

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 sheep showing signs² suggesting a worm infection?	GO TO
	• Yes, they have scouring and/or weight loss	A
	• Yes, they have anaemia and lethargy	B
	• No signs of worms are obvious	2
2	Are these sheep lambs or weaners?	
	• These are lambs just about to be marked	C
	• These are lambs just about to be weaned	D
	• These are weaners after weaning until the autumn break	E
	• These are weaners from the autumn break through to September	F
	• These are not lambs or weaners	3

3	Are these rams?	GO TO
	• These are rams just prior to joining	G
	• These are rams, but it is not just prior to joining	4
	• No	4
4	Are these ewes or wethers (or rams)?	
	• These are spring-lambing ewes just prior to lambing	H
	• It is November/December (regardless of lambing time)	I
	• It is January/February	J
	• These are autumn-lambing ewes just prior to lambing	K
	• It is March until September	L

¹Guidelines 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 registered protection period against susceptible black scour worm with a long-acting moxidectin injection is 49 days.

Using 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 benzimidazole capsules (seek professional advice for use with other treatments).

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

Seek professional advice on the need for an 'exit drench'—an effective short-acting treatment that does not include the active in the mid-length or long-acting treatment. This varies according to drench resistance profiles across properties.

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

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 *WormTest* now. Treat with an effective short-acting drench¹ if egg count exceeds 200 epg, then *WormTest* again in 4–6 weeks³.

If results show scour worms are not the likely cause of the scouring/weight loss, seek veterinary advice.

B *WormTest* now and request a larval culture. Treat with an effective short-acting drench¹ if egg count exceeds 200 epg, then *WormTest* again in 4–6 weeks³.

If results show barber's pole worm are not the likely cause of an anaemia, seek veterinary advice.

C No treatment is required now if lambs are developing normally and putting on weight (if not seek veterinary advice). Treat at weaning with an effective short-acting drench¹.

D Treat at weaning with an effective short-acting drench¹.

WormTest spring-drop lambs 5–6 weeks after this weaning drench (earlier if a wetter than normal summer), or autumn-drop lambs 4–5 weeks after³.

E *WormTest* spring-drop lambs 5–6 weeks after the weaning drench (earlier if a wetter than normal summer), or autumn-drop lambs 4–5 weeks³ after the weaning drench or if this is November/December, give them a highly effective short-acting first summer drench.

Continue testing each 4–6 weeks until the autumn break.

- Treat with an effective short-acting drench¹ if the egg count exceeds 100 epg especially if the paddock weaners are staying on is going to be used for weaners or maiden ewes in winter.
- Delay the drench if all of the following apply (i) the egg count is less than 200 epg, AND (ii) the paddock will not be used for weaners or maiden ewes in winter, AND (iii) the weaners are growing and appear well, AND (iv) weaners will go to a 'Smart grazed' paddock within 4 weeks. Drench at the move.

F *WormTest* no later than 4–6 weeks after the autumn break. However, in high risk conditions (paddocks highly contaminated with worms/higher rainfall areas/wetter season/poorer condition) test as early as 2 weeks after the break³.

Continue testing at 4–6 week intervals through until the end of winter (shorter interval in higher risk conditions). Treat with an effective short-acting drench¹ if egg count exceeds 200 epg, or a different threshold as agreed with your animal health advisor. Consider a long-acting treatment at the beginning of winter if weaners are going onto un-prepared paddocks highly contaminated with worm larvae and conditions are wetter than normal.

G Treat rams with an effective short-acting drench² if this coincides with the second summer drench time.

If not, *WormTest* and treat with an effective short-acting drench¹ if egg count exceeds 100 epg.

H If ewes are in poor condition (less than Condition Score 2.5), treat with an effective short-acting drench¹.

If ewes are in good condition (CS 2.7 or better) *WormTest*. Treat with an effective short-acting drench¹ if egg count exceeds 100 epg.

I Treat with a highly effective short-acting drench¹ in November/early December. *WormTest* 6–8 weeks after this first summer drench³.

NOTE: The first summer drench time can be staggered across mobs if preparing 'Smart grazed' paddocks with these sheep.

J *WormTest* 6–8 weeks after the first summer drench or at the end of January³. Treat with a highly effective short-acting drench¹ if egg count exceeds 100 epg.

- For autumn-lambing ewes *WormTest* again just prior to lamb marking.
- For spring-lambing ewes *WormTest* again in July/August or sooner if ewes are losing condition.

In barber's pole worm areas or higher than normal summer rainfall conditions, also observe for anaemia and lethargy.

NOTE: The second summer drench time can be staggered across mobs if preparing 'Smart grazed' paddocks with these sheep.

K If it has been more than 4–6 weeks since the last *WormTest* or drench, *WormTest* and treat with an effective short-acting drench¹ if the egg count exceeds 100 epg.

L If sheep will graze a low worm-risk paddock being prepared for weaners in winter, treat with an effective short-acting drench¹ before they enter the paddock. They should remain there no longer than 30 days. *WormTest* again in July/August or sooner if sheep are losing condition³ and treat with an effective short-acting drench¹ if egg count exceeds 100 epg.

²Signs of worms

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

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

NOTE: Other diseases can cause similar signs. Consult your vet if *WormTests* do not indicate worms.

³High risk worm conditions

Sheep can sometimes be rapidly re-infected with worms, causing illness and death within 3 weeks of a drench when WECs will still be low or zero. If the onset of scouring, weight loss or deaths is sudden, urgently seek veterinary advice.

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

Future events cannot reliably be predicted accurately. Sheep CRC Ltd ("Sheep CRC"), The University of New England ("UNE"), Australian Wool Innovation Limited ("AWI") and Meat & Livestock Australia Limited ("MLA") make no statement, representations or warranties about the accuracy or completeness of, and you should not rely on any information relating to the WormBoss Worm Control Program ("Information"). Sheep CRC, UNE, AWI and MLA disclaim all responsibility for the Information and all liability (including without limitation liability for negligence) for all expenses, costs, losses and damages you may incur as a result of the Information being inaccurate or incomplete in any way for any reason.

Published December 2015 © Sheep CRC Ltd, The University of New England, Australian Wool Innovation Limited and Meat & Livestock Australia Limited 2015