

This study looked at the effect of culling on the spread of Chronic Wasting Disease (CWD). CWD is a transmissible spongiform encephalopathy (TSE) with an unknown derivation and no antidote. Without any type of intervention, the long-term consequence of CWD lead to extirpation of Cervidae. Culling is the primary method used to control Chronic Wasting Disease. Studies suggest that selective culling of infected individuals could be a more effective method of reducing CWD prevalence, however, the two methods have not been directly compared. A series of ordinary differential equations will be used to create a model that reflects CWD in free-ranging Cervidae populations. This model compares general culling and selective culling of infected individuals using qualitative and numerical techniques to identify outcomes, give insight towards management prescriptions, and understand long term population dynamics as they related to different culling regimes.