

A number of the state's deer and elk farms will try out UHF RFID readers and tags to identify and inventory their livestock, and possibly to control the spread of disease.

By Claire Swedberg

May 31, 2005—[New York's Department of Agriculture and Markets](#) will begin this month a pilot program to test UHF RFID tags on the state's domestic deer and elk (cervids). The ultimate goal is to track the cervid population and better trace diseases such as chronic wasting disease (CWD). The program will use a 915 MHz radio frequency identification system provided by [Advanced ID Corp.](#) that allows deer and elk tags to be read from as far away as 2 meters (up to 8 feet).

New York has about 400 cervid farms, with a total of 10,000 deer and elk. The state requires that all cervid farmers inventory their herds annually, which can be done by means of a simple head count at small farms, or by visual numeric tags or bar codes. The latter can fade in sunlight and get dirty, however, which makes them hard to read with a bar code scanner, according to Barry Bennett, president and CEO of Advanced ID, a Calgary, Alberta, provider of RFID systems for the animal industry. RFID reportedly provides a faster and more accurate read.



*Barry Bennett,
president/CEO, Advanced
ID*

One drawback of animal RFID tags, however, has been that the 134 kHz tags used in the past need to be within close range—15 to 18 inches—to be read. This short read range requires that deer and elk be herded through a chute so that the tag can be close enough to be read by an RFID reader. Bar codes and visual tags have a similar limitation.

Bruce Akey, assistant state veterinarian of the New York Department of Agriculture and Markets, points out that deer and elk do not adapt well to being herded. "Captive deer are semiwild," Akey says. When forced through a chute, they tend to panic, and some actually injure or kill themselves in their effort to escape the chute and close proximity to humans. "Standard ID chips have to be close to the reader," Akey says, which makes reading the tags on deer's ears difficult without either approaching within a foot of a deer using a handheld reader, or shepherding them through the chutes where a fixed reader has been deployed.

Using an RFID system with longer-range tags, Bennett believes, "is a much more humane alternative."

CWD is a fatal transmissible disease that affects the brain and central nervous system of deer and elk. In March, the Department of Agriculture and Markets announced the state's first positive case of CWD. The disease was found in a white-tailed doe from a captive herd in Oneida County, and four additional deer were also confirmed positive in April 2005. The department monitors the health and movement of all captive deer and elk for the presence of common livestock diseases, including CWD. In July 2004, the department initiated the CWD Enhanced Surveillance and Monitoring Program, which requires

owners of captive deer and elk throughout the state to conduct routine sampling and testing.

With this pilot, the department hopes to determine if cervid farmers can use the RFID system to easily take annual inventory of their herds and trace where the animals have been. If a positive animal is found, it might then be possible to trace it back to other farms where it had been and any other cervids it had come in contact with. To accomplish this, farmers would need to use RFID tags and readers, as well as have access to a statewide software system that would make it possible to trace the movement of animals from one farm to another. The current pilot, however, is intended to address only hardware issues.

"We're in discussion with software companies to establish and maintain a database," says Jeffry Huse, program manager for New York's Chronic Wasting Disease Program. "We would like farmers to have the ability to tag an animal at birth," then maintain a lifetime inventory of that animal through a statewide system.

"Our regulations require at least an annual inventory [by all cervid farmers in the state]," Akey says. "They're responsible to have some unique ID on their animals, but it's technology-neutral." That means the state does not require RFID or bar code ID tags. While smaller farmers are unlikely to use an RFID system to track 10 or fewer animals, the state could make readers available to farmers on an annual basis to inventory their herd without purchasing readers.

When the pilot begins, it will use dangle tags, which hang a few inches from an animal's ear. Each dangle tag will contain a passive UHF RFID tag encoded with a unique ID number, which will also be printed on the front of the tag. RFID readers could be affixed to feeding stations or incorporated in handheld devices, Bennett says. The program will begin with up to 1,000 tagged animals at 50 to 100 participating farms of all sizes. In addition to supplying the RFID dangle tags, Advanced ID is providing handheld readers built with RFID reader modules made by [Applied Wireless](#).

After the pilot is finished and a database is established, the agency hopes farmers throughout the state will begin tagging their cervid population.

In December, the United States Department of Agriculture began a program that uses 134 kHz RFID tags to track captive deer and elk in 10 different states where the animals are raised for meat, antlers and hides (see [USDA Tags Deer to Track Disease](#)). The USDA is providing a grant to help finance New York's pilot program. When the state and USDA pilot programs are complete, Huse says, "the USDA would like to have the ability to trace back any [infected] animal in a 48-hour period."