### Online Resources for Integrated Management of Internal Parasites in Small Ruminants

#### **UK Resource**

• Sustainable Control of Parasites (UK): <a href="https://www.scops.org.uk/">https://www.scops.org.uk/</a>. Very useful, evidence-based information. Some content is rather specific to the UK but the general principles are valid for all small ruminant holdings. In addition to internal parasite control information, there is also useful external parasite control information available on that site.

# **Canadian Resources:**

- University of Calgary Website on gastrointestinal parasites in sheep in Western Canada:
   https://vet.ucalgary.ca/research/sheep-parasite-control/gastrointestinal-parasites
   Evidence-based, locally derived information directly relevant to Saskatchewan sheep producers. On the Resources page (<a href="https://vet.ucalgary.ca/research/sheep-parasite-control/resources">https://vet.ucalgary.ca/research/sheep-parasite-control/resources</a>), there is the link to the 8 minute video explaining how to do a fecal egg count; there is also another video on FAMACHA scoring. The 7 TIPS provide a quick overview of components of an integrated internal parasite control program.
- Handbook for the Control of Internal Parasites in Sheep and Goats: comprehensive, evidence-based handbook for producers (and veterinarians) on sustainable integrated parasite control for small ruminants. Developed by Dr. Paula Menzies, Ontario Veterinary College, and a team of collaborators. The handbook can be accessed via the University of Calgary website (under Resources), through this link here:
   <a href="https://vet.ucalgary.ca/sites/default/files/teams/29/Handbook%20for%20the%20Control%20of%20Internal%20Parasites%20of%20Sheep%20and%20Goats.pdf">https://vet.ucalgary.ca/sites/default/files/teams/29/Handbook%20for%20the%20Control%20of%20Internal%20Parasites%20of%20Sheep%20and%20Goats.pdf</a>
  or via the Ontario Sheep Website here: <a href="https://www.ontariosheep.org/parasites">https://www.ontariosheep.org/parasites</a>
- Canadian Factsheets on Parasites: <a href="https://www.wormx.info/single-post/2019/04/30/canadian-fact-sheets-on-parasites">https://www.wormx.info/single-post/2019/04/30/canadian-fact-sheets-on-parasites</a>. Developed by CEPOQ (Centre d'expertise en production ovine du Québec). Contains 7 downloadable factsheets related to selective treatment, refugia, dewormers, fecal egg count, dewormer resistance, integrated management and pasture management.

### North American Resources

- American Consortium for Small Ruminant Parasite Contro (WORMX)I: <a href="https://www.wormx.info/">https://www.wormx.info/</a>. Lots of very good information available including
  - Links to getting online FAMACHA certification
  - Short video series highlighting components of an integrated parasite control program
- Maryland Small Ruminant Page: <a href="https://www.sheepandgoat.com/">https://www.sheepandgoat.com/</a> A lot of excellent resources (handouts, videos, presentations to download/view) provided by the sheep and goat specialist at the University of Maryland, Susan Schoenian.

### Videos shown in presentation:

 Concept of Refugia (from the US Food and Drug Administration): https://www.youtube.com/watch?v=yRK1qLzXm2s

- FAMACHA in a nutshell: <a href="https://www.youtube.com/watch?v=RL3SBR1qIX0">https://www.youtube.com/watch?v=RL3SBR1qIX0</a> (for more information on FAMACHA scoring and/or training, also see the University of Calgary Resources site and the WORMX info site)
- How to collect fecal samples in small ruminants: https://www.youtube.com/watch?v=X2C9sVstce0
- Dose-and DELAY-pasture management & refugia:
   https://www.youtube.com/watch?v=1jv081gcINU&list=PLtImzmj0GoB5p-rIFrzl0YFozWzHgk-ly&index=16

### Other good short videos:

- Understanding and delaying the development of anthelmintic resistant parasites on sheep farms (how to treat right): https://www.youtube.com/watch?v=Ly8jwhLF9yU
- Antiparasitic resistance in cattle and small ruminants in the US (US Food and Drug Administration): <a href="https://www.youtube.com/watch?v=kn1NE-vmhr4">https://www.youtube.com/watch?v=kn1NE-vmhr4</a>

# Using bioactive forage for parasite control

- <a href="https://www.agrisciencer.com/post/lamb-growth-on-plantain-chicory-and-pasture-mixes">https://www.agrisciencer.com/post/lamb-growth-on-plantain-chicory-and-pasture-mixes</a>
- <a href="https://www.progressiveforage.com/forage-types/other-forage/chicory-improved-varieties-are-a-pasture-option">https://www.progressiveforage.com/forage-types/other-forage/chicory-improved-varieties-are-a-pasture-option</a>