A Nose for CWD


Photo by Wise K9 Photography

Chronic wasting disease (CWD) has changed the landscape of hunting in Pennsylvania. A threat to deer and elk, this contagious, always fatal disease was detected in Pennsylvania for the first time in 2012. The long incubation period of CWD makes it difficult to detect. That's why testing and surveillance are so important. There may be a new tool on the horizon to help with that. One with a tail that wags. An experimental program might turn man's best friend into disease detectors.

How can dogs smell CWD?

Volatile organic compounds (VOCs) are organic chemicals produced by all plants, animals, and microbes. Research suggests that disease-specific suites of VOCs may exist. A dog's nose is **10,000-100,000 times better at smelling than the average human**, and their lower limit of VOC detectability is one part per trillion! The VOC profile of feces from a CWD infected deer is different from an uninfected deer. The Penn Vet Working Dog Center (PVWDC) conducted research and confirmed that dogs can recognize this CWD VOC profile in feces (poop!). Moving from the indoor and outdoor laboratory settings, Wildlife Futures program began field training dogs on the unique CWD VOC profile.

How long does it take to train a CWD working dog?


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The dogs in this program have been in training since they were 8 weeks old. **It usually takes 1-1.5 years** to get a working dog fully trained.

How do you choose a dog for CWD work?

Many factors are considered when picking a dog for CWD work including their drive/intensity in the field, endurance, confidence, and ability to learn.

Can dogs get CWD?

No! Members of the *Canidae* family, in particular domestic dogs, are considered resistant to prion diseases. Canine prion proteins have never been shown to misfold in a lab setting. In fact, a study with coyotes shows that they can consume CWD infected animals without developing disease. The CWD prions can pass through their digestive system and remain infectious.

Can dogs detect things other than CWD?

The current focus of this K9 program is CWD detection, but the dogs have the ability to expand their detection capabilities.

Are CWD detection dogs being used anywhere else?

Yes, but this work is still in the early stages and experimental.



Are dogs used in other wildlife/conservation work?

Yes! Dogs have been used to detect rare species to aid in threatened species management and invasive species eradication programs.

How will CWD detection dogs be used in PA?

This work is still experimental and field testing is still ongoing. CWD detection dogs will be incorporated into the current CWD management program as another tool for detection and surveillance like surveying priority areas in and around Disease Management Areas (DMAs).

What happens if the dogs alert in the field?

If a CWD dog alerts while doing a field search, the handler will collect a fecal sample and several inches of dirt at the site. These samples will be tested using a diagnostic protocol under development. Currently, there is no laboratory test for validating CWD in an animal by testing feces.

Can the dogs detect CWD in other samples (blood, saliva, carcasses, living deer)?

Because this is one of the first times dogs have been used in this capacity, they are only being trained to detect CWD in feces. If opportunities arise, expanding detection to other biofluids or tissues is possible.

How much area can the dogs cover? How long can they work?

Many factors affect how long a dog can work and how much land they cover, including terrain, weather, wind conditions, and endurance. The dogs are kept in ideal physical condition, and their handlers have been trained to work the dogs in a way that will maximize their coverage in the field.

What if I see them in the field?

Come over and say hi, but don't be offended if the dogs don't say hi back! They are trained to ignore distractions if they are working. Please do not approach with other dogs.

What if I see them in an area I was planning to hunt?

Please approach the handlers and let them know you were planning to hunt there. They will be able to tell you where they are headed so you can stay out of each other's way.



Are the dogs going to chase deer or other wildlife?

The CWD detection dogs have gone through specific training to desensitize them to wildlife. Squirrels should not distract them 😉.

More information on CWD

More information on the Wildlife Futures Program