



A Guide to Pronghorn Buck Harvest

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Pronghorn hunting in Texas is limited by TPWD through a finite number of hunting permits issued to landowners or their agents annually within defined herd units. Pronghorn herd units are delineated based upon population parameters, habitat types, permit demands, and perceived barriers to pronghorn movements (certain fence types, highways, fenced railroad rights-of-way, natural barriers). Each summer TPWD biologists conduct aerial surveys to estimate populations within pronghorn herd units. Biologists analyze those data along with harvest data for each herd unit to determine the number of permits to be allocated to landowners for the upcoming season.

Landowners, managers, hunters, and wildlife enthusiasts have many different opinions when it comes to the management of pronghorn across their distribution in Texas. For example, in extensively farmed areas of the Texas Panhandle, common opinions are that there are too many pronghorn on the landscape and that they are a nuisance to crop production. In areas dominated by rangeland, landowner and manager attitudes regarding pronghorn are generally favorable. Hunters and wildlife enthusiasts almost always have a positive view of pronghorn. However, pronghorn hunter harvest goals are just as diverse as landowner opinions, ranging from only wanting to harvest a large-horned buck to harvesting any buck to put meat in the freezer.

Biologists set pronghorn permit issuance rates to maximize hunting opportunity while maintaining a level of older aged bucks for hunters who seek mature pronghorn. This management philosophy is rooted in population sustainability and, to a lesser degree, sociological factors. Even with TPWD issuing permits at a sustainable level, numerous landowners want to be more conservative with their buck harvest to maximize horn quality. Provided below are a few harvest management guidelines that landowners and managers can use to ensure an older buck age structure is preserved through time.

Horn Development and Age Structure

Figures 1 and 2 portray basic horn measurements for pronghorn bucks aged and measured in the Panhandle and Trans-Pecos by age group. These data were gathered as part of management or research projects. A process called cementum annuli forensic aging on collected incisors was used to estimate ages of harvested bucks, which is similar to counting rings on a tree. This method is the best technique available for estimating a pronghorn's age. Based on these data, peak horn development occurred mostly by 5.3 years of age. However, unlike deer, on average pronghorn bucks achieve over 95% of their maximum horn development by the time they reach 3.3 years of age. This provides some buffer in maintaining horn quality with higher harvest rates of pronghorn bucks compared to deer.

TPWD provides the opportunity for hunters or landowners to submit collected incisors from harvested pronghorn. Those teeth are then sent to a lab for aging purposes. Analyzing the age of harvested bucks provides additional information regarding buck harvest intensity and can be used to compare horn measurements by age class as illustrated in the figures below.

Striving to harvest bucks 3.3 years of age or older will provide maximum harvest opportunity, while maintaining desirable horn quality through time.

