The goal of the American Sheep Industry Association and the U.S. sheep industry is to eradicate scrapie from our borders by 2017. In addition, it is the objective to have the United States recognized as scrapie free in accordance with the World Organization for Animal Health. This quarterly publication is created specifically for those of you in the field who are also working to achieve this goal.

This newsletter brings together, into one spot, current information from all 50 states, as well as from the U.S. Department of Agriculture and any other organization providing scrapie news, and reports it back to the field. If you have first-hand accounts that you believe would be relevant for others to read or have information that you would like included in this newsletter, please email judym@sheepusa.org.

Testing, Breeding Important in Fight with Scrapie

It's easy for producers to gaze out over a pasture of healthy looking sheep and convince themselves that all is right with the world. Such was the case in Indiana earlier this year, but what the producer didn't see was a scrapie-positive flock.

“The producer had no idea because the flock appeared to be in good condition,” says Cheryl Miller, DVM and field veterinarian for the Indiana State Board of Animal Health. “When a producer isn't seeing any clinical signs of the disease, it's easy to think they are safe from scrapie. But that isn't always the case.”

A 3-year-old cull ewe sent to slaughter was sampled for scrapie and tested positive. The Indiana flock was quarantined at the end of January. Genetically susceptible (QQ) sheep in the flock were euthanized and tested resulting in two additional scrapie-positive sheep being identified.

The producers who have the easiest time overcoming an infected flock are those who can provide USDA officials with complete records on their flock. Investigators will need to know when sheep/goats enter or leave the flock and where they came from or went to.

“We can get things cleared up quickly and easily if all the records are right there for us,” Miller says. “When the records aren’t there, we might end up chasing a lot of dead ends and that takes time. It might mean sorting through records at the sale barns, and the whole process can be very frustrating for everyone involved.”

In late April, an additional sheep tested positive for scrapie in Texas. The blackface show lamb originated in New Mexico.

In that case, the producer noted weight loss and a lack of coordination and immediately contacted a local veterinarian. Cases have also been found in Michigan and Ohio in the last year. These cases are proof that producers need to take the disease seriously and report animals showing clinical signs of scrapie. The most common signs are incoordination, weakness, behavioral changes, weight loss despite a good appetite and/or severe rubbing resulting in wool or hair loss.

“Dr. (Diane) Sutton (with USDA) talks a lot about staying vigilant when it comes to scrapie,” Miller says. “Through codon testing, we can tell if a sheep is susceptible to the disease. The problem is that there are plenty of other genetic traits producers are looking at when it comes to the type of sheep they produce. Scrapie isn't their first priority, and that's understandable. But there's still a need to be cautious about it within breeding programs.”

Using an RR ram is the easiest way to minimize the risk of scrapie in sheep, Miller says, as this will substantially reduce the susceptibility of the offspring. Producers can also manage risk by not purchasing QQ ewes. Use of QR and QQ sheep might be needed to more quickly meet some breeding objectives (based on other genetic traits). A QR ram or even a QQ ram can be used without increasing scrapie risk if bred to an RR ewe.

Further, premise contamination can be largely prevented by breeding all QQ ewes to RR rams or if QR ewes are bred to QR rams since QR ewes are low risk for accumulation of the agent in the placenta. It will, however, open the possibility of producing QQ offspring, which are susceptible to the disease.

“It’s a matter of deciding how much risk you’re comfortable with,” Miller says. Producers who have taken steps to increase the resistance of their flocks are less likely to have their flock become infected and experience minimal impacts on their business if the flock is determined to be infected.
Animals Sampled for Scrapie Testing

Sheep and Goats

In Fiscal Year 2016, as of May 31, 2016

26,258 animals have been sampled for scrapie testing: 24,986 RSSS and 1,272 on-farm samples

20,721 sheep and 5,537 goats.

13 sheep and 0 goats have tested positive

Regulatory Scrapie Slaughter Surveillance (RSSS) Statistics

Since April 1, 2003
507,588 samples collected
479 NVSL* confirmed positives

*National Veterinary Services Laboratories

In FY 2016 (as of May 31, 2016)
24,986 samples collected (5,116 from goats)
1 NVSL confirmed positive

On-Farm Surveillance

In Fiscal Year 2016, as of May 31, 2016

1,272 animals have been tested on farm – 851 sheep and 421 goats
As of May 31, 2016. Adjusted to exclude multiple positive animals from the same flock. Does not include Nor98-like scrapie cases found through RSSS (2 in FY 2007, 1 in FY 2008, 4 in FY 2010, 1 in FY 2011).

* As of May 31, 2016.
### Slaughter Surveillance Samples Collected by Month

**Fiscal Years 2012 to 2016**

*As of May 31, 2016*

![Graph showing Slaughter Surveillance Samples Collected by Month from FY 2012 to FY 2016.]

### FY 2016 Scrapie Confirmed Cases by State

*As of May 31, 2016*

<table>
<thead>
<tr>
<th>State</th>
<th>Sheep</th>
<th>Goats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RSSS</td>
<td>On-Farm</td>
</tr>
<tr>
<td>IN</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>MI</td>
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<td>OH</td>
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<tr>
<td>TX</td>
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<td>1</td>
</tr>
<tr>
<td>Total All States</td>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>
Scrapie Infected and Source Flocks
Open Statuses - As of May 31, 2016

Open Source – 1
Open Infected – 1

New Scrapie Infected and Source Flocks - FY 2016
As of May 31, 2016

New Source – 3
New Infected – 2
The National Scrapie Eradication Program establishes annual sheep and goat sampling minimums for each state, and tracks the states’ level of compliance with meeting these minimums. These state minimums help ensure adequate geographical representation, so that APHIS can find the last remaining cases and document freedom from scrapie. State sampling minimums are established based on the population demographics of mature sheep in each state. The calculations used to derive the sampling minimums are described in the National Scrapie Surveillance Plan. Progress toward meeting these minimums in FY 2016 is shown in the following two slides.

### State Sampling Minimums

*As of May 31, 2016. Percentage of sampling minimum achieved is based on 63% of the annual sampling minimum.*

#### Percent of Sampling Minimum Achieved in FY 2016—RSSS and On-farm Surveillance—Sheep*

#### Percent of Sampling Minimum Achieved in FY 2016—RSSS and On-farm Surveillance—Goats*

*As of May 31, 2016. Percentage of sampling minimum achieved is based on 66% of the annual sampling minimum. AK and RI have a sampling minimum of 1 and DE has a sampling minimum of 2. IA and MD had a large increase in their minimums due to finding an infected herd in each State in FY 2014.*

### Websites Dedicated to the Eradication of Scrapie


Maryland Small Ruminant Page: www.sheepandgoat.com/scrapie.html


Scrapie SharePoint: https://share.aphis.usda.gov/sites/on/

(Federal and State employees can access this password-protected site by emailing Diane.L.Sutton@aphis.usda.gov if you need assistance.)