wormboss

Drench Decision Guide

Qld central and south and NSW northwest

GOATS

Smallholders who assess and treat individuals: use the Smallholders DDG Barbervax® vaccination program: www.wormboss.com.au/barbervax

QUESTIONS

INSTRUCTIONS: *Follow the **'GO TO'** letter or number on the right for each answer. Only answer the questions to which you are directed. When you are directed to a letter, this is the final **recommendation** (shown over the page).*

START HERE

1 Are these goats showing signs[2] of worms or have they been in high worm-risk conditions? — GO TO

- No, there are no signs of worm infection → **2**
- No, there are no signs of worm infection AND I have a recent worm egg count → **7**
- Yes, including pale inside eyelids and gums, bottle jaw, lagging/collapse → **A**
- Yes, some are scouring, but not showing the other signs listed above → **B**
- Yes, dead goats or killers had firm white pimples or nodules visible on the wall of the large intestine and possibly on the small intestine OR nodule worm was present in the *WormTest* larval culture result → **C**
- Yes, these goats have been crowded for 4 weeks or more (due to tall thick grass or heavy rain/flooding) OR grazing green pick along channels or wet areas during drier conditions → **B**

2 Are these does that will kid within 4 weeks?

- Yes → **B**
- No → **3**

3 Are these kids that will be weaned within 2 weeks or weaners?

- Kids about to be weaned → **D**
- Weaners/young goats to 18 months old → **E**
- No → **4**

4 What time of the year is it?

- October–November → **5**
- December–early February → **F**
- Late February → **B**
- March–September → **6**

5 It is October–November: Which situation applies to this mob? — GO TO

- The grass is green and actively growing (there may be an overlay of tall dry grass) → **G**
- The grass is brown or is not actively growing, and these are young goats (under 18 months) → **H**
- The grass is brown or is not actively growing, and these are mature goats (over 18 months) → **I**

6 It is March–September: Has there been rain (more than 20 mm) plus follow up rain (more than 10mm) within a few weeks?

- Yes → **B**
- No → **J**

7 I have a *WormTest* result.

In the table below, find the worm egg count threshold for the class of goats and the type of *WormTest* result you have.

Worm egg count (epg) thresholds

Class of goats	No culture	Less than 60% barber's pole	Greater than 60% barber's pole
Does (dry to mid-pregnancy) or wethers	500	400	700
Does pre-kidding	200	200	300
Goats under 18 months or bucks	400	300	500

What is your worm egg count in relation to the threshold value?

- My worm egg count is equal to or higher than the threshold value → **K**
- My worm egg count is below the threshold value → **L**

[1]High risk barber's pole worm conditions

Goats can sometimes be rapidly re-infected with worms, causing illness and death within 2 weeks of a drench. In these situations (i) check at least weekly for visual signs of barber's pole worm; and (ii) conduct a *DrenchCheck*. To reduce this risk, prepare low worm-risk pastures.

[2]Signs of worms

Closely examine for signs of worms, yard or hold goats against a fence. Catch and examine 5–10 animals.

Barber's pole worm: anaemia (pale inside eyelids and gums); 'bottle jaw' (swelling under the jaw); lagging or collapse when mustered; death.

Scour worms (black scour worm [*Trichostrongylus* species]; brown stomach worm [*Teladorsagia circumcincta*]; and others [incl. *Nematodirus*]): dark scours; weight loss; death.

NOTE: Other diseases and poor nutrition can cause similar signs. Consider seeking veterinary advice.

For more information on regional worm control plans, drenches, tests, checks and worms visit www.wormboss.com.au

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GOATS

RECOMMENDATIONS

*__INSTRUCTIONS:__ Read the **recommendation** that you have been directed to from the Drench Decision Guide questions, plus the information in the other three green boxes.*

A Treat now with a short-acting drench[3] effective against both barber's pole worm and scour worms; *WormTest* in 4–6 weeks[1] after a short-acting drench. Consider a long-acting treatment for barber's pole worm under higher rainfall conditions; follow the guidelines[3] below for long-acting treatments. Remember that other parasites/diseases can cause similar signs.

B *WormTest* with a larval culture now and proceed from Question 7 of the *Drench Decision Guide*.

C The goats probably have nodule worm. Treat with a short-acting drench[3] effective against nodule worm* in your next drench or in May/June (when frosty weather begins) and in September/October.

D Treat at weaning with a short-acting drench[3] effective against both scour worms and barber's pole worm; *WormTest* in 4–6 weeks[1] after a short-acting drench. Consider a long-acting treatment for barber's pole worm under higher rainfall conditions; follow the guidelines[3] below for long-acting drenches.

