

Harvest Data: the Infrastructure to Deer Management

It's amazing how often I hear the phrase "Deer were much bigger back in the ole days". This statement is really perplexing when today's popular sporting magazines are replete with unbelievably high-scoring trophy bucks. Even the once considered untouchable 206 1/8-inch world record Jordan buck taken in 1914 was eclipsed by the 213 5/8-inch Saskatchewan buck taken by Milo Hanson during the 1994 season. But regardless of these facts, some old-timers remain convinced that the old days yielded the largest racked bucks. The question, however, is can these statements be verified? And the answer is no--because few, if any hunters collected data from harvested deer in the past. The priority placed on collecting harvest data is relatively new to the deer hunting world.

Prior to 1975, recordkeeping was minimal if not collected at all, with antler dimensions of those bucks taken years ago enhanced over time. The point is, recordkeeping is an integral component of deer management. Without it, there is no way one can make a factual statement, or a decision, as to what has developed or what is required, not only to improve, but protect one of today's most valuable natural renewable resources—the whitetail deer.

Recordkeeping is simply the compilation of morphological data collected from harvested deer. The age, weight, both dressed and live, and antler measurements are the basic statistics required for harvest records.

Live weight data is simply the weight of the entire animal prior to being eviscerated.

Dressed weight data is the weight of the animal following evisceration. Dressed weight is most applicable since hunters traditionally field-dress their animals immediately following the kill.

When it comes to the male segment of the deer herd, antlers represent a vital source of information. Conventionally, the only measurements taken from antlers were the inside spread, length of beam, a single basal circumference, and number of points. These calibrations alone are less than representative of the actual size of a whitetail's rack. However, it's important to realize that any measurement is better than none. Fortunately, there are other measurements that can be obtained from a rack to enhance one's ability to interpret its size and more importantly, compare it with others.

When collecting data from antlers, the entire antler should be scored using Boone and Crockett scoring procedures. Every inch of antler of every buck, not just the largest ones, should be measured. For example, not one, but four circumference measurements must be obtained per antler beam. Antler tines are not only counted, but measured for length as well. The average total amount of inches referred to as the gross score is compared to other bucks of the same age, either within the same herd or from deer inhabiting other regions.

Antler scores are rendered useless if the age of the animal is not obtained. How many times have you heard individuals speak of a buck being over the hill or being extremely young, without ever looking at the jaw of the animal? The analysis of the lower jaw of a whitetail deer is critical to estimating the approximate age of a deer. But regardless of one's experience at aging jaws, it is only an estimate, but one that can be relied on for trend information.

The oldest, most user-friendly and economic age-estimating tool is based on tooth replacement and wear. For example, to age a yearling (1.5-year-old) deer, one can rely on the fact that the first three premolars in the lower jaw, the third tooth exhibiting three crests, are shed and replaced sometime around 18 months of age with the new third molar exhibiting only two crests. This timely and distinct change allows for the accurate determination of an 18-month-old deer. Differential wear on the permanent molars (fourth through sixth teeth in the lower jaw) are critiqued to determine the older-age classes, which becomes more difficult and less precise as the animals age.

Although the aging technique is hindered by aberrations in tooth wear, the ability to age deer by reviewing wear on lower jaw teeth remains a useful tool in deer management. What is most important to remember about aging deer, in my opinion, is to remain consistent with the estimations. In other words, the age allocated to a particular deer's jaw may be off a year or two, but consistent with all others consolidated in the particular age class. By doing so, the data is placed into groups exhibiting similar tooth wear regardless of the age. It is, however, important to note that based on Texas researchers Cook and Hart, 66% of the estimates obtained by skilled, or more importantly, experienced field personnel are correct, which means they are incorrect 34% of the time. When they are incorrect, 76% of the estimates are older, or over estimated ages. Thus, it is obvious that one's estimate is affected by many factors besides experience, for even those that age a lot of deer are going to err.

In order to enhance your capability of aging deer correctly, you can obtain a consortium of known age jaws and construct a known age jaw board employed as a

visual aid assisting you in your estimations. Several commercial brands are available, but known age jaws from your particular area would be most advantageous.

Another way to obtain proper ages to accompany the antler and weight data collected is to remove and retain the jaws. When performing this task, be sure to identify which deer the jaw belongs to by labeling the jaw itself. You can then have them analyzed by an experienced biologist to obtain the approximate age.

Possibly the most practical method of handling jaws is to simply take several close-up digital images from each side of the lower jaw and email the images to an experienced biologist for final interpretation.

So, the question arises—why collect all this information, and how does it benefit us? Harvest data is extremely helpful when it comes to deciphering the physical condition of our whitetails by simply providing you, the manager, some numerical evidence upon which a decision can be made. The importance of estimating a deer's age becomes evident when the data is presented in a tabular format. Basically, all gathered data pivots around the age of the animal. In other words, the data is displayed in age classes with yearlings lumped with yearlings; 2.5-year-olds lumped with 2.5-year-olds, etc.

Harvest data can be defined as a yardstick measurement tool when it comes to measuring or estimating the quality of animals existing on a particular habitat. By collecting harvest data annually, one can continually monitor either the improvement or degeneration of the animals they are managing. For instance, the data can be utilized to demonstrate the impact domestic stock can have on the quality of deer occurring on your lease, or the negative effects generated from excessive habitat destruction. It can also be

employed to measure the impact of supplemental feeding. By simply comparing body weight and antler size data, prior to the initiation of a feeding program to that data collected proceeding the establishment of the program, one can actually find out just how much each additional inch of antler costs.

The point is, once harvest data is obtained, it can be used to dictate what can or cannot be done without interfering with the deer herd quality.

To the deer hunter, harvest data pertaining to antler size represents a numerical image of the quality of bucks that inhabit the area of interest. Thus, if 160-inch deer are what is desired, a ranch with a 120-inch-class average for mature deer is not going to meet your standards. On the other hand, the landowner can use deer data as an advertisement, particularly if the deer herd demonstrates high standards of antler quality. Thus, to the landowner, properly collected and prepared harvest data can help generate revenue because harvest records are better than the fanciest brochure.

Data collection does not stop or at least should not cease following the hunting season. For instance, those short forays down to the lease during the spring can be turned into physically refreshing outdoor learning experiences as family and friends search for shed antlers. These calcified appendages represent additional sources of information which can fortify harvest data. Although it is impossible to correlate those jettisoned antlers to any age class, they can address a variety of aspects related to the deer herd, including but not limited to buck numbers, antler points, mass, antler weight, and even habitat desired by the bucks that supported the recovered antlers.

Regardless of one's goal as a hunter, landowner or lessee, the whitetail deer remains to be a desirable and more importantly an economically valuable entity.

Unquestionably, its sport value will continue to spiral upward in the future as will its economic value. Thus, maintaining records on the status of this animal is not only practical, it makes good business sense. The whitetail deer has done extremely well and has entertained hunters and nonhunters alike for many years. Thus, it is only right that we continually monitor this wild, renewable resource, not only for its improvement, but protection as well.