

The Small Ruminant Scoop Newsletter

Ministry of Agriculture and Food
Livestock Technology



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Welcome to the second edition of The Small Ruminant Scoop. This virtual newsletter is intended to provide current information and research, as well as topics of interest for the small ruminant producer. With views on nutrition, breeding, animal health and production, it will encompass the various commodities of the small ruminant industry.

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Special Article:

Coming to grips with Johne's: Local dairies, beef and sheep producers work on Johne's disease control and eradication.

By Andrea Myers

Taken from Farm and Dairy online edition at www.farmanddairy.com

SALEM, Ohio - Martha Manderson had big plans for retirement.

A podiatrist by trade, she'd step back from daily treatment. There'd be no worries of disease, chronic conditions, trouble.

She moved to the Southington, Ohio, farm she calls a perfect fit for her herding dogs and flock of 18 sheep.

No warning. Now she's being robbed of her lifelong dream.

Hopelessly, helplessly, without warning, those sheep are dying.

Two wasted away in less than three months, Manderson said. She found two others dead shortly after.

There were no warning signs, no diarrhea, no wasting. Manderson thought those two were perfectly healthy.

A doctor, she was used to testing and wanted answers: What caused this? What was wrong with them? Why was the flock dying?

Necropsy proved at least one of the animals succumbed to Johne's disease.

And now, she wants to know why this disease is spreading and how she can help stop it.

Victims. Manderson isn't alone in watching her valuable livestock waste away to nothing.

Johne's has been around for more than 100 years, and is considered a major problem for ruminants, especially beef and dairy cattle, according to Ohio State extension veterinarian Bill Shulaw.

Llamas, alpacas, sheep and goats can also fall victim to the ravaging disease.

Yet many herd owners drag their feet in recognizing and managing the incurable disease in their herds.

And in doing that, they're only helping Johne's get a tighter grip on farms everywhere.

Protect yourself. "Ohio has an implied warranty law. Buyer beware," Glauer said.

"The buyer needs to ask the health status of animals before they're bought," he said.

"The easy way out is to get rid of all of them. I just don't want this on my farm."

What does Johne's look like?

- * The bacteria that causes Johne's disease, mycobacterium avium subspecies paratuberculosis, is hardy. It can live up to a year outside the animal's body, but can't multiply.
- * Clinical signs of the disease are classic in cattle: chronic diarrhea and weight loss. But not every animal wastes away.
- * In sheep and goats, signs are weight loss, bottle jaw, depression and wool loss or wool break. Afflicted sheep and goats typically don't have diarrhea.
- * Transmission is by fecal-oral contamination, and it can be years before signs show up. Carriers who don't show signs of the disease spread it across your farm before you even know to look for it.

Johne's transmission and testing

- * Milk transmission is likely; calves can pick up the disease before they're born.
- * For every animal in the herd that shows signs, there are 10 others infected.
- * Testing is done by fecal culture, bloodwork, or after death.
- * Lab results can take up to 16 weeks. Ohio Department of Agriculture Animal Disease Diagnostic Lab researchers are developing another method that can shorten that to 14-42 days.

(Source: William Shulaw, Ohio State Extension beef and sheep veterinarian)

Manderson says she purchased the sheep with the disease. The 300-sheep flock they came from, however, never mentioned its Johne's-positive status until she questioned the owners. That breeder, whom she respected, is helping pass this disease, she says.

Considerable costs. But testing and culling alone can't stop the spread of Johne's. Farmers have to do something else to control or eradicate the disease: manage manure and their livestock.

"The things you'll do for Johne's will also help with other diseases, and that's the story we need to pass on," said ODA's Ned Cunningham.

Finton's farm made one easy change. The couple bought another bucket for their skid loader. Now one touches only feed, the other, only manure.

"It's probably still not the best way, but it's workable for us.

"Why wouldn't you want to improve your management? That's a 'duh' for me," Finton said of her on-farm risk assessment.

Losses. If 1 in 10 cows in a dairy herd of 100 have moderate infection, they're costing the farmer around \$23,000 a year.

"That doesn't take long to add up. That [money] could mean a new truck or tractor or a better winter," Glauer said.

Losses aren't as well documented in beef cows.

Veterinarian Glauer said the disease can cost upward of \$200 a cow in a seedstock operation.

"Management is the goal. It's not that you can fix everything, but at least see what you can fix that's economically viable," Glauer urged.

Hindsight. Looking back, Manderson thought the Johne's signs were other diseases.

The bottle jaw was worms, perhaps. Maybe they were thin because she wasn't feeding them enough.

In hindsight, she identified a strange mannerism in the flock: The infected sheep would avoid the flock and stare into the sky.

But she didn't know what Johne's was, what it meant, what it looked like. Now it's too late.

Helpless. Manderson is heartbroken she can't save her dying animals. She won't deny she's got the disease on her

farm. She wants to learn how to control and eradicate it. She'll get past this and start over, she vowed. "I think this is a serious disease, and I'll work really hard to have a closed flock when I start again," Manderson said.

"I don't think the remaining sheep have it, but all it takes is one," she said.

"The easy way out is to get rid of all of them. I just don't want this on my farm."

Reporter Andrea Myers welcomes reader feedback by phone at 1-800-837-3419, ext. 22, or by e-mail at amyers@farmanddairy.com.

