

Effects of Hunting on Chronic Wasting Disease Prevalence in White-Tailed Deer

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Chronic Wasting Disease (CWD) is a prion disease that is contagious to several species of cervids, including White-Tailed and Mule Deer, Elk, and Moose. Since its discovery in the 1960s, CWD has spread throughout much of the United States and Canada. Although it is wide-spread and has been reported in America for several decades, implementation of management is difficult due to the lack of knowledge on transmission methods. One such management method is increasing the hunter-harvest of deer to control deer populations and decrease the number of infected individuals able to spread the disease. To examine if there is a correlation between hunter-harvested deer and CWD prevalence since CWD was first detected in Missouri in 2011, we gathered data from the Missouri Department of Conservation's hunter harvest records from 2011 to 2018, sorting by sex and county. We did the same with MDC's records of the confirmed cases of CWD, comparing the rates of harvest and prevalence year to year to determine a relationship. For each county, we calculated CWD prevalence estimates by dividing the number of deer tested positive by the total number tested and developed a ratio that compared year to year prevalence rates with year to year hunter harvest rates. The results of this study will provide insight into the effect hunter harvest has on CWD prevalence in Missouri deer which may allow for more concrete management techniques regarding the spread of the disease in the future.