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Alpaca worms – an overview

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Alpaca are susceptible to both cattle and sheep internal parasites including liver fluke (*Fasciola hepatica*). Alpaca use dunging 'latrines' which helps to control roundworm parasites; as a result, worm burdens are often not high. Occasional heavy barber's pole worm (*Haemonchus contortus*) burdens are reported, especially in high rainfall coastal areas. Other worm types include black scour worm (*Trichostrongylus* spp.) and small brown stomach worm (*Teladorsagia (Ostertagia) circumcincta*).

Worms in alpaca – what to do

How do you decide if your alpaca have worms or if they need to be drenched? Do you drench them when you think they might need to be drenched? Or do you treat them because you know they have worms? Are you drenching too often, thus wasting money and increasing the likelihood of resistance to drenches developing?

And when you do treat your alpaca, how do you know the drench worked?

Visual appraisal of animals is a notoriously unreliable way of assessing worm burdens. This is especially so in alpaca where the fleece can hide their true body condition. By the time animals 'look wormy'; they can already have a serious worm problem. Be aware also that a 'wormy appearance' (diarrhoea, pallor of eye membranes, ill thrift, poor exercise tolerance) can be due to causes other than worms.

WormTest can help you find out if your alpaca have worms or not.

WormTest

WormTest is used to monitor internal parasites of alpacas as well as cattle, sheep or goats. Worm egg and fluke egg counts are done on dung samples

submitted to the laboratory in a WormTest Kit. Egg count results are faxed or mailed to farmers, usually within 24 hours of the samples arriving at the laboratory.

The type of worms present can also be identified. This requires culturing worm eggs and examining the larvae which hatch, so a further 10 days is required for the result.

WormTest kits – availability and cost

WormTest kits are free and available from Livestock Health and Pest Authority (LHPA) offices, rural resellers and Industry and Investment NSW (I&I NSW, formerly Primary Industries) offices. Private laboratories also provide a similar service.

Prices for laboratory testing vary according to the tests required. Call your laboratory for current charges. (See below for contact details.)

Sample collection and using the kit

To collect dung samples, muster a number of the mob to a clean corner of a paddock for 10 minutes and then let them drift away quietly. Younger animals are often an important group to sample because they tend to be more susceptible to worms. Fresh, clean dung samples can then be collected from the ground, avoiding soil. Alternatively, samples can be collected from the communal dung heap, but samples must be fresh and clean. Animals used to being handled can be sampled direct from the rectum (a glove is supplied in the WormTest kit).

Ten samples from separate alpaca are required and sufficient dung to fill each sample container in the WormTest kit should be collected. Fewer animals than 10 can be sampled, but this is less economical and, in larger groups of alpaca, gives less information on the likely level of worm burdens in the rest of the group. Keep samples from young animals separate or identify individual animals. Fill out the information sheet and post the package to

the laboratory within 24 hours of collection. Keep samples cool but do not refrigerate them.

Where is the testing done?

WormTests are done at the Industry and Investment NSW Veterinary Laboratory at Menangle, which is NATA accredited (to ISO 17025) and provides a wide range of diagnostic services. (NATA is the National Association of Testing Authorities.)

Other laboratories offer a similar service. Following are some contact details

Phone: (02) 4640 6327

Fax: (02) 4640 6400

Delivery address	Postal address
Attention: Sample Submissions Elizabeth Macarthur Agricultural Institute Woodbridge Rd MENANGLE NSW 2568	Attention: Sample Submissions Elizabeth Macarthur Agricultural Institute Private Bag 4008 NARELLAN NSW 2567

E-mail for information and feedback:
menangle.rvl@dpi.nsw.gov.au

Webpage:
www.dpi.nsw.gov.au/aboutus/services/das/veterinary

Private laboratories

Veterinary Health Research, Armidale

Telephone: (02) 6770 3200

Website: www.vhr.com.au

For other labs, see the list of service providers at WormBoss:

www.wool.com/WormBoss

(then navigate to 'Professional service providers').

