

CONTROL OF WORMS IN CATTLE, SHEEP AND GOATS

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A. INTRODUCTION

Worms are living things which during all or part of their lives live at the expense of another, called hosts, causing it some damage but not necessarily destroying it. Generally, worms have privilege habitats within their hosts such as intestine, live, muscle, blood etc. Some worms are called “specific worms” because they develop only within certain species. Example is worm called stongyes that lives in the stomach of sheep. Some other in specific organ such as liver flukes in the liver of cow.

In order to establish and maintain healthy growth in animals, certain practices are very essential. These practices include the control of worms, vaccination, sanitary hygiene, routine clinical checks. Sanitary hygiene, in Farm animals include keeping the animals body clean, proving clean and balance feed, and water, providing clean housing environment and pens. It also include keeping farm utensils clean at all times. This guide will teach farmers and animal attendants about how to view and carry out these practices more effectively.

B. TYPES AND SIGNS OF WORM INFESTATION

1. Worms affecting domestic animals can be differentiated into four main groups namely:
 - i Nematodes (Round worms)
 - ii Cestodes (Tape worm)
 - iii Trematodes (Flat worms)
 - iv Protozan (Coccidia)



Figure 1: Round worms

2. **Worm infestations generally result in**

- i. Poor health
- ii. Low productivity
- iii. Loss of profit
- iv. Waste of time of the farmer

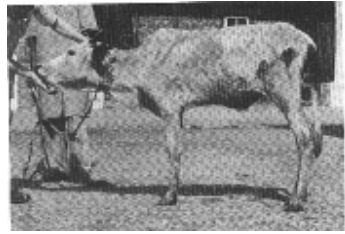


Figure 2: COW WITH HEAVY WORM BURDEN

3. **Round worms and flat worms (flukes) rob animals of blood and nutrients, leading to**

- i. Poor growth
- ii. Infertility
- iii. Poor immune status
- iv. Death



C. HOW WORMS LIVE

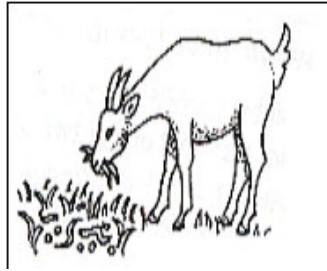


Stage 1. Eggs hatch in the grass and larvae come out, grow and change

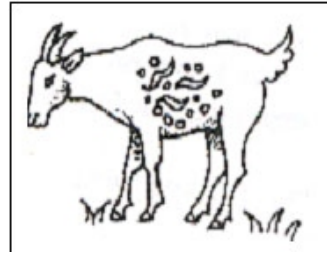
1. **Roundworms**

Found in esophagus, stomach, intestine, lungs, etc.

Stage 2: Animal eats the larvae with grass



Stage 3: The larvae enter the body, change to adult worms and produce eggs.



Stage 4: Adult worms in the stomach or intestine produce eggs



Stage 5: Eggs drop to the ground in faeces



D. GENERAL RULES OF HYGIENE IN WORK CONTROL

For a livestock enterprise to maximize its output, it is necessary that the animals should be in good health. The measures to be taken falls into two classes. First is a good guidelines for effective animal Husbandry (feeding, drinking, housing) that will ensure a satisfactory rate of reproduction and normal growth of a healthy stock that will produce at an acceptance economic yield. The second is to routinely protect the animal from the action of parasite burden through regular pest control deworming exercises. High level of hygiene are required in the following areas.

1. Drinking hygiene

Every herdsman brings his herd to common watering place. Shallow pools which form around watering places are favorable environments for the appearance of infective forms of parasites which develops form eggs dropped with the faeces from the major or intermediate hosts. It is important therefore to avoid the contamination of watering places or water spots. Individual herds drinking should prevent pollution of the water by excreta.

2. Hygiene of Rangelands and pasture

Protection is difficult on open rangelands where the herds have unrestricted movements. For close pastures in which animals movement can be checked, pasture contamination can be avoided by subjecting newly introduce animals to a quarantine period during which they are given worm treatment.

3. Hygiene of Animal house and pens

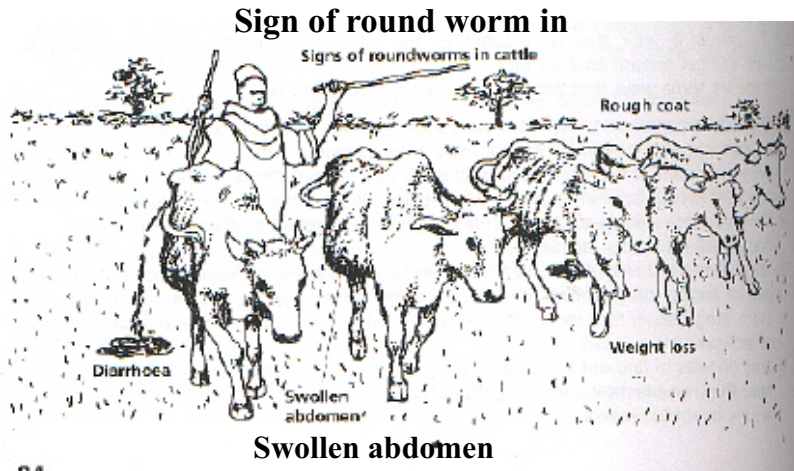
- Whatever the type of building or livestock housed you have, its cleanliness will ensure success. Excrement should be removed regularly and routinely. Uneaten feed should not be left too long in the troughs.
- Regular disinfection of the Environment with recommended chemicals and spray with residual insecticides are indispensable methods of avoiding build up of common worm eggs which can become dangerous.
- Professional guideline on the construction and use of farm structure according to animal species is also important for maximum control on humidity, temperature and cross ventilation.

