The Deer-Forest Study

Purpose of the Study: Can We Do Better?

Pennsylvania's deer management plan clearly directs Game Commission staff to evaluate and improve the methodology behind the deer program. Research is the vehicle for this work. The Game Commission has maintained an active deer research program for decades. Research findings are incorporated into the deer program improving our management and understanding of whitetails and deer conflicts.

Game Commission research efforts have evaluated deer management measures. Deer harvest estimates, use of age ratios to monitor deer population productivity and predator impacts, methods to monitor deer population trends, methods of gathering public input, methods of collecting hunter-killed deer to monitor chronic wasting disease have all been evaluated and published in the scientific literature. Every aspect of the deer program has been subjected to external, professional scrutiny and, in most cases, published in the scientific literature. The program is sound.

Since the Game Commission began using forest regeneration data (i.e., PRS) to guide its deer management recommendations, evaluations and improvements have occurred. In 2007, personnel from the bureaus of Wildlife Management and Wildlife Habitat Management reassessed whether the PRS data set is the best to use for monitoring deer impacts on forests. After evaluating characteristics of all available data sets, the answer was clear. The PRS collects highly-detailed tree regeneration data, measures overstory stocking levels and competing vegetation, and is representative of public and private lands. As such, the PRS is still the most appropriate data set available to evaluate forest habitat health based upon adequate tree regeneration.

Since 2007, other modifications in the analysis of the data have occurred based on recommendations from an external review by Wildlife Management Institute and ongoing PGC evaluations.

Incorporating PRS data into deer management recommendations has improved our decision-making, but the question remains. Can we do better? Can we improve our sample sizes or choose alternative measures to increase our ability to detect changes in forest regeneration? How can we better assess other factors affecting

forest regeneration and plant diversity? Can we fine-tune deer impact assessments to ensure they reflect actual deer browsing pressure? These questions deserve answers to ensure deer management recommendations are made in the best interest of deer, people, other wildlife species, and forested habitats. These questions also require data from field studies to provide answers. The Deer-Forest Study is designed to provide these answers.

The Deer-Forest Study is a complex study. Since 2006, when the Game Commission began using measures of forest regeneration, it has recognized that deer are not the only factor affecting regeneration. To better understand the effect of deer on the forest, these other factors must be investigated. Consequently, the Deer-Forest Study will explore how forest management activities (i.e., timber harvesting, prescribed fire, herbicide treatments, etc.) can influence deer impacts on the forest.

The Deer Management Assistance Program (DMAP) is an important part of the deer management program. DMAP helps landowners to reach their forest and deer management goals. DCNR is a primary user of DMAP and the state's largest forested landowner. As a result, it is important that the science behind DCNR's requests for DMAP permits is as strong as the science behind the Game Commission's deer management recommendations. For this reason, the Game Commission and DCNR have decided to work together with the U.S. Geologic Survey and Penn State University to complete this comprehensive study of deer and forest interactions.

The Deer-Forest Study represents the next step in improving the deer program. By completing the Deer-Forest Study, the Game Commission is working to achieve objectives in its Strategic and Deer Management plans to evaluate and improve management measures and programs.