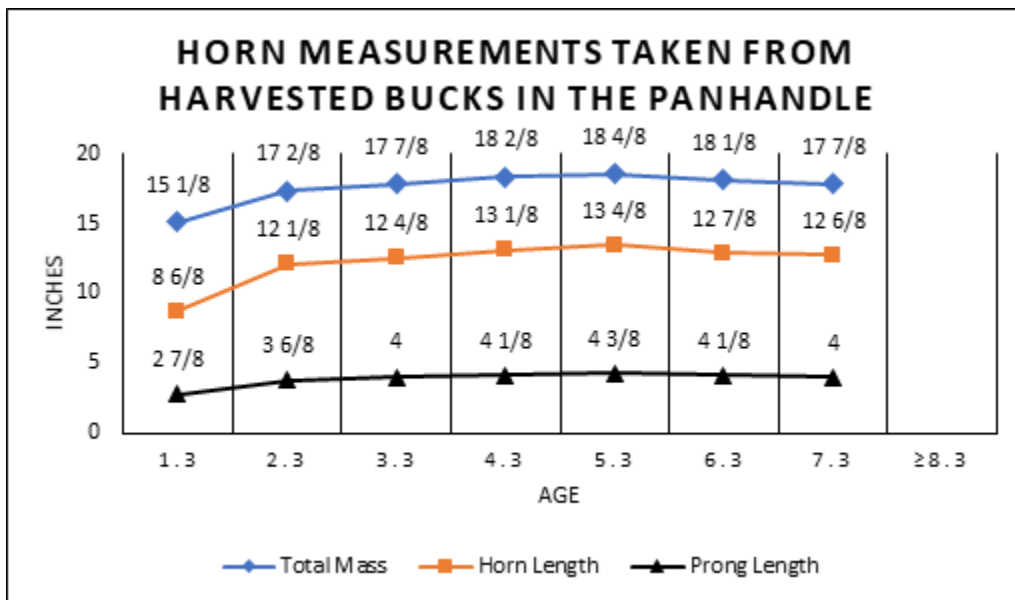


Figure 1. Average horn measurements taken from one horn of harvested pronghorn in the northern Panhandle. Over 1,000 bucks were aged and measured from 2013–2020. Total mass was calculated using 4 circumference measurements. **The ≥ 8.3 age class was not included because of a small sample size.**

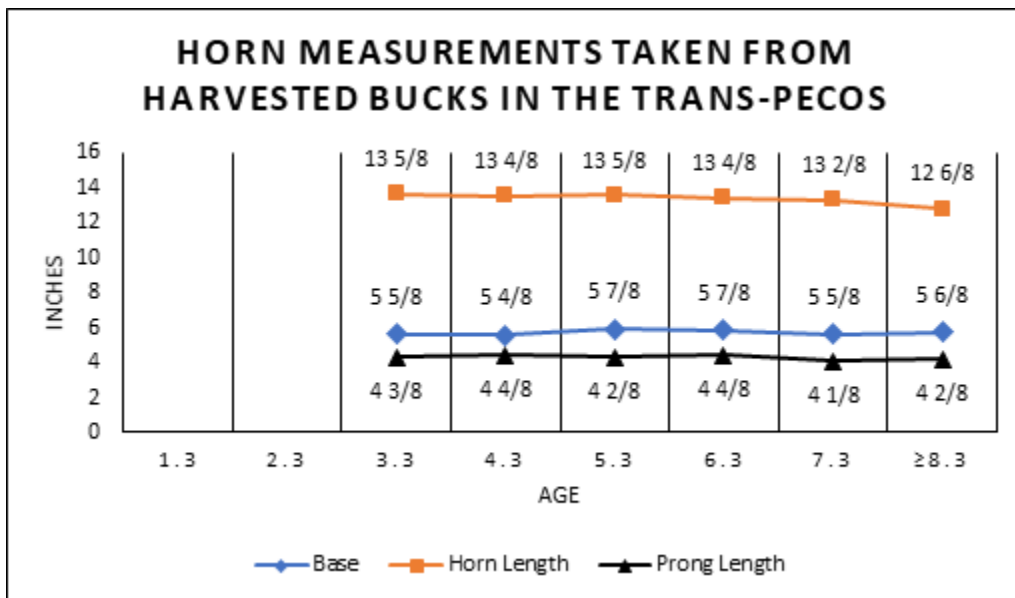


Figure 2. Average horn measurements taken from one horn of harvested pronghorn in the Trans-Pecos. About 120 bucks were aged and measured from 2010–2011. **The 1.3 and 2.3 age classes were not included because of small sample sizes.**

Sex Ratio

Sex ratios in pronghorn herds fluctuate slightly over time, depending on hunting pressure and other sources of mortality among both bucks and does. Prior to the hunting season, it is common to observe sex ratios of approximately 1–3 does per buck. Large ranches interested in producing better horn quality will generally ensure that post-season ratios do not exceed 3 does per buck. A post-

season ratio of 4–5 does per buck will result in a slightly younger age structure among bucks, but is sustainable and will continue to provide adequate buck numbers for breeding success and harvest.

Example: A ranch with 20 bucks and 60 does would typically be able to harvest 5 bucks during the hunting season, resulting in a post-season sex ratio of 1 buck to 4 does.

Percent of Buck Segment of the Herd

Another effective method in achieving a sustainable buck harvest is determining the average number of bucks on the property (not the maximum number) and harvesting 20–25% of the bucks. This harvest rate will allow many of the bucks to reach 3–5 years of age and often results in a post-season sex ratio of approximately 1 buck to 4 does. **Example:** A ranch with 8–12 bucks using the property (an average of 10) could expect a sustainable harvest by taking 2–3 bucks annually.

Biologists use several pieces of population and habitat data to issue pronghorn buck permits yearly to meet our objectives within each herd unit. Regardless of the number of permits that a landowner may receive for a property, the tools described above can be used to ensure buck horn quality remains high while maximizing hunter opportunity.



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