

Western Canadian parasite study - now also accepting fecal samples from GOATS

Background

The Western Canadian sheep parasite study started in 2014 and is led by researchers from the University of Calgary (Drs. Lévy and Gilleard) and supported in Saskatchewan by Dr. Fabienne Uehlinger from the Western College of Veterinary Medicine. Since its start, more than 80 sheep producers from BC, AB, SK and MB have collected fecal samples from their sheep pre- and post-deworming to determine how severe and widespread infection with internal roundworms are and whether their anthelmintic treatments are effective. The findings are alarming: infection with roundworms are not only very common and severe on many farms, but more than 80% of all anthelmintic treatments administered by participating producers are ineffective at reducing the roundworm burden adequately. This is the case regardless of the deworming product used although ivermectin or fenbendazole are used most commonly. The pathogenic barber pole worm (*Haemonchus contortus*) is the most common roundworm that infects sheep in western Canada but mixed infections with primarily the black scour worm (*Teladorsagia colubriformis*) and the brown stomach worm (*Teladorsagia circumcincta*) also occur frequently on some farms. The barber pole worm is also the roundworm that is most commonly resistant to the deworming treatments in the flocks that have participated to date. **We now would like to expand our project to include goats!**

Reason for project

Internal roundworms in goats can cause significant economic losses to the industry. While deworming drugs have been very effective at controlling the roundworm burden in the past, parasite resistance to these anthelmintics is now increasing the risk of production losses and disease. Furthermore, some roundworm species are better able to resist deworming treatment than others and changing climatic conditions affect how well roundworms survive on pasture.

This project will provide valuable data for western Canadian goat producers on how widespread goat infection with roundworms is, what roundworm species are predominantly present and how efficacious the current deworming methods are.

The study continues in 2019 and we welcome your participation – what does study participation involve?

Participating farms should have at least 15 adult goats and we would need fecal samples from all 15 adult goats. Herds with more than 20 goats will be asked to collect samples from max. 20 individual goats. Before fecal samples are collected for the first time, the goats should have been **out on pasture for at least 5-6 weeks** and should **not have been dewormed in the 8 weeks before** that. When you are ready to deworm, you should collect fresh fecal samples from the same 15-20 individual does before and 14 days after deworming with a product of your choice. A fecal sampling kit containing material for both sampling occasions will be mailed to you with two pre-paid courier return packages. The kit also includes recommendations on the best way to collect the fecal samples. The fecal samples from your goats will be pooled at the laboratory and analyzed at the herd level for the severity of roundworm infection (determined by a parasite fecal egg count); molecular techniques (nemabiome sequencing) will be applied to determine the predominant roundworm species present in your herd. By participating, you will receive free information on whether your deworming treatment was effective, which roundworm species are predominantly present in your goats and whether all of them were equally susceptible to the treatment.

For more information, please contact Dr. Fabienne Uehlinger at the Western College of Veterinary Medicine, University of Saskatchewan either by **phone: 306-966-7062** or **email: sheep.parasites@usask.ca**