

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).

1	Are these sheep showing signs ¹ suggesting a worm infection or have they been in high worm-risk conditions?	GO TO
	• There are no signs of worm infection	2
	• Some are scouring, but are not showing anaemia or bottle jaw	A
	• They have signs including anaemia (pale inside eyelids and gums), bottle jaw, lagging/collapse	B
	• These sheep have been crowded for 4 weeks or more (due to tall thick grass or heavy rain/flooding) OR are in poor condition (condition score less than 2.5)	A
2	Are these sheep in the eastern Riverina (including Griffith, Jerilderie and Finley and east of the Newell Hwy)?	
	• Yes	C
	• No and I also have a current egg count	6
	• No	3
3	Are these ewes about to lamb within 4 weeks?	
	• Yes	A
	• No	4
4	Are these lambs about to be weaned?	
	• Yes	D
	• No	5

¹Signs of worms

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

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); lagging or collapse when mustered; death.

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

²High risk barber's pole 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.

5	Which sheep class and time of year applies?	GO TO															
	• All sheep in November–December in years with normal or above average rainfall	E															
	• All sheep in November–December in years with lower than normal rainfall	A															
	• All sheep in late January–early February (prior to a possible 'second summer drench')	A															
	• All sheep in March–October, 4–6 weeks after there has been significant rain (20+ mm) that has follow-up rain (10+ mm) within a few weeks (including the autumn break)	A															
	• Weaners in summer/autumn, especially if feed is poor; and in winter, when worm challenge may be high	A															
	• Ewes prior to joining or shearing (except the far western areas of the region)	A															
6	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.																
	Worm egg count (epg) thresholds																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Class of sheep or time of year</th> <th style="width: 33%;">No culture OR less than 60% barber's pole</th> <th style="width: 33%;">Greater than 60% barber's pole</th> </tr> </thead> <tbody> <tr> <td>Ewes (dry to mid-pregnancy) or wethers</td> <td style="text-align: center;">250</td> <td style="text-align: center;">400</td> </tr> <tr> <td>Ewes pre-lambing</td> <td style="text-align: center;">150</td> <td style="text-align: center;">250</td> </tr> <tr> <td>Sheep under 18 months or rams</td> <td style="text-align: center;">150</td> <td style="text-align: center;">300</td> </tr> <tr> <td>Time of 1st or 2nd summer drench</td> <td style="text-align: center;">100</td> <td style="text-align: center;">100</td> </tr> </tbody> </table>	Class of sheep or time of year	No culture OR less than 60% barber's pole	Greater than 60% barber's pole	Ewes (dry to mid-pregnancy) or wethers	250	400	Ewes pre-lambing	150	250	Sheep under 18 months or rams	150	300	Time of 1st or 2nd summer drench	100	100	
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	Liver fluke: This requires a different test than for roundworms. Any positive liver fluke test is significant and requires action: treatment and grazing management.																
	Nematodirus (thin-necked intestinal worm): This can cause scouring and deaths with very low or zero worm egg counts (particularly in weaners), and after summer storms. Seek professional advice.																
	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	F															
	• My worm egg count is below the threshold value	G															

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 *WormTest* now and proceed from Question 6 of the *Drench Decision Guide*. Include a larval culture if

- Barber's pole worm has been a problem over the last year.
- Late spring/summer is wetter than normal.

B Treat now with a short-acting drench³ effective against both barber's pole worm and scour worms¹; *WormTest* in 4–6 weeks² after a short-acting drench. Consider a long-acting treatment for weaners, in particular, if worm challenge is high and low worm-risk paddocks are not available. Follow the guidelines³ below for long-acting treatments. Remember that other parasites/diseases, including liver fluke, can cause similar signs. If signs have not improved in 4–7 days, seek veterinary advice. After drenching, do a *DrenchCheck-Day10* if this drench group has not been tested in the last year.

C There are 3 times to conduct worm control practices:

- Weaning (when average age is 12 weeks): Treat lambs with an effective drench³ and move them onto a paddock that has had no sheep under 2 years of age on it since the end of February.
- Around cereal harvesting and before sheep are moved onto stubble: (choose one option)
 - Before starting cereal harvest, treat with an effective short-acting drench³; however, in dry years, particularly in adult sheep, *WormTest* first and only drench if egg count exceeds 150 epg to minimize development of drench-resistance.

OR

- As soon as cereal harvest is finished *WormTest* and treat with an effective drench³ if egg count exceeds 150 epg.
 - Late February: *WormTest* and treat with an effective drench³ if egg count exceeds 150 epg.
- After drenching, do a *DrenchCheck-Day10* on each drench group that has not been tested in the last year.

D Treat at weaning with a short-acting drench³ effective against scour worms¹ (and barber's pole worm if this is a problem on your property), (this may coincide with the first summer drench); then *WormTest* in 4–6 weeks² after a short-acting drench. Consider a long-acting treatment for weaners in particular if worm challenge is high and low worm-risk paddocks are not available. Follow the guidelines³ below for long-acting drenches. After drenching, do a *DrenchCheck-Day10* if this drench group has not been tested in the last year.

E Treat all sheep with an effective short-acting 'first summer drench'³ when the pastures are haying off in late spring/early summer. After drenching, do a *DrenchCheck-Day10* if this drench group has not been tested in the last year.

F Treat now with a short-acting drench³ effective against scour worms¹ (and barber's pole worm if there were greater than 60% barber's pole worm in the *WormTest* culture results). In 4–6 weeks proceed from Question 1 of the *Drench Decision Guide* with this mob. Consider a long-acting treatment for weaners in particular if worm challenge is high and low worm-risk paddocks are not available. Follow the guidelines³ below for long-acting drenches. After drenching, do a *DrenchCheck-Day10* if this drench group has not been tested in the last year.

G No treatment is required. If the mob showed signs¹ suggesting worms, investigate other causes. In 4–6 weeks proceed from Question 1 of the *Drench Decision Guide* with this mob.

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.