

Chronic Wasting Disease (CWD) Prion Persistence in Soil and Infectivity

This study advances the science of detecting prions in soils and our understanding of the persistence of CWD prions in soils.

TIMELINE

Launch: July 2019
Funded Through: June 2022

FUNDING

Pittman-Robertson

DNR PARTNER BUREAU

Wildlife Management

EXTERNAL STAKEHOLDERS

Deer hunters
Private landowners
Conservation Congress
CDAC
Interested public

The Prions in Soils Project will assess the persistence of CWD prions in soils, which are a likely source of environmental transmission.

To determine the potential for prion persistence in soil, researchers will test soil samples taken from 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. At the time of depopulation, soil samples were collected and archived. Assays will be conducted on those archived samples as well as newly-obtained samples from the Almond Farm. Testing soil samples 13 years post-depopulation is important in establishing the ability of prions to persist in the environment.

An important first step in this project is to optimize next-generation prion-detection methods (RT-QuIC) for the detection of CWD prions in soil samples.

The project will represent a big step toward understanding the persistence of prions in the environment, which has implications for the role of environmental transmission in CWD epidemics.

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

SPOKESPERSON

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KEY POINTS

- » The Prions in Soils Project seeks to adapt and optimize next-generation prion-detection methods (RT-QuIC) for the detection of CWD prions in soil samples.
- » Soil samples will come from the highly contaminated Almond Farm, a DNR facility.
- » Soil samples taken both at the time of depopulation and 13 years following depopulation of the Almond Farm will be tested.
- » The Prions in Soils Project will offer insight into prion persistence in soils.

