

Information Item: Bovine Tuberculosis Surveillance and Management in Franklin, Fayette, and Dearborn counties, 2016

Brief History

Bovine tuberculosis was identified in Indiana in a single cow in November 2008. Soon after, bovine tuberculosis was detected in farmed deer in 2009 in a nearby Franklin County deer farm. As a result, IDNR, the Indiana State Board of Animal Health (BOAH), and USDA APHIS Wildlife Services and Veterinary Services began a surveillance program to determine if bovine tuberculosis had spilled over into wild white-tailed deer. In 2011, bovine tuberculosis was detected in a Dearborn County cattle farm. Later that year, surveillance of white-tailed deer was expanded to this area. From 2008-2015, over 1,400 deer were tested and all wild white-tailed deer were negative for bovine tuberculosis.

In April 2016, bovine tuberculosis was detected by BOAH and USDA on a cattle farm consisting of 2 premises in Franklin County. As part of the response to that event, wildlife was removed and tested from the affected areas. In August 2016, a wild white-tailed deer removed from the affected premise tested positive for bovine tuberculosis. Results from the other wildlife taken from the farm are pending.

The USDA APHIS National Veterinary Services Laboratory has been conducting research on bovine tuberculosis strains from throughout the United States. The results from Indiana indicate that all of the deer species and cattle affected by bovine tuberculosis have been the same strain. The data indicate that all of the bovine tuberculosis found in Indiana is closely related and that these events are likely connected. Current data suggests that bovine tuberculosis has possibly been circulating at extremely low levels in the deer herd since at least late 2008 when the first case was detected. Based on these findings, IDNR will establish a Bovine Tuberculosis Management Zone in south Fayette and Franklin Counties and a Bovine Tuberculosis Surveillance Zone in northern Dearborn County.

Bovine Tuberculosis Management Zone

For 2016, the area south of State Road 44 in Fayette County and all of Franklin County has been designated a Bovine Tuberculosis Management Zone and the primary activity in this area will focus on reducing the prevalence of the disease and reducing the population of wild white-tailed deer to reduce the spread of the disease. Surveillance for the disease in the Bovine Tuberculosis Management Zone is considered a secondary objective.

Management activities will consist of:

- Removing additional deer from the bovine tuberculosis affected property and/or the surrounding properties will occur as soon as possible. If hunters have access to surrounding properties, IDNR will partner with them to collect targeted samples.
- Additional opportunities to harvest deer will be provided to allow hunters to assist in the reduction of the deer population.
 - Authorization to take a second buck will be issued to anyone submitting a buck that meets the established requirements (see below).
 - Landowner permits will be available to landowners desiring to reduce the deer population on their property for the purposes of disease management
- Surveillance

- Hunters will check-in their deer on-line within 12 hours of harvest and obtain their registration number.
- Voluntary surveillance for hunters who are concerned about bovine tuberculosis in their harvested deer can either use 2-3 established drop-off and/or staffed locations, or they can contact a biologist using the toll-free number to arrange a time and location for heads to be sampled.
- A collectable Deer Cooperator Patch will be issued to all cooperating youth and adult hunters who submit deer for bovine tuberculosis surveillance.
- A ban on feeding deer and other mammalian wildlife in the Bovine Tuberculosis Management Zone will be implemented.
- The IDNR will work to establish a base-line population size/density for the area using spotlight counts and/or other methods.
- Active white-tailed deer population reduction will begin in January until early April using a combination of landowner permits and sharpshooting with the goal of reducing the number of infected individuals in the area and the density of deer to reduce the spread of the disease among wild white-tailed deer.

Bovine Tuberculosis Surveillance Zone

For 2016, we redesigned the sampling protocols in an attempt to detect bovine tuberculosis at lower prevalence rates by conducting bovine tuberculosis surveillance in Dearborn County north of State Road 48 during the 2016 deer hunting season. The IDNR will need to collect samples from between 350 and 1,100 deer, depending on sex and age class of the animal. While any age and sex of white-tailed deer can become infected with bovine tuberculosis, surveillance from other states has demonstrated that sampling bucks older than 2 years of age is more likely to detect the disease. Therefore, obtaining samples from older age bucks will result in less total deer that need to be tested (approximately 350). If most samples come from does or bucks less than 2 years old, then more deer will need to be sampled. In general, a buck older than 2 years old equals about 10 yearling bucks from a bovine tuberculosis surveillance perspective. Therefore, our objective is to sample as many hunter-harvested bucks greater than 2 years old as possible and obtain the remaining samples with hunter-harvested does and younger bucks.

