

Rendell's Worm Matrix to Assist Worm Control Decision Making



Introduction

"Rendell's Worm Matrix" defines worm risk for sheep flocks in the winter rainfall zone of SE Australia. Major risk factors are age, condition of sheep, pasture level, lactation grazing history & Worm Egg Count (WEC). Rendell's Worm Matrix (table 1) and worm control strategies (table 2) was trialed by over 90 sheep producers participating in 7 worm focus discussion groups between 1995 & 2000.

Rendell's Worm Matrix was runner up for the 2000 Hugh McKay NRE Vic Science Innovators 2000 award

"We laminated a copy of Rendell's Worm Matrix and keep a copy in ute for constant reference"

D & A Watt Balmoral Vic

Table A. "Rendell's Worm Matrix"

Risk Factors	Mob worm risk level		
	High	Medium	Low
Age	< 1-Y-0	2-Y-0 & CFA	3, 4, & 5-Y-0
Cond Score	< 2.5	2.5 – 3.0	> 3.0
Pasture (Kg DM/Ha)	under 800 (1" high)	800 –1500 (1- 2" high)	1500 + (2"+ high)
Grazing History Last 3- 6 mths	<ul style="list-style-type: none"> • lambing ewes • sheep < CS 2.5 • sheep < 1-Y-0 	<ul style="list-style-type: none"> • sheep CS 2.5 - 3 • sheep 1 to 2-Y-0 	<ul style="list-style-type: none"> • cattle • capsuled sheep • adult dry sheep CS 3+
Lactation	Lambing to mulesing	Mulesing to weaning	Dry
Dry Pasture at Autumn Break	High (>3000)	Mod (1000 – 3000)	Negligible carryover dry feed
Hay making weather (for hay aftermaths)	Rain delays raking > 14 days	Moderate delays	Fine sunny weather
WEC epg	300 +	100 - 300	< 100
Last Drench	> 6 weeks	4- 6 weeks	< 4 weeks

Method

1. Assess the average worm risk rating of a particular mob for all the relevant risk factors using Rendell's Worm Matrix (Table 1 above)
2. Then using the mobs worm risk rating select the appropriate level of worm control for mob in table 2 opposite
3. Implement plan on time
4. Re evaluate at least annually

Conclusion

Rendell's Worm Matrix has lead to an understanding by sheep producers of the principles of worm control empowering sheep producers to implement effective and efficient worm control strategies.

Management targets set for low worm risk and minimal drenching are consistent with prograze™ targets and are achievable

Table 2 shows the worm control consequences of running the mob in the high risk column of Rendell's Worm Matrix

Table B. Rendell's sheep worm control strategies

	Mob Overall Worm Risk Rating		
	High	Medium	Low
1. 1st Summer Drench	Oct & Dec	Nov	Dec
2. Summer WEC	Jan & Feb	Feb	Feb
3. Monitoring after Autumn Break			
<i>a) Check alertness & scouring</i> Drench if observe marked deterioration	4-7 wks post break (inspect twice weekly)	6-9 wks post break (inspect weekly OK)	Not required
<i>b) WEC</i>	7 wks post drench (then every 2 wks)	9 wks post drench (then every 4 wks)	
4. Monitoring after a drench on green feed			
<i>a) Check alertness & scouring</i> Drench if observe marked deterioration	4-6 wks post drench (inspect twice weekly)	6-8 wks post drench (inspect weekly OK)	Not required
<i>b) WEC</i>	6 wks post drench (then every 2 wks)	8 wks post drench (then every 4 wks)	
5. Winter Drenching Freq	4 - 6 weeks	6 - 10 weeks	Not required
6. Lambs first drench Weeks after start of lambing	8-11 wks	11- 14 wks	15 + wks
7. Ewes Prelambing Lamb marking	Drench Drench	WEC WEC	Not required

medium or low risk sheep on proposed weaning paddocks /lambing paddocks require more frequent monitoring to ensure not contaminating paddock

Acknowledgments

Peter Schroeder(Hamilton))
Meat and Livestock Australia
Dr Andrew Thompson DNRE (Vic)