4. Animal behavior and hygiene

It is necessary to avoid over stocking which causes the animals to be aggressive because of their need to defend their territory and access to food. In addition to the inconveniences, there is increased risk of transmission of normally common place worms and parasites. Also when animals show sickly appearance and poor growth they should be removed and housed separately. This is primarily for health reasons and also for economic reasons too.

E. HOW TO CONTROL WORMS

First learn to observe signs of worm burden in a herd. Most times worm make animals sick and more often than anything else does. Most worms make animal lose flesh and stop growing. They often cause diarrhea in several animals in the herd. The rate at which the problem spread from one animal to another is very rapid too.



Example of Herd with worm problem

F. HOW TO CONTROL WORMS WITH LOCAL MEDICINE

- 1. *Albrizia anthelmintica***
Some people crush the bark of this tree with a stick and soak it in cold water. They strain the liquid and give it by mouth to cattle, sheep or goat to treat for some worms. Note that modern worm medicine are more effective.

- 2. *Pramnia maxima***
Some people use the fruits of this plant to control worms. They crush the fruits and mix them with water. They give the liquid by mouth to treat worms. Mordern worm medicine are more effective.

3. Veronia Amygdalina

Some people also use a grab of butter leaf weighing approximately 117gm pounded in a mortar 100ml of water is added and left overnight. The extract is then sieved and used for drenching one cow, sheep or goat. Note also that modern worm control medicine is more effective.

4. Kaya senegalensis

Some farmers take the fresh bark of kaya scenegalensis plant and is air dried, grounded into powder and mixed with 1% red potash. One palm full of these mixture (71.8gm) is soaked in cold water form a suspension, stirred and drenched to an animal. Note also that modern worm medicine are more effective.

G. CONTORL OF WORMS WITH WORM MEDICINE (ANTHELMINTICS)

An annual programme aimed at controlling worms in farm animals is desirable. This involves the strategic use of anthelmintics at the following periods in the year:

- i. Preventive treatment early in the raining season.
- ii. Treatment mid season and early dry season to reduce pasture contamination
- iii. Routine treatment in case of chemical outbreaks.

1. February to June Treatment (Early Raining Season)

Deworm at this period to prevent the cycling to worm

infestation in calves during the early part of the grazing period and thus reduce subsequent pasture contamination with infective larvae. The 3-8-13 system (i.e 3 weeks, 8 weeks and 13 week sequence of deworming practice at this period) prevent cycling of both stomach and lung worm and the deposition of eggs and larvae on the pasture for up to 16-17 weeks from the on-set of rains. As a result the programme will provide season long control of stomach worms, liver flukes and lung worms in calves.

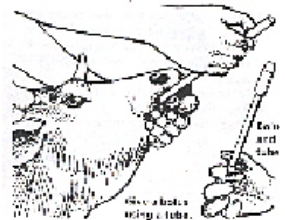
2. July to September Treatment (Mid -Raining season)

At this time a good worm medicine effective in the treatment of round worms should be administered. This treatment is based on the understanding that there is already a build up of worm on pasture which should be control before it cause problem.



3. October to December (Early Dry season)

Again an effective anthelmintic effective in the control of round worms and liver fluke should be administered.



4. Routine treatment in cases of clinical infection.

This is when animals are simply dewormed in response to clinical helminthiasis. Clinical signs observed include loss of appetite, anemia, coughing, diarrhea etc.

H. HOW TO USE DEWORMER (ANTHELMINTICS)

1. Use drugs that are from reputable sources on animals Be sure that the drugs have been kept in good conditions and are used within the expiry period specified.
2. Some of the drugs are specified only for certain kinds of animal and are dangerous for others – so be careful.
3. Direction of use that come with worm medicine are very important. It tells you which animals to use the drug for and at what dose rate.
4. To treat a group of animals, use the weight of the heaviest animals in the same age group. Never use the average weight of the group.
5. Respect the expected treatment intervals for better result.

I. HOW TO DRENCH AN ANIMAL

Liquid Medication can be given as drench. You will need a fanta, coke, bear bottle or dose syringe. Measure the correct amount of drench. Keep Goat, Sheep or Cow head in normal position. Place end of syringe or bottle in left side of mouth on back of tongue slowly pour drench into the throat.