To meet this objective, the following strategies will be employed:

- The Surveillance Area is Dearborn County north of State Road 48 and will consist of a period of mandatory and voluntary check in at Biological Check Stations.
 - Mandatory check-in of deer will be required at IDNR Biological Check Stations September 24 & 25 and November 4 – November 27. During the mandatory check-in period, hunters must check in their deer on-line and obtain their registration number within 12 hours of harvest and then bring the deer to a Biological Check Station within 12 hours of harvest.
 - Voluntary sample submission will occur October 1 – November 3 and December 3 – 11. Hunters that harvest deer in Dearborn County will check in their deer on-line and obtain their registration number within 12 hours of harvest. During the check-in process, hunters will be instructed to contact the IDNR using a toll-free number to facilitate participation in the bovine tuberculosis surveillance effort.

- A sample collection team based in Dearborn County will be on call to meet with hunters to sample their deer or hunter can visit Biological Check Stations.
 - The samples needed are found in the head and neck of the deer, so this should be preserved if deer are processed in the field.
 - Hunters that wish to have their deer mounted or processed can provide the name of the taxidermists or processor so that arrangements can be made to collect the samples from that location.
- Authorization to take a second buck will be issued to anyone submitting a buck that meets the established requirements (see below)
 - A collectable Deer Cooperator Patch will be issued to all cooperating youth and adult hunters who submit deer for bovine tuberculosis surveillance.

Additional Buck

During 2016, hunters who harvest a buck 2 years old or older from the bovine tuberculosis surveillance and management areas and allow a sample to be collected (either by IDNR staff, taxidermist, or at a processor) will qualify to take a second older-aged buck (at no extra cost) from the bovine tuberculosis surveillance or management area. A buck older than 2 years old can typically be estimated in the field by the spread of the antlers and the number of antler points. The age will be confirmed by tooth wear replacement by a biologist. To judge a deer in the field, hunters can look for:

- An antler spread that is equal to or greater than the width of the ears when the ears are in the alert or outstretched position.

Deer that are presented to a biologist that meet this criterion will qualify for an additional buck tag. Deer that do not meet these criteria, but are judged to be older than 2 years old by tooth wear by a biologist will also qualify for an additional buck.

The 2nd buck that is harvested must meet the same criteria as the 1st buck and must also be presented for sampling before hunters can obtain their registration number. Hunters will be allowed to keep antlers and the deer from both the 1st and 2nd buck.

Locations where the authorization to take an additional buck will be available at Biological Check Stations or by arrangement with biologists by calling the toll-free number listed on the CheckINGame System.

Time Frame

Hunter harvested samples will be collected starting during youth weekend and continue through early December. Active management in the Bovine Tuberculosis Management Zone will begin immediately.

Agency Sharpshooting for Surveillance

If an adequate number of samples to meet the surveillance goal are not collected through hunter-harvested deer, personnel from DNR and USDA APHIS Wildlife Services will be utilized to remove deer from the bTB Surveillance Area (northern Dearborn County) in early 2017. There

are typically enough deer harvested by hunters in the surveillance area to meet the surveillance objective; however, we estimate that the vast majority of the deer older than 2 years old will need to be sampled. It is critical that hunters participate in the surveillance to eliminate the need for sharpshooting. It is also important that hunters encourage each other to participate in the surveillance. Indiana DNR considers sharpshooting for surveillance purposes an undesirable option; however, it may be necessary if successful hunter participation in the surveillance effort is low.

For more information on bovine tuberculosis in Indiana visit the Board of Animal Health's website on bovine tuberculosis at <http://www.in.gov/boah/2396.htm>

Questions about the surveillance of bovine tuberculosis in Indiana's deer should be directed to Joe Caudell, State Deer Biologist with the Indiana Department of Natural Resources at 812-334-1137.