

## 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 signs<sup>3</sup> suggesting a worm infection? **GO TO**

- They have scouring and/or weight loss **A**
- They have anaemia/bottle jaw/lethargy **B**
- There are no obvious signs of worms **2**

**2** Are these lambs or weaners?

- These are lambs prior to lamb marking **C**
- These are lambs between lamb marking and weaning **D**
- These are weaners after weaning and through till October **E**
- These are yearlings/hoggets, not yet mated **F**
- These are not lambs or weaners **3**

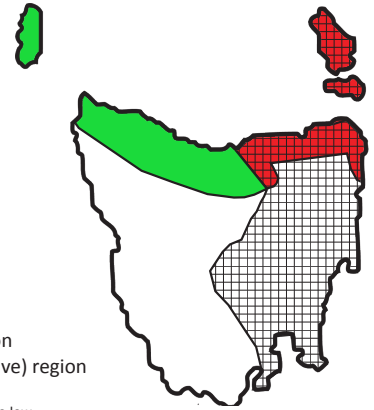
**3** Are these rams or wethers?

- These are rams just prior to joining **G**
- These are rams, but it is not just prior to joining **4**
- These are mature wethers in dry bush runs **H**
- These are mature wethers NOT in the dry bush runs **4**
- These are ewes **4**

*NOTE: Mature wethers not in bush runs and rams should be treated the same as ewes.*

**4** Are these ewes? (Treat wethers not in bush runs and rams as if they are ewes)

- These are ewes just prior to lambing **I**
- These are ewes prior to lamb marking **J**
- These are ewes between lamb marking and weaning **K**
- These are ewes in late January/early February **L**
- These are ewes during autumn or winter that are about to graze new fodder crops or perennial pastures that are being kept low worm-risk for weaners **M**
- These are ewes, rams or wethers (not in bush runs) in April **N**



■ High rainfall (prime lamb) region  
 Medium to low rainfall (extensive) region  
■ Summer rainfall region  
Note: This is an extension of the medium to low rainfall (extensive) region

### <sup>1</sup>Guidelines 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 4 principles together, where possible:

1. Use drenches most effective on your property; ideally those shown to reduce worm egg count by at least 98%. If drench effectiveness is unknown, conduct a *DrenchCheck-Day10* after drenching.
2. Use a combination of 2 or more drench groups.
3. Rotate drench groups each time a mob is drenched and for each paddock.
4. Use short-acting treatments.

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 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 drench<sup>1</sup> if egg count exceeds 300 epg for weaners or 500 epg for adults, then *WormTest* again in 3–4 weeks<sup>2</sup>.  
 If results show scour worms are not the cause of the scouring/weight loss, seek veterinary advice.

**B** *WormTest* now and request a larval culture. Treat with an effective short-acting drench<sup>1</sup> if egg count exceeds 300 epg for weaners or 500 epg for adults, then *WormTest* again in 3–4 weeks<sup>2</sup>.  
 If results show barber's pole worm is not the cause of the anaemia, seek veterinary advice.

**C** No treatment is required at lamb marking if lambs are developing normally and putting on weight. Drench the lambs at weaning time. However, if their mothers need a drench at lamb marking (e.g. daggy and in poor condition) also drench the lambs; use an effective short-acting drench<sup>1</sup>.

**D** Treat at weaning with an effective short-acting drench<sup>1</sup> (unless drenched at marking); this may coincide with the first summer drench. *WormTest* again in 3 weeks<sup>2</sup>.

**E** *WormTest* at these times<sup>2</sup>:  
 (i) 3 weeks after the weaning drench.  
 (ii) Just prior to the second summer drench (late January/early February).  
 (iii) Each 3–4 weeks thereafter till October.

- Treat weaners in the high rainfall region if egg count exceeds 200 epg.
- Treat weaners in the low to medium and summer rainfall region:
  - In January/February if egg count exceeds 100–150 epg.
  - In Autumn/Winter/Spring if egg count exceeds 300 epg.

Generally use an effective short-acting drench<sup>1</sup>, but in early to mid winter consider a long-acting product<sup>1</sup> in high worm-risk conditions<sup>2</sup> and follow the guidelines on the previous page for long-acting drenches.

**F** Give hoggets a first summer drench:

- In low to moderate and summer rainfall regions treat with an effective short-acting drench<sup>1</sup> in October/November (around lamb marking time).
- In the high rainfall region young wethers will have been sold and young ewes should be managed as breeding ewes (drench at weaning time). *WormTest* ewes again in January to see if a second summer drench is required. Any retained wethers should be in dry areas; *WormTest* them before shearing.

**G** Treat rams with an effective short-acting drench<sup>1</sup> if this coincides with the second summer drench time (January/February).  
 If joining at other times, *WormTest* and treat with an effective short-acting drench<sup>1</sup> if egg count exceeds 100 epg.

**H** *WormTest* wethers in dry areas prior to shearing. Treat with an effective short-acting drench<sup>1</sup> if results are above 500 epg. Wethers in wetter areas can be treated as ewes (go to question 4).

**I** Treat all ewes with an effective short-acting drench<sup>1</sup>. Consider using a long-acting product<sup>1</sup> in high worm-risk conditions<sup>2</sup>. Review this *Drench Decision Guide* prior to lamb marking.

**J**

- If ewes are daggy and in poor condition (less than condition score 2.5) treat with an effective short-acting drench<sup>1</sup> at lamb marking.
- If ewes are in dry (central) areas of Tasmania consider giving the first summer drench at lamb marking (consult your adviser); use an effective short-acting drench<sup>1</sup>.
- If neither above apply, give the first summer drench at weaning.

**K**

- Treat ewes in low/medium/summer rainfall regions that were not drenched at lamb marking with an effective short-acting drench<sup>1</sup> (first summer drench) at weaning.
- *WormTest* ewes in the high rainfall region that will stay on perennial pastures just prior to weaning. Treat with an effective short-acting drench<sup>1</sup> (first summer drench) at weaning only if results are 200 epg or above.
- Ewes in the high rainfall region not staying on perennial pastures will not require a drench at weaning.
- Treat all rams with an effective short-acting drench<sup>1</sup> around weaning time.

**L** Ewes that are in the summer rainfall region or are on perennial pastures in any region should be *WormTested* 6–8 weeks after they received their first summer drench at lamb marking or weaning:

- On perennial pastures in all regions, treat with an effective short-acting drench<sup>1</sup> (second summer drench) if egg count exceeds 150 epg.
- In the summer rainfall region where ewes are not on perennial pastures, treat with a short-acting drench<sup>1</sup> effective against barber's pole worm if egg count exceeds 500 epg.

Ewes not staying on perennial pastures and not in the summer rainfall area do not need treatment, but should be *WormTested* in April.

**M** Treat with an effective short-acting drench<sup>1</sup> before they go onto the low worm-risk fodder crop or perennial pasture.

**N** *WormTest* all mobs. Treat with a short-acting drench<sup>1</sup> if egg count exceeds 500 epg. High counts indicate pasture contamination and that a long-acting treatment could be considered pre-lambing.

### <sup>3</sup>Signs 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.

### <sup>2</sup>High 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](http://www.wormboss.com.au)