Office of Applied Science

Deactivation of Chronic Wasting Disease (CWD) Prions Using Composting

This study examines how composting could be used to deactivate CWD prions, potentially providing a solution to long-standing challenges in deer carcass disposal.

TIMELINE

Launch: May 2019 Funded Through: June 2021

FUNDING

Pittman-Robertson

DNR PARTNER BUREAU

Wildlife Management

EXTERNAL STAKEHOLDERS

Deer hunters Private landowners Conservation Congress CDAC Interested public

The Prion Composting Project will test the ability of composting to degrade and deactivate CWD prions in deer carcasses.

CWD-infected deer carcasses will undergo a controlled and monitored composting process contained within tubs. Leachate resulting from the composting process will be tested for CWD. There are persistent concerns regarding safety in the disposal of CWD-infected deer carcasses, including in landfill settings. The Prion Composting Project is intended to address these concerns and to work toward developing best-management practices for carcass disposal.

Research will be conducted at the Almond Farm, a DNR facility, previously a commercial cervid farm. Deer at the farm were depopulated in 2006, at which time it was discovered that 80% of those deer were infected with CWD. The Almond Farm is double-fenced, preventing deer from entering the facility and ensuring that this work does not pose a risk to wild deer.

This is a collaborative project with Wisconsin DNR, the University of Wisconsin Stevens Point, and the University of Wisconsin-Madison.



KEY POINTS

- » There is a need for safe and costeffective disposal of CWD-infected carcasses
- » Composting, through a combination of biochemical processes, has the potential to degrade and deactivate CWD prions
- » Under controlled experimental conditions, researchers will compost CWD-infected deer carcasses, continuously monitoring the composting process and collecting and testing leachate for the presence of prions
- » Research will be conducted within the double-fenced Almond Farm, a former captive cervid facility, now DNR-owned property.
- » The Prion Composting Project may guide best management practices for disposing of CWD-infected deer carcasses



