hunters observed 2.0 hours hunted per turkey seen which is 8% worse than what was predicted. A relatively high inverse correlation r = -0.68 was obtained from this analysis.

**2016 Season Forecast**

Georgia, along with most of the southeastern states, has seen a declining trend in wild turkey reproduction and population. In Georgia, we have had poor reproduction the last 4 summers in a row. Turkey populations are cyclic and their populations can rebound quickly. When we get consecutive years of bad reproduction, the impact is much more noticeable. But let's keep some perspective. While we have had some declines in reproduction and overall turkey populations, we still have a lot of turkeys in Georgia. Georgia is still in the top 6 states in terms of eastern wild turkey harvest and population (300,000 turkeys, 68,000 hunters, harvest 35-40,000 turkeys).

So what should hunters expect this spring? The Lower Coastal Plain and Ridge and Valley will have above average seasons this year and next year due to better reproduction than other parts of the state. The other regions of the state did see some improvement in reproduction in 2015, but the lower reproduction in 2014, will surely mean fewer 2-year-old gobblers which usually account for the largest portion of the adult turkey harvest. For the second consecutive year the percent of Jakes in the statewide harvest was 5% or less. In those areas, hunters may be hunting older birds which are typically more challenging. The wild card this season will be the weather. With the El Nino weather pattern, we could be in for a wet spring. This generally does not help hunter success!