E *WormTest* in 4 weeks (summer) or 6 weeks (winter) after the last effective short-acting drench was given and proceed from Question 7 of the *Drench Decision Guide*. If the last drench was mid- or long-acting, follow the guidelines[3] below for long-acting drenches. Observe goats closely for signs of worms between drenching and worm testing[1].

F No treatment is required if these goats were treated in October/November; if they were not, *WormTest* now and proceed from Question 7 of the *Drench Decision Guide*.

G *WormTest* representative mobs (with a larval culture).

- If the egg count is below 200 epg no treatment is required.
- If the egg count is 200–500 epg, treat all goats now with a short-acting drench[3] effective against barber's pole worm, scour worms (and nodule worm* if present).
- If the egg count is above 500 epg and the culture shows barber's pole worm is present at greater than 60%, treat all goats now with a drench[3] effective against barber's pole worm, scour worms (and nodule worm* if present), but consider a long-acting treatment for barber's pole worm.

If no treatment was required or a short-acting drench was used, *WormTest* again in 4–6 weeks[1]. If a long-acting drench was used, follow the guidelines[3] below for long-acting drenches.

H Treat now with a short-acting drench[3] effective against barber's pole worm, scour worms (and nodule worm* if present). *WormTest* again in 4–6 weeks[1].

I Adult dry goats under drier conditions with no signs of worms do not need drenching. *WormTest* in late February.

J No treatment is required, *WormTest* during March–September once there has been significant rain (20+ mm) with follow up rain (10+ mm) within a few weeks, or prior to mustering goats for management activities.

K Treat now with a short-acting drench[3] effective against scour worms, barber's pole worm (and nodule worm* if present). In 4–6 weeks proceed from Question 1 of the *Drench Decision Guide* with this mob. Consider a long-acting treatment for barber's pole worm under higher rainfall conditions. Follow the guidelines[3] below for long-acting drenches.

L No treatment is required. If the mob was scouring, investigate other causes including coccidiosis, green feed and hypersensitivity. In 4–6 weeks proceed from Question 1 of the *Drench Decision Guide* with this mob.

*Nodule worm drenches must contain either a benzimidazole (BZ) or a macrocyclic lactone (ML) group.

[3]Guidelines for worm control treatments

When using anthelmintic products in goats, obtain a veterinary prescription because:

- Goats require a different dose rate and withholding period to that on the label.
- Many drenches are not registered for use in goats (see exceptions below).

Victoria: over the counter drenches can be used if residues are kept below the Maximum Residue Limits (MRL).

South Australia: cattle drenches can be used in goats, but pour-on formulations should be avoided.

When giving all treatments

Follow the product labels or veterinarian's instructions. Dose to the heaviest goat in the group. Calibrate equipment to ensure the right dose is delivered with the right procedures. Do not mix drenches unless the label states they are compatible. Check and comply with withholding periods and export slaughter intervals.

Choosing treatment options on your property

Use these principles together, where possible:

1. Use drenches tested to be most effective on your property and either multi-active products or more than one active concurrently (up the race with one and then the other); if drench effectiveness is unknown, conduct a *DrenchCheck* after drenching.
2. Use short-acting treatments—reserve long-acting products for specific purposes or high worm-risk times.

For more details read the drench resistance section in the WormBoss Worm Control Program.

Check effectiveness of long-acting treatments

Use only under veterinary prescription.

WormTest with a culture at 35, 60 and 90 days after treatment.

If *WormTest* results are 100 epg or above, drench resistance is likely. Drench immediately with an effective short-acting drench with a different drench group to the long-acting treatment. Seek veterinary advice on the further use of this product. If *WormTest* results are less than 100 epg, then treat with an exit drench at 100 days after the long-acting treatment was given.

Seek veterinary advice if *WormTests* are positive at or before 60 days.

Primer and exit drenches

These help to slow drench resistance to persistent treatments.

Protection period of persistent treatments

(These are for sheep as goat times are unknown, but likely much shorter as goats metabolise the drenches faster)

Mid-length: 7–28 days. Long-acting: 91–100 days.

NOTE: The protection period against susceptible black scour worm with a long-acting moxidectin injection is 49 days in sheep, but is not set in goats.

Use a primer before long-acting treatments

Primer drenches (effective short-acting treatments that do not include the drench group in the long-acting treatment) should be given concurrently with all long-acting treatments.

Use an exit drench after all mid-length and long-acting treatments

- Treat with an 'exit drench'—an effective short-acting treatment that does not include the drench group in the mid-length or long-acting treatment. Also called a 'tail-cutter' drench.
- Give this at 42 days (mid-length) or 100 days (long-acting) after the treatment was given.
- *WormTest* 4–6 weeks after the exit drench.

Anytime that you are concerned that the persistent treatment is not providing protection, *WormTest* immediately and seek veterinary advice regarding drench resistance.