





Disease name: Late blight of Potatoes

			
<p>A healthy Red Maasai ewe</p>	<p>A Red Maasai ewe infected with gastrointestinal worms</p>	<p>Description</p>	<p>Dosing a Red Maasai sheep to control gastrointestinal worms</p>
<p>Disease/Pest Name</p>	<p>Parasitic gastroenteritis (worm infection)</p>		
<p>Description</p>	<p>Parasitic gastroenteritis is condition caused by a mix of gastrointestinal round worms that reside in the gastrointestinal tracts of ruminants. The most important roundworms of sheep and goats live in the stomach, small and large intestine. A number of species live in other sites like the eyes and the lungs but these are rarely of clinical or economic importance in Kenya. The common nematodes that cause this condition in sheep and goats in Kenya belong to the following genera:</p> <ul style="list-style-type: none"> • <i>Haemonchus</i> • <i>Trichostrongylus</i> • <i>Oesophagostomum</i> • <i>Cooperia</i> • <i>Nematodirus</i> • <i>Trichuris</i> <p>The roundworms lay eggs in the gut and these eggs pass out in droppings</p>		

	<p>to develop into infectious stages on pasture. The pathology is associated mainly from the fact that some parasites suck blood from the hosts leading to anaemia. If present in large numbers, it can lead to a rapid depletion of the animal's blood reserves which can be fatal. Inflammation of the gut mucosa leads to other syndromes like diarrhea, loss of appetite, weakness, etc.</p>
Symptoms	<p>The symptoms associated with infection with gastrointestinal worms include the following:</p> <ul style="list-style-type: none"> • Dullness • Loss of appetite • Scruffy hair coat • Membranes inside the eyelids are pale – not the usual pink • A pendulous swelling may develop under the lower jaw – 'bottle-jaw' • Loss of body condition • Death in severe cases
Control & Prevention	<p>The goals of control and prevention are as follows: 1) prevent heavy exposure in susceptible animals, 2) reduce overall levels of pasture contamination, 3) minimize the effects of worm burdens, and 4) encourage the development of immunity in the animals.</p> <p>Some of the measures that can help prevent infection with high worm burdens in sheep and goats include the following:</p> <ul style="list-style-type: none"> • If animals are fed indoors, use a slatted floor • Construct feed troughs on the wall to avoid contamination with droppings • Feed animals adequate quantities of quality feed (eg use of <i>Lucaena</i>) • Use animals that are known to be resistant to worms.
Treatment	<p>Strategic use of anthelmintics is designed to reduce worm burdens and, thereby, the contamination of pastures. Timing of administration is based on knowledge of the seasonal changes in infection and the regional epidemiology of the gastrointestinal worms. Prompt recognition of circumstances likely to favor development of parasitic disease, e.g., weather, grazing behavior, and loss of weight and condition, is essential.</p> <p>It is important to note that there are only three classes of broad-spectrum dewormers currently in the Kenyan market. These are levamisoles, benzimidazoles and ivermectins. It is advised that the farmers use one classes until it proves ineffective as opposed to frequent rotations across different classes.</p>
Good Practice	<p>In order to ensure effective treatment, it is important to observe the following in the use of dewormers:</p> <ul style="list-style-type: none"> • Use correct dose – based either on individual animal weight or on

	<p>weight of the heaviest animal in the flock or age group</p> <ul style="list-style-type: none"> • Drench over the tongue – a drug deposited at the front of the tongue may go directly into the abomasum and this reduces drug availability in the body • Deworm in the morning before animals have fed • In cases of drug resistance give two full doses at a 12hr interval • Goats should be dosed at 1.5 times the dose of sheep.
Special instructions	Anthelmintic drugs (dewormers) are commonly available at various outlets and are sold to livestock keepers. It is very important to always read and follow the user information on the packages as relates to dosages for different classes of livestock and even more importantly, the withdrawal period for meat and milk.
Prevention of disease	Sustainable worm control generally, require knowledge of seasonal larval availability, origin of larvae contributing to any peaks and climatic requirements for worm egg hatching, larval development and survival. A veterinary professional can help the farmers identify the best times of the year to drench their sheep and goats based on this information. In order to reduce, over reliance on anthelmintic drugs (dewormers) it is important to integrate strategic deworming with various forms of grazing management.
Referral Centres	KARI Muguga North and other centres with animal health and production research components.
Reference Links – book, journal paper, magazine, brochure, bulletin, fact sheet, web etc	
Geographic Coverage	Parasitic gastroenteritis is a problem in all parts of the country where sheep and goats are reared.
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