Interpreting worm egg counts

Results will be faxed or posted to you within 24 hours of samples being received by the laboratory, and a copy sent to your nominated veterinarian. Worm egg counts in alpaca are usually low (less than a few hundred eggs per gram faeces, or ep_g), and significantly less than values commonly found in sheep or goats. Results should be discussed with your vet or animal health advisor to determine the need for any worm treatments.

Benefits of regular WormTesting

WormTest is good value for money.

- It could save you the expense of unnecessary drenching.

- WormTest can help forestall a disaster due to heavy worm infection.
- The test can be used to check whether a drench is working, by collecting samples 10–14 days (longer for 'long-acting' drenches) after using a particular drench.
- WormTest is a useful tool for monitoring your worm control program.

Don't guess – WormTest!

Drenches for alpaca

There are no anthelmintics (drenches) registered for use in alpaca. This means the only way they can be used legally in NSW in these animals is under veterinary direction. See your veterinary practitioner for more information.

As for dose rates of drenches for alpacas, experts have varying opinions. Some state that cattle or sheep dose rates are effective. However, one authority from New Zealand suggests that sheep dose rates of ivermectin for example, or oxfendazole (a benzimidazole (BZ) or 'white' drench), are unsuitable, and that ivermectin needs to be given at 1.5 times the sheep dose rate and oxfendazole at twice the sheep dose rate. Again, it is important to get advice from your veterinarian.

Be advised that there are reports of albendazole toxicity in crias (baby alpacas).

'Organic' drenches

Organic drenches, for example plant-based remedies, have been used for many centuries in traditional agriculture in various parts of the world. There is increasing interest in these alternative methods of worm control in western agricultural systems. A difficulty is getting reliable information on the efficacy and safety of organic remedies, as well as possible residues following their use. Some of them doubtless have some efficacy, but in the absence of good data, animals should be carefully monitored.

There are also legal considerations. Under the *NSW Stock Medicines Act 1989*, the use of unregistered products or medicines in animals that produce food for human consumption or are used for human consumption is illegal. Alpaca are not defined as 'major food producing species' so only fall into this category if they are intended to be eaten. Permits for products to treat them if they are to be used for food should be obtained, for example, by a producer organisation, from the Australian Pesticides and Veterinary Medicines Authority (www.apvma.com.au).

However, drenches registered for use in sheep, for example, can be used in alpaca under written veterinary direction.

Integrated parasite management

As with other animals, integrated worm control is better than relying solely on frequent treatments, whether 'synthetic', 'chemical' or 'organic'.

Integrated parasite management involves using a number of techniques. It includes the following.

Effective use of drenches

Use drenches no more than necessary, and be careful with your choice of drench. See your local vet.

Grazing management

Set-stocked animals are more likely to get wormy. Move animals to fresh pasture from time to time. Although alpaca are susceptible to cattle (and sheep) worms, rotational grazing using adult cattle, for example, is likely to reduce exposure to worms.

Be especially careful with alpaca used as guardians for lambing-ewe flocks, as ewes can heavily contaminate the lambing paddock with worm eggs.

With respect to liver fluke, avoid grazing known flukey areas in danger periods (e.g. dry autumns). Land near slow flowing streams and drainage ditches where the necessary vector aquatic snails live are potentially flukey areas.

Nutrition

Well-nourished animals generally tend to have stronger immunity and fewer worm problems.

Fine tuning and further information

Fine-tune your worm control program using tools such as regular worm egg count monitoring (WormTest) and testing of effectiveness of drenches. (Resistance of sheep worms to drenches is common.) Get good advice, especially sound information relative to your local area.

Refer to the I&I NSW website for further information on worms and drenches www.dpi.nsw.gov.au/agriculture/livestock/sheep/health and also the WormBoss website www.wool.com/Wormboss.

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