NORTH CAROLINA WILDLIFE RESOURCES COMMISSION

2005 WILD TURKEY SUMMER BROOD SURVEY REPORT

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In order to gain insight into wild turkey productivity over the various regions of the state, a wild turkey brood survey is conducted each summer. The survey was mailed to approximately 1,200 participants. Personnel from the North Carolina Wildlife Resources Commission, the North Carolina Forest Service, the US Forest Service, the US Fish and Wildlife Service, several military bases, and numerous key private individuals around restoration areas participated in the survey.

Observations made during the course of routine daily activities were recorded during the July 1 through August 31 period. This information was compiled and analyzed to determine a productivity index from the average poult per hen ratios.

The following tables summarize the data received for 2005.

Table 1. 2005 Wild Turkey Summer Brood Survey Data.

Region	Observations	Hens W/O Poults	Hens W/ Poults	Total Hens	Total Poults	Total Gobblers	Total Unk.
Coastal	328	157	350	507	1,025	327	359
Piedmont	298	278	193	471	723	285	173
Mountains	318	220	287	507	889	210	160
State	**944**	**655**	**830**	**1,485**	**2,637**	**822**	**692**

Table 2. 2005 Wild Turkey Summer Brood Survey Results.

Region*	% Hens W/ Poults	Average Poults/Brood	Average Poults/Hen	Average Gobblers/Hen
Coastal	69%	2.9	2.0	0.64
Piedmont	41%	3.7	1.5	0.61
Mountains	57%	3.1	1.8	0.41
State**	**53%**	**3.3**	**1.7**	**0.56**

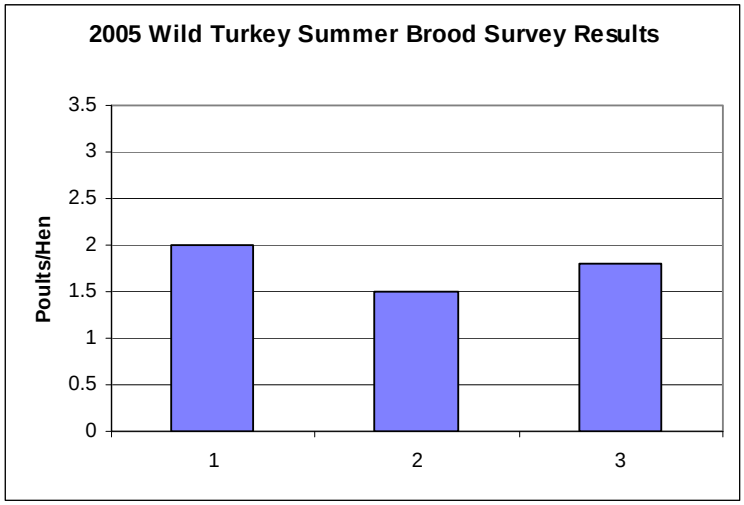
**Geographical regions, not NCWRC regions.*

***The State percentages and averages in Table 2 were calculated by weighting the regional data by the percentage of the total wild turkey population in that region (Coast – 26%, Piedmont – 46%, & Mountains – 28%).*

The percentage of hens with poults is an indication of nesting success while the average number of poults/brood is an indication of poult survival. Overall productivity is determined by the average number of poults/hen. An average of 3.0 poults/hen is considered good productivity.

A total of 5,636 wild turkeys were observed during this summer's brood survey. Statewide, the percentage of hens with poults (53%) indicates poor nesting success; the average number of poults/brood (3.3) indicates only fair poult survival; and the average number of poults/hen (1.7) indicates poor overall productivity. Wild turkey productivity varied somewhat among the three geographical regions. The Coastal Region experienced good nesting success (69% of the hens were with poults) but poor poult survival (only 2.9 poults/brood) and only fair overall productivity (2.0 poults/hen). The Piedmont Region experienced very poor nesting success (only 41% of the hens were with poults), fair poult survival (3.7 poults/brood) and very poor overall productivity (1.5 poults/hen). The Mountain Region experienced only fair nesting success (57% of the hens were with poults), poor poult survival (only 3.1 poults/brood), and poor overall productivity (1.8 poults/hen).

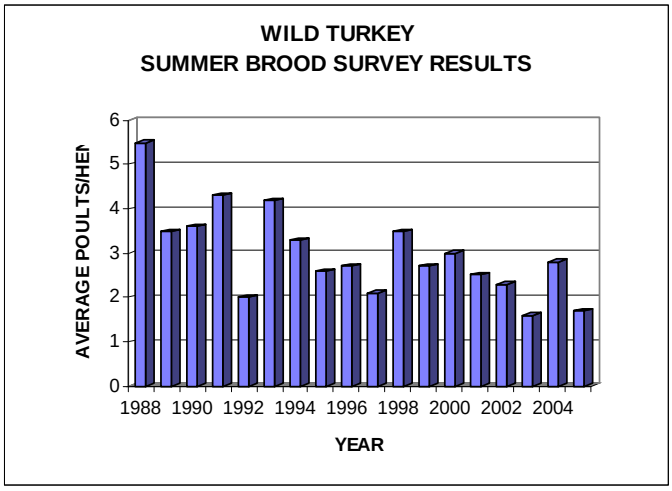
Figure 1. 2005 Wild Turkey Summer Brood Survey Results.



An unusually late spring with cool, damp conditions during the nesting and early brood rearing periods may have contributed to this year's poor productivity. Another contributing factor may have been the irregular age structure of the current population.

The poorest hatch on record occurred in 2003 resulting in very few two year old birds in the population this year. All three geographical regions experienced good wild turkey productivity in 2004. Therefore, a large percentage of this year's wild turkey population consists of one year old birds. Some research studies indicate that young hens are not as successful at nesting and brood rearing as the older, more experienced hens. If those studies are accurate, then a wild turkey population containing a large proportion of young hens and few older hens would logically have lower reproductive success than normal.

Figure 2. Wild Turkey Summer Brood Survey Results, 1988-2005.



One final piece of data added to this report is the gobblers/hen ratio. This ratio is an indicator of the level of carryover of gobblers following the previous spring gobbler season. Some states use a minimum benchmark of 0.50 gobblers/hen. A ratio of less than 0.50 gobblers/hen may be an indication of over-harvest of the male segment of the turkey population if quality spring gobbler hunting is the management goal.

Statewide, this ratio for 2005 was 0.56 gobblers/hen. This is only the second time this ratio has been above the minimum benchmark in the last nine years and may be reflective of the large number of jakes in the population from the good hatch in 2004. The average ratio for the last nine years is 0.46 gobblers/hen while the average ratio for the last five years is 0.49 gobblers/hen. These data indicate that additional pressure should not be placed on the male segment of the wild turkey population by increasing the season length, opening the spring season earlier, or increasing the bag limit if quality spring gobbler hunting is to be maintained.

Figure 3. Carryover of Gobblers.