J. HOW TO GIVE AN ANIMAL A BOLUS

Remove Bolus from container in proper dose, break between two paper and dissolve in coke bottle and drench. You can also insert bolus in end of balling gun or tube. Hold tube upward to prevent bolus from dropping out. Put tube in left side of goat, sheep or cow's mouth.

Push plunger forward forcing bolus into oesophagus. Hold the mouth closed and stroke through at down until bolus is swallowed.

K. CHOOSING THE RIGHT WORM MEDICINE FROM THE MARKET

Animal drug trade in Nigeria is not regulated. Most drugs are easily available across the counter. This open the way for all sorts of fake drugs of dubious quality in the Nigerian market. Therefore avoid choosing drugs whose origin cannot be quaranteed. Such drugs are often less expensive but of uncertain composition. The efficacy of such products cannot be quantified and they can be dangerous.

Fake drugs cannot be recognized easily but preference should be given to products sold in containers which are difficult to re-use. Also avoid using products whose packaging or labeling gives rise to doubts about the genuiness. It is always better to contact your local veterinarian when in doubt.

L. AVOID USING UNSUITABLE DRUGS

The choice of a dewormer should take into account the particular animal to be treated. First identify what worms you want to control. Once the worms have been identified, the next step is to know what active agent(s) you want in the drug of choice and what dosage is appropriate to achieve the best result. It is a fact that not all trade name with the same active ingredient offer the same spectrum of efficacy. The wrong choice of formulation may therefore result in poor protection of the animal

To choose a product, seek advice first. Care should be take to select good quality products with easy to understand direction for use.

M PREPARATION AND APPLICATION OF DEWOEMERS

1. First clean pens and environment to prevent reinfection.
2. Observe the expiry date on the label and follow the direction carefully and calculate the dosage per kilogram live weight. Don't use unguided guestimated.
3. Avoid spillage and wastage and don't contaminate yourself, water or utensils carelessly. Clean up properly after work. Dispose off used material properly. Expired drugs should be buried.

EXAMPLES OF COMMON DEWORMERS

Drugs	Spectrum	Dosage (mg/kg) liveweight		
		Cattle	Sheep	Goats
Albendazole	a,b	5-7.5	5-7.5	5.75
	c,	10	4.75	4.75
Flukazole	c	10	10	10
Ferbedudizile	a,b,c	5-7.5	5-7.5	5-7.5
Ivermeitin	a,d,e	0.2-0.5	0.2-0.5	0.2-0.5
Levamisol	a e	7.5	7.5	7.5
Lovamisol/Oxy clozaide (mixed)	c	0.25	0.25	0.25
mebendazole	a,b,c	15	15	15
Morantel	a	10.5	5.9	5.9
Nitroxynil	a	10-15	10-15	10-15
Oxfendazole	a,b,c	4.5-5	4.5-5	4.5-5
Oxyclozamine	c	4.5-5	4.5-5	4.5-5
Piperzine	a,f	15	10	10
Thiabendazole	a,d	60	160	160
Thiophanate	a,d,	66-110	44-66	44-66
Triclabendazole	c	12	10	10

NB a=Round worm, b=Tape worm, c=Liverflukes, d=Lungworms e=Stomach worms f=Ascanis

O. PRECAUTIONARY MEASURES

- i. Don't use milk for human consumption within 3 days of deworming except otherwise advised.
- ii. Do not slaughter such animal for human consumption at least within 2 weeks of treatment.
- iii. Overdose or underdose is harmful. This is why it is always good to ask for professional services.

P. COMMON WORMS OF CATTLE, SHEEP AND GOAT

- Cause loss of weight, diarrhea, anemia
 - Pot belly, swelling under the jaw
 - Some are passed out in stool
 - Transmitted through contaminated feed, water or grass.
 - Control is by regular de-worming exercises.
2. **Tape worm**
- Found in tissue, organs, intestine etc
 - May stay in the body without any sign
 - Lambs are mostly affected
 - Segments passed out in stool and cysts are found in flesh.
- 3 **Liver flukes**
- Affects liver, bile ducts, gallbladder, stomach.
 - Loss of weight, anemia
 - Eggs passed out in faeces
 - Death may occur because of liver damage
 - In Slaughtered animal, a whole liver can be condemned
 - To control avoid marshy areas for grazing.
 - Kill snails by spraying
 - Flukazole and levamisole are first drug of choice

4. Coccidia

1. A protozoa that destroy the small intestine
2. Cause loss of appetite
3. Diarrhea in calves, lambs and kids
4. Diarrhea may be bloody and the parasites can be isolated
5. Control include sanitation, cleaning and drying up wet spots
6. Amprolium and Ampromix in feed and water are first drugs of choice.

1. Trypanosomes

- a. Parasites found in blood streams
- b. Affect local sheep and cattle
- c. Show no specific symptoms
- d. Control include eradication of tsetse fly or, trapping and destroying the flies.
- e. Berenil is first drug of choice.

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