SASKATCHEWAN GOAT INTERNAL PARASITE SURVEILLANCE 2020/21 – STUDY INFORMATION

Why test? Parasite resistance to dewormers is a known problem in Saskatchewan goat herds. Resistance can be slowed by deworming goats less frequently, not deworming all goats in a herd all the time and only deworming when it is actually needed based on lab or clinical evidence as opposed to routine practice. Testing fecal samples to gain a better understanding of the parasite burden in goats or whether treatment was effective is one very important approach in a sustainable integrated parasite management control program.

Each producer is eligible to submit samples to PDS **at least twice during one of the two grazing seasons (2020 or 2021)**. If funds permit, producers may submit twice in each of the two project years. Each submission may be for multiple samples. See **Submission (testing) Options** below for details.

Submission (testing) options depending on herd size (each constitutes 1 submission to the lab regardless of the number of goats sampled):
- Producers with **up to 20 goats**: samples from each individual goat will be analyzed in the lab and results reported back for each goat. The producer submits individual fecal samples from all of his/her goats (up to max. 20).
  - ➔ Individual samples collected at the right time of the year from a majority of goats in the herd can be meaningful in determining the need for deworming individual goats. Great individual variation in susceptibility to internal parasites make an individual egg count of only a few goats in the herd not very reliable as only about 30% of goats in a herd shed most (70%) of the parasites present in that herd.

- Producers with **>20 goats**: a group (pooled) egg count will be conducted and a group result will be reported back. **The producer randomly selects 15-20 goats in one production group** (e.g. adult does; yearling doelings) and submits individual fecal samples to the lab. The lab will pool the samples for the group fecal egg count.
  - ➔ Pooled fecal egg counts generally correlate well with the worm burden in kids and grazing adults. They are most useful to determine group worm burden and need for treatment in a group; effectiveness of treatment; level of pasture contamination. There is no need to examine each goat individually when at least 15-20 goats within a production group can be sampled!

Please note: regardless of testing option selected, **ALL samples must be collected and stored INDIVIDUALLY.** For pooled samples, the lab will pool the samples - please **DO NOT POOL** fecal samples from multiple animals in the same storage container or else the resulting fecal egg count will not be representative of the group!

Recommended reasons for testing:
1. **To determine whether deworming is actually warranted**, collect fecal samples once before deworming; the decision to deworm or not is then based on the individual or group fecal egg count result which should be available to you within about 1 week of collection.

2. **To determine whether deworming treatment was effective**, collect fecal samples <u>at the time of deworming and again 14 days later</u> (same animals). We will calculate the percent reduction in fecal egg count after deworming and let you know whether your treatment was effective or not.

Timing of fecal sample collection: The **timing of collection** is important for best results and most accurate interpretation. **Fecal egg counts are often not very meaningful if collected in late fall or winter**; therefore, submissions at that time of the year are generally discouraged unless previously discussed with your regular veterinarian or the project coordinator, Dr. Schumann.

✓ Recommended times of fecal sample collection:
  o **Does around kidding** (about 2-4 weeks before to 4-6 weeks after kidding) tend to have a higher-than-usual fecal parasite egg count during that time period. Heavily parasitized does around kidding will also increase pasture contamination and, therefore, the risk of infection to kids during the grazing season. Therefore, to limit unnecessary deworming, understanding whether does around kidding actually benefit from deworming is important.
  o **Kids during the grazing season**. As kids are most susceptible to internal parasites, monitoring them during their first grazing season is beneficial to determine most appropriate time of deworming.

✓ In all situations, sampling is most meaningful in goats that have been **on pasture for at least 5-6 weeks** and have **not been dewormed for at least 8 weeks** prior to fecal sample collection.
✓ Individual samples in the winter or late fall are less meaningful and are generally discouraged.

Ineligible samples: Samples collected <u>within 8 weeks after deworming</u> or samples collected only after deworming without a pre-deworming fecal egg count result <u>will not be accepted</u>!

How to collect fecal samples? Please refer to the separate document **"How to collect fecal samples"** for detailed instructions on fecal sample collection. The following video is also very useful. **Please use individual Ziploc bags for each fecal sample and do not send in the inverted glove containing the fecal sample as shown in the video:** https://www.youtube.com/watch?v=X2C9sVstce0&feature=relmfu

How to store the fecal samples? Samples should be sent to the lab as soon after collection as possible. Any delay may result in the hatching of parasite eggs in the fecal sample which will lower the number of eggs that can be counted and results in a falsely low fecal egg count. **Samples should also be kept cool (e.g. around 4⁰ Celsius) but never frozen!** Ideally, ship them to the lab by courier in a box with cooling elements or ice packs. If you are using ice packs, please put an insulating layer of newspaper or paper towel between the samples and the ice packs to avoid freezing of the samples. Freezing may destroy the eggs in the sample, resulting in a falsely low fecal egg count.

Questions? Please speak to your regular veterinarian or contact Dr. Fritz Schumann at
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