



Ontario Animal Health Network (OAHN)
Small Ruminant Expert Network
Quarterly Producer Report – Spring 2017

Spring 2017

Report #12

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Q1 Surveillance Summary

Clinical Impressions Survey

Not unexpectedly for the first quarter of the year, practitioners surveyed indicated that the top clinical issues in youngstock dealt with lambing and kidding issues (stillbirths, congenital defects, born weak, hypoglycemia/hypothermia, failure to thrive), neonatal diarrhea, septicemia, joint disease, pneumonia and goiters.

The main clinical findings for adult sheep and goats were pregnancy toxemia, mastitis, abortions, enterotoxemia and wasting/thin animals.

An Unusual Presentation of Abortion in a Dairy Goat Herd

Dr. Gillian Marson, Mildmay Veterinary Clinic

In March 2017, a closed dairy goat herd milking 150 does in southwestern Ontario experienced an abortion storm. Over the course of several weeks, 32 of 130 dry does in their second and third trimester aborted. The does showed no sign of illness and were located in multiple pens throughout the barn. Both doelings and mature does were affected. Placentas and a fetus from the does that aborted were sent to the Animal Health Laboratory for testing. A large number of *Campylobacter jejuni* bacteria were grown from all the samples, indicating this was the cause of the abortions. This abortion storm was a large blow to the producer due to the costs of diagnostic testing, antibiotic treatments, loss of milk and involuntary culls (does did not come into milk).

“In recent years, there have been a large number of reports of antibiotic resistance and failure to respond to treatment. These failures are due to the emergence of a specific strain of *Campylobacter jejuni*, called the SA clone, which is resistant to oxytetracycline.”

Campylobacter jejuni is a bacterium that can be found naturally in the intestines of animals, including cattle, sheep, chickens, dogs, cats and some birds. Infection occurs when a pregnant female ingests the bacteria and it enters the bloodstream through the intestinal lining. The bacteria then travel to the fetus and placenta where they cause inflammation and fetal death. Abortions generally occur in the third trimester of gestation and does show no signs of general illness. The aborted fetus, placenta and fluids will contain high amounts of campylobacter bacteria, and therefore does that abort should be isolated and the contaminated material (bedding, placenta) destroyed.

Campylobacter is a common cause of abortion in sheep in North America, and less commonly a cause of abortion in goats. Historically, outbreaks were managed by treating the herd with oxytetracycline by injection or in the feed.



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However, in recent years, there have been a large number of reports of antibiotic resistance and failure to respond to treatment. These failures are due to the emergence of a specific strain of *Campylobacter jejuni*, called the SA clone, which is resistant to oxytetracycline.

The SA clone was isolated in this abortion case. This is the first time that this strain of bacteria has been found in goat abortions in Canada. The high prevalence of this strain in North America warrants antibiotic susceptibility testing for all abortions associated with campylobacter. Your veterinarian can help you interpret susceptibility reports and choose an appropriate antibiotic. In this case, the campylobacter isolate was resistant to a wide range of products and an extra-label antibiotic was used under the supervision of their veterinarian.

When is “Too Many” a Problem?

For many diseases, good training and protocol development between veterinarians and producers means that you may not tell your veterinarian when you treat individual sick animals. However, it is important that you inform your veterinarian when any individual disease occurs at a greater frequency than what you consider “normal” for your flock or herd.

Deciding when you have “too many” sick animals can be a challenge. For most diseases, **defining an “Alarm Level”** with your veterinarian is a good idea. For diseases that we don’t expect in high numbers, this is likely anything higher than the “normal” level for your farm. For some diseases, the speed at which new cases are occurring might also be important.

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One example would be abortions – if 2 to 4% abortions are normal, we may not do anything until more than 5% have aborted. In small groups, this might mean no action is taken on the first abortion, but the second abortion triggers the alarm. In larger groups, it might mean that 5 or even 10 abortions occur before the alarm level is triggered.

