

Vaccination with Barbervax® is not addressed in this Drench Decision Guide. The Barbervax program is published at www.wormboss.com.au/barbervax.

QUESTIONS

START HERE



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).

<p>1 Are these sheep showing signs² of worms or have they been in high worm-risk conditions?</p> <ul style="list-style-type: none"> 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 sheep 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 <i>WormTest</i> larval culture result C Yes, these sheep have been crowded for 4 weeks or more (due to tall thick grass or heavy rain/flooding) OR grazing green pick along bore drains during drier conditions B 	<p>2 Are these ewes that will lamb within 4 weeks?</p> <ul style="list-style-type: none"> Yes B No 3
<p>3 Are these lambs that will be weaned within 2 weeks or weaners?</p> <ul style="list-style-type: none"> Lambs about to be weaned D Weaners from weaning through to 1 year old E No 4 	<p>4 What time of the year is it?</p> <ul style="list-style-type: none"> October–November 5 December–early February F Late February B March–September 6

<p>5 It is October–November: Which situation applies to this mob?</p> <ul style="list-style-type: none"> 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 sheep (under 18 months) H The grass is brown or is not actively growing, and these are mature sheep (over 18 months) I 	<p>6 It is March–September: Has there been rain (more than 20 mm) plus follow up rain (more than 10mm) within a few weeks?</p> <ul style="list-style-type: none"> Yes B No J 																
<p>7 I have a <i>WormTest</i> result. In the table below, find the worm egg count threshold for the class of sheep and the type of <i>WormTest</i> result you have.</p> <p style="text-align: center;">Worm egg count (epg) thresholds</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Class of sheep</th> <th>No culture</th> <th>Less than 60% barber's pole</th> <th>Greater than 60% barber's pole</th> </tr> </thead> <tbody> <tr> <td>Ewes (dry to mid-pregnancy) or wethers</td> <td>500</td> <td>400</td> <td>800</td> </tr> <tr> <td>Ewes pre-lambing</td> <td>300</td> <td>300</td> <td>300</td> </tr> <tr> <td>Sheep under 18 months or rams</td> <td>400</td> <td>300</td> <td>500</td> </tr> </tbody> </table> <p>What is your worm egg count in relation to the threshold value?</p> <ul style="list-style-type: none"> My worm egg count is equal to or higher than the threshold value K My worm egg count is below the threshold value L 		Class of sheep	No culture	Less than 60% barber's pole	Greater than 60% barber's pole	Ewes (dry to mid-pregnancy) or wethers	500	400	800	Ewes pre-lambing	300	300	300	Sheep under 18 months or rams	400	300	500
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¹High risk barber's pole worm conditions

Sheep 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; (ii) use the Haemonchus Dipstick Test; and (iii) conduct a *DrenchCheck-Day10*. To reduce this risk, prepare low worm-risk pastures.

²Signs of worms

Closely examine for signs of worms, yard or hold sheep 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 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

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 drench³ effective against both barber's pole worm and scour worms; *WormTest* in 4–6 weeks¹ after a short-acting drench. Consider a long-acting treatment for barber's pole worm under higher rainfall conditions; follow the guidelines³ 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 sheep probably have nodule worm. Treat with a short-acting drench³ 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 drench³ effective against both scour worms and barber's pole worm; *WormTest* in 4–6 weeks¹ after a short-acting drench. Consider a long-acting treatment for barber's pole worm under higher rainfall conditions; follow the guidelines³ 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 guidelines³ below for long-acting drenches. Observe sheep closely for signs of worms between drenching and worm testing¹.

F No treatment is required if these sheep 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 sheep now with a short-acting drench³ 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 40%, treat all sheep now with a drench³ 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 weeks¹. If a long-acting drench was used, follow the guidelines³ below for long-acting drenches.

H Treat now with a short-acting drench³ effective against barber's pole worm, scour worms (and nodule worm* if present). *WormTest* again in 4–6 weeks¹.

I Older sheep 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 sheep for management activities.

K Treat now with a short-acting drench³ 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 guidelines³ 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.

³Guidelines for worm control treatments to slow drench resistance

When giving all treatments

Follow the product labels. Dose to the heaviest sheep in the mob or groups. 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 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 multi-active combinations where possible; If drench effectiveness is unknown, conduct a *DrenchCheck-Day10* after drenching.
2. Use short-acting treatments—reserve long-acting products for specific purposes or high worm-risk times.
3. Rotate drench groups each time a mob is drenched and for each paddock.

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

Check effectiveness of long-acting

treatments

WormTest with a culture at 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 active to the long-acting treatment.

Seek professional 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 (15 weeks) after the long-acting treatment was given.

Seek professional 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

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.

Use a primer before long-acting treatments

Primer drenches (effective short-acting treatments that do not include the active 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 active in the mid-length or long-acting treatment. Also called a 'tail-cutter' drench.
- Give this at 6 weeks (mid-length) or 15 weeks (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 professional advice regarding drench resistance.