



# HUSBANDRY

## WORMS AND ALPACAS

Alpacas are susceptible to cattle, goat and sheep worms, however the four most likely to cause problems with alpaca are:

Name	Eggs laid per day
Barber's Pole Worm ( <i>Haemonchus contortus</i> )	up to 10,000 eggs per day
Small Brown Stomach Worm ( <i>Ostertagia ostertagi</i> )	100-200 eggs per day
Black Scour Worm ( <i>Trichostrongylus spp</i> )	100-200 eggs per day
Liver Fluke ( <i>Fasciola hepatica</i> )	20,000-50,000 eggs per day

The eggs are passed out in the faeces and can remain in the paddock for long periods, until warm moist conditions are present and they begin to hatch into infective larvae. Alpacas with a worm burden can be passing eggs in their faeces over winter with the eggs not hatching due to the cold, only to have millions of eggs begin hatching when the warm spring days arrive. This sudden arrival in the paddock of millions of larvae can result in sudden and severe worm infestations with severe consequences.

### Effects of worms

Worms are damaging alpacas whenever they are active. They affect alpacas in different ways and can cause tissue damage, the removal of protein, depression of appetite and scouring. Barber's Pole Worms and Liver Flukes also cause anaemia.

Tissue damage may be temporary or permanent. To repair the tissues requires protein, carbohydrates and structural elements that need to be diverted away from production or growth.

The removal of protein occurs when round worms penetrate the lining of the gut, for example to seek a blood vessel to feed from. They remove protein from the bloodstream or the gut lining or ingested feedstuff for their own metabolism. Barber's Pole (*Haemonchus contortus*) is a blood-sucker and is able to remove blood proteins and red blood cells resulting in anaemia. A lack of protein will affect fleece production, muscle growth, milk production, ovum and sperm production, metabolism, development and maintenance of immunity.

The depression of the appetite can vary from small reductions that are unnoticed but affect the production of the animal, to large reductions up to half the normal daily intake. Severe untreated reductions in appetite will result in the wasting and eventual death of the animal.

Worms in the small intestine will cause the intestine to be irritated and produce excessive mucus while being excessively stimulated,

with the passage of food too quickly resulting in scouring. The scouring will result in reduced nutrient uptake from the food consumed affecting all areas of growth and breeding.

### Drench resistance

Drench resistance is common in sheep and an increasing problem in alpacas. This occurs when some of the worms are able to survive the chemical used in the drench. This can result in persistent worms within the herd causing sub clinical production losses or in the extreme severe production losses and deaths. Overuses of the same drench or under dosing are two common causes of drench resistance occurring.

Bringing new animals into a herd is another very common way of introducing drench resistant worms. It is highly recommended to drench and quarantine all new arrivals to property.

To prevent drench resistance occurring, grazing management strategies, faecal egg count monitoring, alternating the broad spectrum drenches and advice from your veterinarian on local issues should all be employed.

As a rule of thumb, treatment should be considered when faecal egg counts are above 300 epg for alpacas less than a year old or above 100 epg for older alpacas.



## At risk animals

Healthy adult alpacas with strong immune systems are generally able to cope with some larvae in the paddock and hence worms in the gut, assisted by alpacas using communal dung piles. When the health of the alpaca is below optimum the immune system will not be able to cope with the larvae and hence worms ingested from the paddock. Late pregnant and post partum females are under stress and hence their immune systems are compromised and are at risk of a worm infestation.

Cria have immature immune systems and are at risk of picking up worms. Rather than drenching cria, grazing them on clean paddocks is preferred unless severe worm burdens are present. Most weanlings suffer some separation stress and are susceptible hence they should be drenched. Consult with your veterinarian regarding appropriate drenching and management practices for your farm.

## Drench products

There are currently no drenches available that are registered for use in alpaca, however their use under the direction of a veterinarian is permissible. Many sheep drenches are in use to treat worms in alpacas with good success. Drenches fall into different categories: broad spectrum, narrow spectrum, long acting and short acting.

Broad spectrum, short acting is the most common in regular use.

Consult with your veterinarian prior to using drenches to determine the most appropriate for your farm.

Common drenches used with alpacas are:

Trade Name	Component	Family	Spectrum	Duration
Ivomec	Ivermectin	<i>Macrocyclic Lactones (ML)</i>	Broad	Short acting. Round Worms, Lung Worms, nasal bots.
Cydectin	Moxidectin	<i>Macrocyclic Lactones (ML)</i>	Broad	Long acting on parasites as listed above; but particularly for Barber's Pole and Brown Stomach Worms. Not good on bots.
Panacur	Fenbendazole	<i>Benzimidazole (BZ)</i>	Broad	Short acting. Round Worms, Lung Worms, Tape Worms.
Valbazen 1	Albendazole	<i>Benzimidazole (BZ)</i>	Broad	Short acting. The chemical Albendazole is not recommended with early pregnant females as high doses can be toxic to the embryo.
Closicare	Closantel	<i>Salicylanilides</i>	Narrow	Long acting for Barber's Pole Worms and Liver Fluke.
Virbamec	Abamectin	<i>Macrocyclic Lactones (ML)</i>	Broad	Short acting. Round Worms, Lung Worms. More potent than Ivermectin.

Further information for breeders can be found at [www.wormboss.com.au](http://www.wormboss.com.au)

**Australian Alpaca Association Ltd. (03) 9873 7700 [www.alpaca.asn.au](http://www.alpaca.asn.au)**

Disclaimer: The management practices detailed in this overview do not constitute veterinary advice. Any alpaca appearing to have an adverse condition should be assessed by a veterinarian.