Another example would be pneumonia in lambs – we might expect to treat up to 10% of a group of lambs prior to weaning. Due to the speed that pneumonia can become an epidemic, we might trigger an alarm if 5% of a group is treated within a 3 day period.

Good communication with your veterinarian in a timely fashion can allow immediate action to be taken to reduce the impact of an outbreak of disease and put appropriate preventative steps in place for the next group.

Dairy Goat Research in Ontario

Dr. Cathy Bauman, Assistant Professor of Applied Clinical Research, Ontario Veterinary College

The project, “*Investigating Mortality in Ontario Dairy Goat Kids*”, has received full approval from OMAFRA. The project received funding support from the Ontario goat industry and the OMAFRA -University of Guelph partnership. This study will be conducted in 2 phases and is anticipated to start in August or September of 2017. The first phase will consist of an on-farm questionnaire about management practices that may impact kid health, such as the amount and source of colostrum fed and perinatal care. The second phase will involve collecting the bodies of all kids that die on-farm from a sub-set of farms that participated in Phase I (~30 farms). The objectives of the study are to quantify the current level of kid mortality in the industry and identify the factors that predispose to a high level of kid deaths. In addition, it will be helpful to identify the role that colostrum quality and failure of passive transfer may also be having.

Planning is currently underway to address other health concerns impacting the dairy goat industry. One issue is to determine the drugs of highest priority to the industry that should be targeted for drug withdrawal studies. Management of disbudding pain in kids is another project currently being investigated.

Launch of the Small Ruminant Adult Mortality Project!

The Animal Health Laboratory (AHL), the Ontario Veterinary College (OVC) and OMAFRA have received funding to conduct a study investigating adult small ruminant mortalities on-farm. Adult sheep and goat mortalities are rarely sent to a laboratory for a complete postmortem and veterinarians infrequently perform postmortems on-farm. However, there is value in knowing why an animal died (chronic wasting diseases, metabolic/nutritional diseases, neurological disorders, parasite problems), so that changes can be implemented to help prevent on-going disease. This project seeks to improve the practice of on-farm postmortems, and improve information flow among producers, veterinarians, and pathologists. **The cost of laboratory testing and the postmortem fee will be covered by the project!** In order to learn the most from this project, **the project will be requiring a Premises Identification (PID) number on all submissions.**

Distance Support for On-Farm Investigation of Adult Small Ruminant Mortalities



The objectives of the study are:

1. To determine why adult sheep and goats are dying on-farm;
2. To determine if technology (smart phones, tablets, digital cameras) can be used to increase the accuracy and usefulness of on-farm postmortems; and,
3. To determine if better disease diagnoses can increase discussions between producers and their vets, so that they can create sound flock/herd health and biosecurity plans that will increase on-farm productivity.

The project began May 2017. Details of the project can be found at <https://www.uoguelph.ca/smort>

Please note that only veterinarians licensed to practice in Ontario and who provide veterinary services to Ontario sheep and goat farms are eligible to enrol in the project. The farming operation **must** be raising animals for meat, milk or fibre, i.e. pets and hobby farms are not eligible. **Please contact your veterinarian for more details and to ensure that they have requested a project account.**

This project has been funded by the Agri-Food and Rural Link KTT Funding Program, part of the OMAFRA-U of G Partnership; and the Ontario Animal Health Network.

Registering premises is quick, easy and free.

- Visit the Ontario PPR website: www.ontarioppr.com OR
- Call Monday through Friday, 8:30am – 5:00pm at 1-855-697-7743

Information needed to obtain a Premises Identification Number (need to accurately identify the property by providing **one** of the following):

- ◆ Assessment Roll Number (tax assessment number) – preferred method
- ◆ Latitude and Longitude coordinates from a GPS
- ◆ Municipal Address of the premises
- ◆ Lot and Concession Number of the premises

