Distance support for on-farm investigation of adult small ruminant mortalities

Small Ruminant Research Forum
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KTT project rationale

- on-farm adult mortality is approximately 5% annually, likely representing > 10,000 sheep and goats.
- dead adults are rarely submitted to the diagnostic laboratory for complete postmortem examination → low animal value
- on-farm postmortems are not currently being used as a surveillance and management tool by most SR producers
- veterinarians infrequently perform on-farm PMs – tissue sampling often inadequate to provide useful diagnosis
Inconclusive lab diagnosis = Frustration!!

- ewe had normal lambing 2 mos ago
- found dead
- on-farm PM findings:
  - good body condition
  - hemorrhages in heart
  - formalin-fixed tissues submitted to AHL:
    - heart, lung, thymus, kidney, liver, muscle
- histol dx: cause of death - inconclusive
Objective #1

To increase the level of surveillance of infectious, emerging, zoonotic and other production-limiting diseases of adult sheep and goats on Ontario farms.

• Why are adult sheep and goats dying?
Objective #2

To develop and evaluate a distance-support system of information transfer regarding on-farm mortalities that improves:

(i) the accuracy and detail of information received at the AHL;

(ii) enhances knowledge transfer between veterinarians and producers.

- **Can technology be used to increase the utility of on-farm postmortems?**
Objective #3

To provide producers and their veterinarians with information regarding the presence of specific disease(s) on their particular farm, so that they can create sound flock/herd health and biosecurity plans.

- Can better disease diagnoses increase dialogue between producers and their vets, and improve overall herd health?
SRAM project website – Landing page

**Researchers:**

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**What is this Project?**

- There is a need to assist veterinarians in providing diagnostic services to their sheep and goat clients, specifically in the diagnosis of on-farm mortalities of adult sheep and goats.

- For this project, veterinarians are to perform on-farm postmortems of adult mortalities, and submit the required information and samples to the AHL using this webpage as the interface.

- If you want more information, contact the project administrator at sr.mort@uoguelph.ca.

- If you wish to participate, please request an account.

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**Which Veterinarians are Eligible to Participate?**

- Veterinarians licensed to practice in Ontario and who provide veterinary services to Ontario sheep or goat farms.
Small Ruminant Adult Mortality – Postmortem Procedure

Getting ready to perform an on-farm postmortem

Adult Sheep and Goat Postmortem Video

[Video Embedded: Goat Postmortem Video - Animal Health Lab Guelph]
Case submission form:

- farm information
- management data
- animal clinical info
- postmortem findings
- uploaded photos
Kit supplies

Project sampling kit

Tissue collection mats - laminated
Tissue set for lab submission
Vet will provide:

Case requirements:

1. complete set of fresh (not autolysed) tissues

2. completed submission form

3. complete set of 6 photos uploaded to web page
Project will provide:

Project pays for:
1. Vet PM fee ($175 max)
2. Sampling kit
3. Lab tests (~ $400 max):
   • histology
   • bacterial culture
   • fecal flotation
   • tissue mineral panel
   • +/- IHC, PCR
Required photos to upload to web page

1. Whole body in situ
2. Thoracic cavity viscera in situ
3. Abdominal viscera in situ
4. Ileocecal junction and mesenteric lymph node
5. Pluck removed (heart, lungs)
6. Opened abomasum
Examination of the head – At AHL

Enzootic nasal tumour – Retrovirus
Focus groups

- Participating veterinarians and producers are being contacted to participate in focus groups
- 2 hours long, via telephone/video conference
- Groups will explore:
  - quality of the online support tool
  - knowledge and attitudes towards flock health management in the small ruminant industry, in general
  - veterinarian-producer relationship and the online support tool’s impact

Contact Jeanette Cooper at jeanette@uoguelph.ca if you have submitted a case and are interested in participating in a group
Final Outcomes

• identify common causes of adult sheep and goat death loss
• standardize tissue sampling protocol for on-farm PMs
• minimize cost of lab testing (more bang for the buck!)
• increase communication between vets and lab
• improve diagnostic outcomes
• assess utility of website for submitting cases to lab
• increase collaboration between vets and producers
• improve overall flock/herd health and profitability by implementing appropriate health management services
SRAM Project Funding Agencies

OMAFRA-University of Guelph Partnership
KTT Program

and the

Ontario Animal Health Network