

Factors That Affect The Size Of Antlers

Some judge a hunting season to be successful based on their buck's antlers. Well, let's look at what affects the size of antlers. There are three factors that contribute to antler size - age, nutrition and genetics.

AGE. Antler size increases with age until the buck reaches its prime and then declines. Deer antler development usually peaks when the bucks reach 5-7 years of age, but individual bucks may peak at a younger or older age. After peaking, a buck's antlers generally lose tine length and have fewer points, but continue to increase in thickness. No matter how good the nutrition and genetics of the area, the population will not contain large bucks unless they are allowed to reach the older age classes. As a buck matures past its first year, his hormonal system creates a physiological environment for larger antler growth.

NUTRITION. Good nutrition is an important ingredient for growing large antlers. Nutrients consumed by bucks go first to body development and maintenance, then to antler growth. This is one reason yearling bucks do not produce large antlers - their nutrient intake is being used almost entirely for body development their first year. If there is a limited amount of forage available there may not be enough "extra" nutrients to optimize antler development that year. In years of below average rainfall or a widespread mass crop failure, bucks will sport smaller racks than in years of abundant forage quality and quantity.

GENETICS. Every buck has individual genetic potential for antler growth. Captive bucks of the same age, fed the same diet, show antler shapes and sizes that are very different from one another. Some bucks will be superior to others at the same age and some will never have large antlers just as some humans never reach 6 feet tall regardless of diet or age. Every population has some individuals that have genetic potential for antler size that is far above or below average for that population. Research on whitetails found that bucks carrying spike antlers when they were yearlings produced more spike-antlered offspring than bucks that had forked antlers as yearlings. There are many genes which act together to determine the shape, size, mass, and density of a buck's antlers, as well as his ability to efficiently process his nutrient intake and survive to a ripe old age. Does carry half the genetic material for antler size and shape, which serves to complicate matters. Females cannot express these genes themselves, but can certainly pass them on to their male offspring. The female daughters of huge bucks have been shown to consistently produce male offspring with superior antlers even when bred to several different mediocre bucks. Every population has some individuals that have a genetic potential for antler size that is far above average. Those are the breeding bucks that landowners wish they had - and the ones hunters dream of.