Wild Turkey Production and Population Survey Results for 2012

The 2012 hunting season was the 34th year of our annual turkey population survey. The continuing cooperation of turkey hunters has made the survey possible. Your assistance is vital to managing wild turkeys in Georgia. We greatly appreciate this partnership.

Turkey Production Index Survey

Historically, this survey was conducted from May through August from 1978 thru 1990. Beginning in 1991, the annual survey period was shortened to June through August. Field personnel of the Game Management, Law Enforcement, and Fisheries Management Sections of the Wildlife Resources Division are involved in data collection. All observations of turkey broods and hens, with and without poultys, are reported.

During the summer of 2012, 303 broods were seen, which was down 27% from 415 in 2011. The average brood size of 7.4 poults observed in 2012 was 8% more than 2011 (6.9) and 5.6% less than the previous 5-years average (7.9). The statewide production index of poults per observer (13.53) was less than last year (16.4) and about the same as the 5-year average (13.6). The production index ‘poults + hens’ was 4022 in 2012, which was 9.2% lower than the 2011 index of 4428 and similar to the 5-year average of 4436. The average number of poults per hen was 1.26 in 2012 down 29.4% from 1.93 in 2011. This was also 23% lower than the previous 5-years average (1.6). The past several years of production data and harvest data indicate that reproductive levels around 2 poults per hen or slightly less have been able to maintain our current population level. A production index of1.26 poults/hen is not good. Statewide poults production decreased 30% from 2011 to 2012. Some of the state will not be impacted, but much of the state will notice the effect of lower production during the 2014 spring season.

Reproduction data suggests that turkey production was low in many parts of Georgia in 2012. The Blue Ridge area of the state experienced the most significant decreases. The poult/hen index was 0.65 which is a 69% increase from 2011. Poults/observer was down 65.6% with an average of 10.08 poults observed/observer. The Piedmont region also did poorly. The poult/hen index was 1.19, down 47.1% from 2011. The index of total poults + total hens (1435) also decreased by 13.5% and poults/observer (15.17) was down 33.5% from 2011. The Ridge and Valley region has seen good production in recent years, however, the poult/hen index was 1.37 in 2012, down 32.9% from 2011(2.02). The Ridge and Valley had a 43% decrease in the poults/observer index (24.1) and a 40.3% decrease in the total poults + total hens index (349). South Georgia fared a little better. The Upper Coastal Plain region experience a 15.6% increase in the poult/hen index (1.62), a 42.3% increase in the poult/hen index (14.1), and a 45.3% decrease in the total poult + total hens index (1325). Reproduction was still low, but stable in the Lower Coastal Plain. This region experienced a 2% decrease in poult/hen index (1.12), a 19.7% increase in poults/observer index (8.9), and little change in the total poult + total hens index (648). The early spring green up in 2011 should have set the stage for better reproduction. Unfortunately, the timing of spring rains in the north half of the state likely resulted in poor poult survival and lower nest success.

Hunting Population Index Survey

Usable hunt data was supplied by 479 cooperators (which is 6% above the 5-year average of 451). Of these, 437 came from the permanent cooperator list and 42 from the NWTF list which resulted in a reporting rate
These cooperators reported spending a total of 15,927.85 hours hunting (which is 3% below the 5-year average of 16,400.5). The average season hunter effort was 9.7 trips (which is 8% less than the 5-year average of 10.6) totaling 33.3 hours (which is 9% less than the 5-year average of 36.4). They reported observing 9,256 turkeys (which is 7% less than the 5-year average of 9,937) and hearing 8,282 gobblers (which is 6% more than the 5-year average of 7,822). The statewide population index of 1.7 was the same as last year (and the 5-year average of 1.7). The effort per gobbler heard of 1.9 was 14% better than last year (2.2 = 2011) and 10% better than the 5-year average of 2.1, which corresponds with the 18.8 hours/turkey harvested being 23% better than last year (24.3, 2011) and 21% better than the 5-year average of 23.9.

The least hunting effort per turkey seen occurred in the Ridge and Valley and Lower Coastal Plain. The effort per gobbler heard was least in Ridge and Valley and Lower Coastal Plain and greatest in the Blue Ridge Mountains. Even though there were more cooperators this year, there were fewer hours hunted and less trips made; however, there were more gobblers harvested. Thus, this year cooperators seem to be more efficient in their hunting trips as pertaining to harvest.