Animal Welfare

Source: CSAW News Issue #11, The Colonel K.L. Campbell Centre for the Study of Animal Welfare (Editor: Anne Malleau)

Lessons learned from the stranded Australian sheep – problems with live animal transport across the sea

In August 2003, a story from Australia caught international attention with the plight of 57,000 sheep. The sheep were destined to be delivered to Saudi Arabia, which have received live animals from Australia for many years. This time, the shipment of sheep were deemed to have a higher rate of infection for scabby mouth than what the Saudi government standards would allow, and therefore refused to let the sheep off the ship. This stranded the sheep, turning what would normally be a 16 day trip into 79 days, on board. During this time, more than 5,000 sheep were estimated to have died from heat stress, which caused international pressure on the Australian government to act quickly, by either taking back the sheep, or destroy them humanely on the boat. Australian regulations would not allow them to be taken back (due to the risk of infection from foreign diseases while in transport), so they instead tried to give the sheep away to any nation that would have them. In the end, Eritrea, a poor African nation, received the sheep to be slaughtered, with the meat given to the country's people. The Australian government is looking into enforcing the strict animal welfare regulations that are practiced on land must also apply on the sea. During any means of live transport of animals, animal welfare must be followed.

Pain Assessment in Animals

Professor Vince Molony, Chair in Animal Welfare at the Royal (Dick) School of Veterinary Medicine at the University of Edinburgh recently presented over 20 years of research on pain experienced by lambs and calves after castration, and with tail docking in lambs. His work involved creating pain assessment methods during these procedures, which could lead to more humane ways to deal with these on-farm practices. Professor Molony highlighted the need for physiological and behavioral indices while assessing pain and suffering, such as monitoring hormone levels and changes in posture. One of the most important aspects of this research involved the participation of shepherds and farmers. They related their own experiences to the researchers on a broader, more commercial scale, rather than in a small controlled group, and also provided areas where further research could be conducted. This research has the potential to influence future regulations relating to these procedures, as well as adoption of practices that reduce or eliminate pain and suffering without extra financial costs to the farmer. Although there has been a lot of research over the years into the pain experienced by animals, Professor Molony emphasized that there is still more work to be done.

More information on Professor Molony's research can be found at www.vet.ed.ac.uk/animalpain/.

Canadian Voluntary Scrapie Flock Certification Program

Jocelyn Jansen, Veterinary Science, OMAF

This article appeared in the Ceptor Animal Health News, Vol. 12 No. 2, August 2004

The Canadian sheep industry has launched a national voluntary Scrapie Flock Certification Program (SFCP). The program was announced at the World Sheep and Wool Congress held in Quebec City, July 20, 2004. The Canadian Food Inspection Agency (CFIA) developed the national standards for the SFCP. A national scrapie eradication program has existed in Canada since 1945.

There are three different pathways that can be followed to achieve a certified status. Briefly, pathway 1 involves ongoing surveillance of mature deadstock for scrapie by testing the brain, specifically the obex. The program involves six levels, from the entry Level E to Certified Status, and will take a minimum of five years.

Pathway 2 involves genotyping ewes and collecting lymphoid tissue from the third eyelid for scrapie testing. Upon acceptance into the SFCP, surveillance of mature deadstock for scrapie must begin.

Pathway 3 involves genotyping the flock and the elimination of genetically susceptible animals from the flock. Upon acceptance into the program, surveillance of mature deadstock must begin.

Both sheep and goat producers can join the SFCP, provided they agree to follow the program rules. Sheep producers can follow any of the three pathways, while goat producers can only follow pathway 1. All three pathways involve minimal purchasing of animals or introducing animals from flocks/herds of an equal or higher certification level.

Laboratories must be approved by the CFIA to provide diagnostic testing for the SFCP. Veterinarians will be required to be accredited by the CFIA to aid in the delivery of the SFCP. Duties will include: performing the initial flock inventory, collecting and submitting obex samples from deadstock if the owner requests, collecting or supervising the collection of blood samples for genotyping, submitting samples to laboratories and providing information on scrapie and flock management.

The Ontario Sheep Marketing Agency (OSMA) will be acting as the regional administrator of the program. Their role will include: developing and distributing forms required for the program, collecting and collating data from enrolled flocks and issuing certificates indicating flock status.

Producers wishing to join the SFCP at the current time will have to bear all the costs of testing. However, funding is being sought for a pilot project that would include 60 flocks and 10 goat herds from across Canada.

For more information, contact OSMA at (519) 836-0043.

Research Notes

It's in the genes

New research has highlighted the process of wool growth and the possibility of increasing profits by genetically selecting for traits that enhance better wool.

Australia's Commonwealth Science & Industry Research Organization (CSIRO) have found that valuable fine-grade wool is produced by the "secondary follicles" during wool development. This soft wool desired by buyers is also a result of a branching effect seen at these secondary follicles, a process that only occurs with secondary follicles and not primary follicles. The researchers now want to identify the genes responsible for these follicles and for the branching effect to produce more fine-grade wool, as well as gain a better understanding of the molecular mechanisms for follicle development.

Effective Estrus Alternatives

A study out of Texas A&M University compared different alternative methods for synchronization of estrus in Nubian goats. Sixty does were tested using 2 different sponges (fluorgestone acetate - FGA, and medroxyprogesterone acetate - MAP), and compared the sponges to a controlled internal drug release device (CIDR). They found that CIDR performed as well as the 2 sponges, with the onset and duration of estrous occurring within the same time frame as FGA and MAP (CIDR had a shorter onset than FGA and MAP for induced estrous duration), and kidding percentages being almost the same between the 3 methods. This study concluded that CIDR can be used successfully as an alternative to sponges in Nubians. (Small Ruminant Research, Volume 55, Issues 1-3, October 2004, pages 15-19.)

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