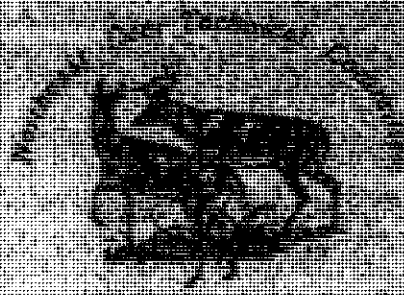


An Evaluation of Deer Management Options



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Population Growth and the Concept of Carrying Capacity

Deer populations have the potential for rapid growth. This is an evolved response to high mortality often related to predation. Under normal circumstances, does two years old or older produce twins annually, while yearlings does typically produce single fawns. On excellent range, adult does can produce triplets, yearlings can produce twins and fawns can be bred and give birth during their first year of life. In the absence of predation or hunting, this kind of reproduction can result in a deer herd doubling its size in one year. This fact was illustrated on the 1,146 acre George Reserve in southern Michigan where biologists at the University of Michigan have been studying the deer population since 1928. The deer herd grew from six deer in 1928 to 162 deer by 1933⁽²⁷⁾. In 1975, the George Reserve herd grew from 10 deer to 212 deer in 5 years⁽²⁸⁾.



Hal Korber, PA Game Commission

There are natural limits to the number of deer that a given parcel of habitat can support. These limits are a function of the quality and quantity of deer forage and/or the availability of good winter habitat. The number of deer that a given parcel can support in good physical condition over an extended period of time is referred to as "Biological Carrying Capacity" (BCC). Deer productivity causes populations to exceed BCC, unless productivity is balanced by mortality. When BCC is exceeded, habitat quality decreases with the loss of native plant species and herd physical condition declines. Biologists use herd health indices and population density indices to assess the status of a herd relative to BCC.