Statewide peak gobbling activity, 2.5 gobblers heard per trip, occurred during the first (March 24-25) weekend (which is similar to the 5-year average for the first weekend of 2.6). The next highest period recorded 2.2 gobblers heard per trip was the third weekend (April 7-8). This season there were 3 periods with greater than or equal to 2.0 gobblers heard per trip, whereas last year there were 2. For most of the state the greatest amount of gobbling activity was the first 7 days (Mar 24 – April 1) and the 7-day period of April 7 - April 15 (the third week of the season). Peaks of gobbling by region occurred during the first weekend (3.3 gobblers heard/hour) for the Ridge and Valley, the second weekend (1.6 gobblers heard/hour, March 31 - April 1) for the Blue Ridge Mountains, the first weekend for the Piedmont (2.3 gobblers heard/hour), first weekend for the Upper Coastal Plain (2.6 gobblers heard/hour), and the first weekend for the Lower Coastal Plain (3.1 gobblers heard/hour). More gobblers were heard per trip across all Regions than last year.

The statewide gobbler harvest during the first seven days of the season amounted to 40% of the total season harvest (which is more than the 5-year average of 31 %). Peak harvest was generally seen within the first seven days of the season in all parts of the state.

Similar to previous seasons, the greatest number of trips made was during the first seven days of the season. Only minor variations in hunting effort have occurred over the years.

Hunter success (68.5 %) was better than last year (2011= 67.4 %) and the 5-year average 66.7 % (2007-2011) with 328 of 479 hunters reported taking or assisting in taking at least one gobbler. Of the successful hunters, 103 (21.5 %, 5 year average was 25.3 %) took or assisted in taking one bird, 88 (18.4 %, 5 year average was 18.0 %) took or assisted in taking two birds, and 137 (28.6 %, 5 year average was 23.3 %) took or assisted in taking three birds. This was the greatest year for cooperators taking or assisting in taking three birds.

Cooperators reported 266 gobblers harvested by companions (which is greater than the 5-year average of 171).

The predictive model analysis uses Poults+Hens of the reproductive season during the current year to predict the following years harvest season population index of Hours Hunted/Turkey Seen, where the predictor model (1978-2012) is:

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\text{Constant + (Slope \times 2011 Total Poults+Hens)} = 2012 \text{ Hours Hunted/Turkey Seen}
\]

Therefore:

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3.3175 + (-0.00034\times 4,428) = 1.8 \text{ Hours Hunted/Turkey Seen in 2012.}
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After the production data from 2011 was entered and updated the model, the prediction for the 2012 harvest season was 1.8 hours hunted per turkey seen; which was only 6% from what was observed, 1.7 hours hunted per turkey seen. A relatively high inverse correlation \( r = -0.90 \) was obtained from the comparison of the new nesting season population index versus the following years harvest season population index.

**2013 Season Forecast**

According to a post-season telephone survey, Georgia’s estimated 56,736 resident turkey hunters had a great spring season in 2012, harvesting about 33,049 gobblers statewide. The average harvest per hunter (0.58 turkeys) decreased slightly from 2011, and was better than the previous 5 years averaged (0.56). Not surprising, 71.0% of turkey hunters surveyed rated Georgia turkey hunting good or excellent. The turkey population in Georgia has declined since 2003, primarily due to poor reproduction and loss of quality habitat. I think we will continue to experience the ups and downs of normal population cycles typical of a stable population at or near capacity. We recently estimated the population at about 335,000 turkeys and harvest rates remain good.

The 2013 season should be good in most parts of the state. Production in 2011 was good in the Piedmont, Ridge & Valley, and Blue Ridge regions of the state. However, those areas had poor reproduction in the
summer of 2012. So, those areas of the state should have a good supply of vocal 2-year-old gobblers, but there will likely be less juvenile gobblers in the woods. The lower and upper coastal plain areas of the state may see a little less success in 2013. Reproduction in those areas was good in 2010, but poor in 2011. In 2012, reproduction in the lower coastal plain remained poor, but the upper coastal plain saw an increase. So, the supply of easier 2-year-old gobblers may be a little more limited, but hopefully the good hatch in 2010 has provided a good supply of 3-year-old gobblers. There should also be a better supply of juvenile gobblers in the upper coastal plain.