



## Fall Harvest Rates and Annual Survival of Female Wild Turkeys in Pennsylvania, 2010 - 2014

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### Study Objectives:

1. Estimate female wild turkey harvest and survival rates by age class and fall season length.
2. Determine if one-week changes to fall season length affects harvest rates of hen wild turkeys.
3. Determine fall hunter participation, satisfaction and retention, and whether the Thanksgiving season recruits new hunters.
4. Use the information gained to more effectively establish fall hunting seasons.

The Pennsylvania Game Commission manages wild turkey populations primarily through the fall turkey season because the fall either-sex harvest influences the number of hens that survive to reproduce the next spring. This study will determine fall harvest and annual survival rates, as well as the effects of fall season length on those rates.

**2 Study Areas:** consist of groups of similar Wildlife Management Units (WMUs)

**Study Area 1** – WMUs 2C, 2E, 4A, 4B & 4D; Units that have shown to be sensitive to long fall seasons.

**Study Area 2** – WMUs 2F, 2G, & 2H; Units that traditionally have had long seasons, but have lower population densities (turkeys per mi<sup>2</sup>) than the state average.



### Procedures:



**Objective 1:** Estimate female wild turkey harvest rates.

**Leg Bands** - Each year 230 female wild turkeys are trapped, using rocket nets, in each study area during the fall (Aug-Oct) and winter (Jan-Mar) trapping seasons. All turkeys are fitted with aluminum leg bands, one on each leg. Leg bands on the females offer a reward and are stamped with a toll-free telephone number to report the band number.



**Satellite Radio Transmitters** - A sample of hens also are equipped with a satellite radio transmitter attached as a backpack that remains on her for life. Transmittered hens allow us to estimate how many birds survive to the fall hunting season. The harvest of reward-banded and transmittered birds allows us to estimate the proportion of birds that are harvested – the harvest rate for hen turkeys. We retrieve transmitters from hens that die and re-deploy them on other hens each trapping season to maintain a sample of around 60 transmittered hens each year.

**Objective 2: Determine How Season Length Affects Harvest Rates**

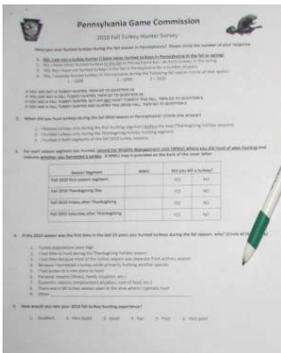
We'll change season lengths in each Study Area after 2 years (2013) to determine how this change affects female harvest rates:

Fall 2011 & 2012 hunting seasons:

**the traditional 2 weeks in Study Area 1; 3 weeks in Study Area 2.**

Fall 2013 & 2014 hunting seasons:

**increase to 3 weeks in Study Area 1; decrease to 2 weeks in Study Area 2.**



**Objective 3: Fall Hunter Surveys**

After each fall turkey season a survey is mailed to 10,000 Pennsylvania hunters with a postage-paid return envelope. Only a few questions are asked to ensure at least a 70% return rate. Questions focus on hunting participation, success and satisfaction for both early and late segments of the fall hunting season, and reasons why hunters did or didn't hunt to determine hunter recruitment and youth participation.

**Objective 4: More Effective Fall Hunting Seasons**

Hen harvest and survival rate data and hunter participation, retention and satisfaction will be incorporated into a turkey population model to help effectively manage the wild turkey population and provide the most desirable fall turkey hunting seasons.



**Funding Sources:**

- Federal U.S. Fish and Wildlife Services research grant,
- The National Wild Turkey Federation, The Pennsylvania Chapter NWTf & local NWTf Chapters,
- U.S. Geological Survey, PA Cooperative Fish & Wildlife Research Unit, at The Pennsylvania State University.