

# Pronghorn Hunting in Wyoming

Using ecology to balance hunter opportunity & horn size

In Wyoming, pronghorn are an iconic species of the sagebrush steppe, and Wyoming is home to more pronghorn than any other state. Pronghorn also generate millions of dollars annually for wildlife conservation and management through hunting. People hunt for many different reasons, from filling the freezer to spending time enjoying wild spaces or harvesting a trophy animal. These goals often require very different management actions, and wildlife managers must balance the competing desires of the public when setting seasons and allocating licenses. Yet, pronghorn are unique because they grow and mature much more quickly than other species of big game and may shift that balance.



**Given the unique ecology of pronghorn, can managers aim for ample opportunity for many hunters while retaining the chance to harvest an impressive buck?**



## Measuring what influences horn size.

From 2019 to 2022, Wyoming Game and Fish Department and University of Wyoming personnel sampled harvested pronghorn in central and south-central Wyoming to learn about pronghorn size, age structure, with varying degrees of hunter opportunity. At check stations in Hunt Areas 57, 58, 60, 61, 64, 68, 73, 75, and 106, field personnel collected teeth to age harvested pronghorn and used Boone and Crockett scoring techniques to measure horn size.

## Pronghorn Management

In Wyoming, the chance to draw a tag to harvest a pronghorn depends on three primary factors: 1) how many animals are in each herd 2) the objective size of that herd, and 3) the ratio of males to females.

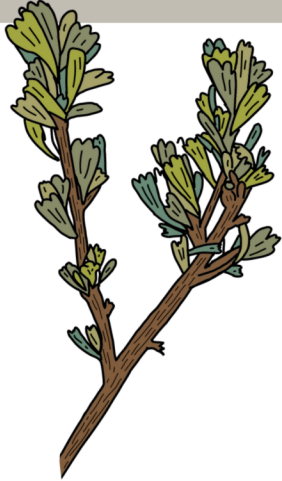
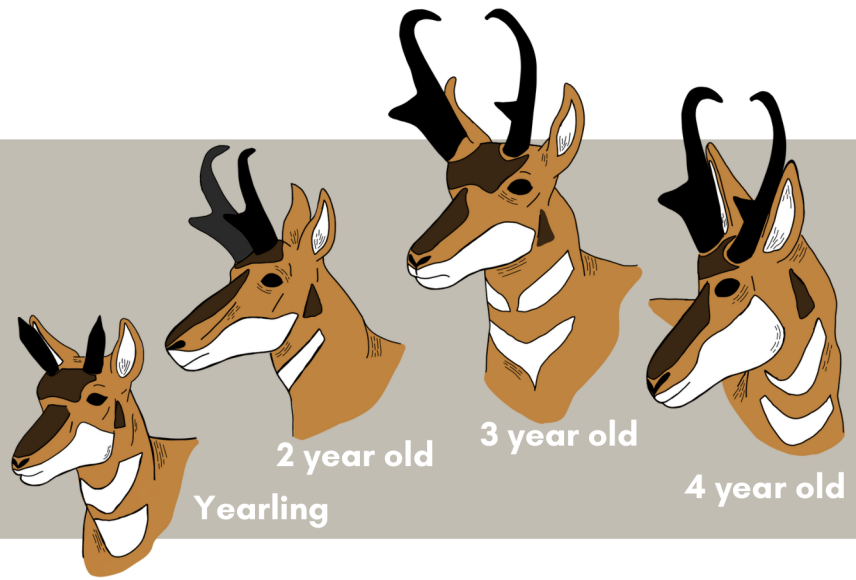
Increasing or decreasing the number of buck or doe tags in a hunt area allows managers to maintain objective sex ratios and keep herds at desired sizes. Managing for high ratios of males to females has long been thought to yield more old, and thus, large males on the landscape.

The Wyoming Game and Fish Department strives to balance population management with hunter opportunity, reasonable expectations of harvest success, and potential to harvest mature bucks.

# What we found.

## Pronghorn grow big horns early in life.

Unlike other big game in North America, pronghorn bucks attain over 95% of their lifetime horn size by 3 years of age, and reach peak horn size by 6. Pronghorn grow larger horns for their age faster than any other big game species in North America grows their horns or antlers.



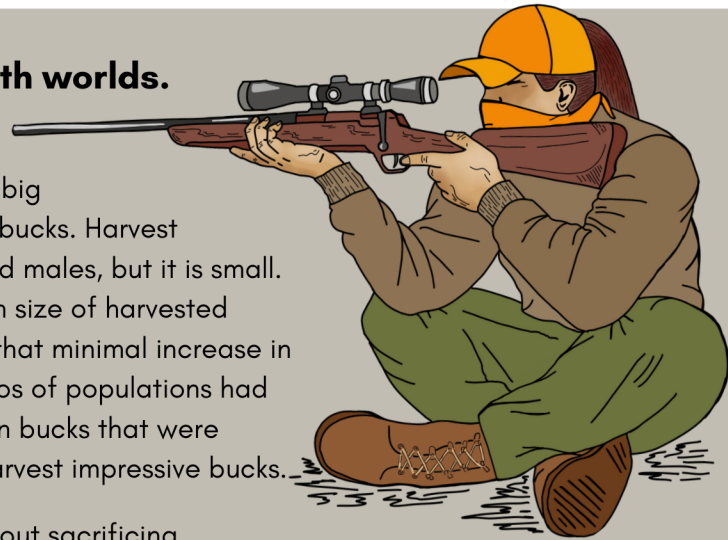
## Environmental conditions early in life are important for horn growth.

Each spring, the snow melts across Wyoming's landscapes and provides critical moisture which supports the growth of sagebrush—pronghorn's primary food. Consequently, during the winter a buck fetus is growing inside the womb, the snow depth his mother experiences affects how large his horns will grow for the rest of his life; deeper snow leads to more moisture and food for a mother and a lifetime of larger horns for her son. For young bucks, the additional food resulting from more snow during the year he grows his horns also leads to bigger horns during the first few years of his life.

## Pronghorn's ecology can lead to the best of both worlds.

The fast growth of pronghorn horns offsets the typical tradeoff between the number of hunters and the presence of bucks with big horns—increasing tags leads to more hunters harvesting mature bucks. Harvest rates do have an influence on the average horn size of harvested males, but it is small. A 20% decrease in harvest rate could increase the average horn size of harvested bucks by less than 1" by allowing more bucks to grow older, but that minimal increase in horn size comes at the cost of opportunity. Additionally, sex ratios of populations had no influence on either the average age or horn size of pronghorn bucks that were harvested—regardless of the sex ratio, hunters could find and harvest impressive bucks.

For pronghorn, an increase in harvest rates can be possible without sacrificing opportunities for harvest of large males. Wildlife managers can provide more opportunities to hunt pronghorn bucks with minimal impact to having large-horned males on the landscape.



## Supporters and partners.

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