

Appendix M

Herd Composition Data: An Essential Element of White-tailed Deer Population and Harvest Management in South Texas

Herd composition data refers to the **buck to doe ratios, fawn survival, and relative age structure of bucks within a population.** These key population parameters are used to implement and evaluate management and harvest strategies. Deer are born at approximately a one-to-one sex ratio; however, few free ranging populations reflect this ratio. Herd composition is not static but changes throughout the year due to the cumulative influences of hunting pressure, reproduction, natural mortality (diseases, accidents, predation, etc.), range conditions and land use, and environmental factors such as rainfall patterns, temperatures, drought, or floods.

Although the exact number of deer living on most ranches is impossible to determine, various techniques are available that estimate their numbers. Herd composition data through field observations provide supplemental information which is essential.

Deer herd composition data through field observations should be made during that time of the year when bucks, does, and fawns are most easily identifiable. The best time of the year for the collection of reliable herd composition data in South Texas seems to be from October through November. Observations initiated before October tend to underestimate fawn survival because fawns are not actively up and moving with does until they are 6-8 weeks of age. December observations may result in skewed sex ratios and inaccurate fawn survival estimates because of the rutting activity which occurs in South Texas during this period.

Herd compositions counts can be made any time of the day. Record **only** deer which can be identified as a buck, a doe, or a fawn. If you see a deer but can not identify it - don't record it. Do not assume the identity of deer or counts will become biased. Fawns and mature bucks are usually easy to identify. Every effort must be made to be sure you properly identify all deer. Your objective is to observe a representative cross section of deer throughout the total population on your ranch. In South Texas baiting deer through the feeding of senderos, roads, and established feeder locations is a common practice. Deer become accustomed to bait and can be readily observed in a very relaxed setting. The use of binoculars or spotting scopes allows for reliable herd composition data to be collected and enables the observer to classify bucks into relatively broad age classes.

Data should be recorded on a simple forms that has columns for the date, bucks, does, fawns, and total. When all herd composition observations are completed, simply add to total number of bucks, does, and fawns observed together. It is recommended that a minimum of **200** individual deer be identified if possible. **The more the better!**

To determine the **doe to buck ratio**, **divide the number of identified does *by* the number of identified bucks.** To determine the **fawn to doe ratio (fawn survival)**, **divide the number of identified fawns *by* the number of identified does:** For

example:

Divide 50 (# identified Does) by 20 (# identified Bucks) = **2.50 Does per Buck**
Divide 30 (# identified Fawns) by 50 (# identified Does) = **0.60 Fawns per Doe**