Bovine Tuberculosis Update

Totals as of January 11, 2017

Total number of samples collected since 9/24/2016: 2,042

Number of samples from bucks at least 2 years old: 1,100

Number of Authorizations to Take an Additional Buck issued: 819

Number of bucks sampled that were harvested using the Authorization: 113 (13.8% success rate)

Breakdown of Samples by County

<table>
<thead>
<tr>
<th>Franklin County</th>
<th>Fayette County</th>
<th>Dearborn County</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
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<td>708</td>
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<td>Wayne: 7</td>
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<td></td>
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<td>Total unknown: 1</td>
</tr>
</tbody>
</table>

ADDL Results

Total number of samples submitted to ADDL: 2,012

Remaining samples to be submitted: 21

The number of samples submitted to ADDL is less than the total number of samples collected because some samples were sent directly to NVSL for testing and are not included in this total.

All samples tested negative for bovine tuberculosis.

National Veterinary Services Laboratory (NVSL) Results

Number of samples submitted to NVSL: 11

Three samples tested negative for bovine tuberculosis.

Cultures are pending for 8 samples.
Apparent Prevalence rate in northwest Franklin County and southern Fayette County

An estimated 1,002 total hunter-harvested deer were tested within a 10-mile radius of the location where the 1st infected wild white-tailed deer was found and consisted of 228 deer less than 2 years old, 196 female deer at least 2 years old, and 578 male deer 2 years of age and older. Our results will be further refined as we continue to verify data. Only one wild white-tailed deer, the wild white-tailed deer collected off the bTB affected farm near Metamora in northern Franklin County, was positive for bTB.

To calculate the apparent prevalence of bTB in free-ranging white-tailed deer, we used the values determined by APHIS Wildlife and Veterinary Services scientists in Fort Collins, CO, for the Cervid Sample Size Calculator to “discount” deer based on their age and sex (males and females less than 2 years old = 1/9 of bucks greater than 2 years old, females at least 2 years old = 1/3 of bucks at least 2 years old) and how the sample was collected (hunter harvested sample = 0.75 vs. an agency shot deer with a full necropsy = 0.85). Based on these criteria, we sampled an equivalent of 502 deer within the 10 mile radius, resulting in an apparent prevalence rate of 0.2% prevalence rate at a 95% confidence level. This means we are 95% confident that bTB is present in 0.2% or less of the wild deer population within a 10-mile radius of the three affected properties.

Surveillance for Northern Dearborn County and Southeast Franklin County

An estimated 877 hunter-harvested deer were tested within a 10-mile radius of the 2011 bTB positive farm in Dearborn County. The surveillance was comprised of 221 yearlings and fawns, 173 does that were at least 2 years old, and 483 bucks that were at least 2 years old. These results will be further refined as we verify data. No positive deer were detected. At this level of surveillance, we did not detect the disease assuming a 0.25% prevalence rate at a 95% confidence level. Based on these results, there is no reason to take additional deer for surveillance purposes in Dearborn and southeastern Franklin outside of the hunting season.

Figure 1: Results of bTB hunter-harvest surveillance.