

## APPENDIX F



# General Population Management Recommendations for Big Game

**P**ronghorn antelope, desert mule deer, white-tailed deer, and elk populations in the High Plains are adapted to specific habitats. Pronghorns are keyed to tracts of shortgrass prairie; mule deer are tied to interspersed canyons/grasslands, cropland/CRP habitat, and sandhills; white-tailed deer occur in areas of brush encroachment and cropland/CRP habitats. A small elk herd ranges throughout the breaks of Punta de Agua Creek and the Canadian River in Hartley and Oldham Counties. Weather and agricultural/range practices dictate quality and quantity of these habitat types and in turn influence productivity of these animals, especially pronghorns and deer. See guidelines for cover in *Vegetation Management Recommendations* as previously stated.

Agricultural crops (irrigated wheat, milo, and alfalfa) are important to pronghorns and deer, and do influence nutritional conditions during winter stress periods and gestation. Native browse plants are also preferred by deer and comprise a high percentage of their diet depending on availability. Mountain mahogany, aromatic sumac, littleleaf sumac, fourwing saltbush, sand sage, ephedra, shinnery oak, and hackberry are valuable where they occur in canyonlands, sandhills, or river break habitat adjacent to grasslands. Pronghorns and deer rely heavily on native forbs (broadleaf weeds) and legumes (nitrogen-fixing plants) and are not grazers in the sense that they *prefer* grasses; in fact, forbs comprise 60% of their diets. They will consume young tender shoots of grasses (5%) during periods of rapid luxuriant growth after prescribed burns and rainfall when palatability and digestible crude protein have increased, along with available forbs, browse (30%), and crops (5%). These percentages change seasonally depending on availability of preferred foods. Elk are mainly grazers (70% grasses) in the growing season, use browse during the winter, and can conflict with agricultural production when croplands occur in close proximity to rangeland.

Pronghorns are herd animals that traverse large acreages up to 10,000 acres. Desert mule deer and white-tailed deer in plains (fragmented) habitats tend to be more mobile with home ranges up to 5,000 acres. Therefore, the same animals can range on multiple landowners. Seasonal movements are influenced by rainfall, range conditions created/managed by livestock grazing, and cropland distribution. **Cooperative management** by neighboring landowners in an area affords the best opportunity to address 1) annual productivity/predation losses (coyotes eat fawns), 2) habitat

management, and 3) harvest management. The figures stated above should be considered minimum acreages for neighborhood "Wildlife Management Associations". However, management efforts will tend to be more productive (i.e. result in more wildlife for viewing, harvest, photography) when conducted over larger areas. Examples are a) entire county cooperates with Texas Animal Damage Control Service in predator control/management program to reduce pronghorn/deer fawn losses to coyotes on 100,000+ contiguous acres, b) landowners form a "WMA" to cooperatively share a limited number of buck pronghorn permits available within a herd unit boundary as opposed to individual permit issuance to landowners sharing the same animals, c) landowners form a "WMA" to improve wildlife habitat quality on large, contiguous acreages to benefit highly mobile species, and d) landowners form a "WMA" to achieve specific harvest management goals for mule/white-tailed deer, especially in low deer density/light harvest scenarios.

### Big Game Population Characteristics

Fawn survival for pronghorns (~25%), desert mule deer (~35%), white-tailed deer (~40%), aoudads (~30%), and elk (estimate ~30%) in the High Plains fluctuates with annual rainfall and habitat quality. Because nutritional condition is always marginal, productivity is generally low; therefore, recommended harvest for these species is conservative. To effectively conserve big game, pronghorn buck and elk harvest is provided for by TPWD-issued permit; mule deer buck harvest is by regulation, and white-tailed deer either-sex harvest is by regulation (see TPWD Hunting Guide).

### Method(s) Used to Determine Population Density and Composition:

In addition to survey information in the deer appendix, see the following: Aerial pronghorn surveys are conducted annually by Department wildlife biologists in fixed-wing aircraft. Herd composition information is collected by distinctive herd units and permit issuance is based on herd productivity and availability of surplus bucks. General population trend information on elk and aoudads is determined by landowner/game warden interviews.

### Recommendation for Harvest or Other Use:

Specific harvest recommendations *tailored to meet landowner/manager objectives* can only be made after surveys are conducted; however, the following guide may be used as a rule-of-thumb for High Plains big game:

- **Pronghorn antelope** - Buck harvest (only) is regulated by TPWD-issued permit; where smaller landownership occurs (~1-5 sections), **cooperative harvest management** by voluntary Wildlife Management Association is encouraged (contact TPWD wildlife biologist).
- **Desert mule deer** - To effectively conserve the resource, harvest bucks (only) legally as desired. To promote *improved buck quality* (>antler size and body weights), selectively harvest no more than **1 buck/3000 acres of deer range** each year. In areas of smaller landownership (~1-5 sections), **cooperative harvest**

**management** by voluntary Wildlife Management Association is encouraged (contact TPWD wildlife biologist).

- **White-tailed deer** - To effectively conserve the resource, harvest bucks legally as desired. Harvest *adult does* where legal at no more than 1/200 acres of deer range. To promote *improved buck quality* (>antler size and body weights), selectively harvest no more than **1 buck/2000 acres of deer range** each year. In areas of smaller landownership (~1-5 sections), **cooperative harvest management** by voluntary Wildlife Management Association is encouraged (contact TPWD wildlife biologist).
- Elk - See TPWD Hunting Guide and consult with a Department wildlife biologist.