

Crops(s) **Pasture/Winter crops**

Pest (s) **Redlegged earth mite (RLEM) (*Halotydeus destructor*)**

Guidelines:

1. **Rotate** insecticide Groups.
2. **Do not** apply consecutive sprays of products from any one insecticide Group.

Crop stage	Group*	Chemical sub-group	Example chemical
Seed treatment (or in-furrow)	4A	neonicotinoids or organophosphates or phenylpyrazoles	imidacloprid chlorpyrifos fipronil
	1B		
	2B		
Bare Earth (Pre-emergent)	1B	organophosphates or synthetic pyrethroids	omethoate bifenthrin
	3A		
Early Season (Autumn when limited green growth)	1B	organophosphates or synthetic pyrethroids or mitochondrial ATP synthase inhibitors	chlorpyrifos alpha-cypermethrin diafenthiuron (Canola only)
	3A		
	12A		
Spring	1B	organophosphates or synthetic pyrethroids diafenthiuron	omethoate gamma-cyhalothrin diafenthiuron
	3A		
	12A		

*Refer: CropLife Australia Expert Committee on Insecticide Resistance Mode of Action Classification for Insecticides

3. If both autumn and spring applications are needed, alternate chemical groups.
4. Timing of sprays:
 - a. Monitor RLEM activity carefully and only treat if damage has reached threshold levels. Hatch timing tool can be used to determine season risk.¹
 - b. One well timed spray in Autumn or Spring will maximise effectiveness of treatment. Optimal timing of Spring sprays can be calculated using the TIMERITE tool.²
5. Placement of sprays:
 - a. Apply perimeter sprays where infestations are concentrated on the edge of the fields.

Please note:

This strategy is a guide only and does not endorse particular products, groups of products or cultural methods in terms of their performance. Always follow the product label for specific use instructions. While all effort has been made with the information supplied in this document, no responsibility, actual or implied, is taken for the day to day accuracy of product or active constituent specific information. Readers should check with the Australian Pesticides and Veterinary Medicines Authority's product database for contemporary information on products and actives. The database can be sourced through www.apvma.gov.au. The information given in this strategy is provided in good faith and without any liability for loss or damage suffered as a result of its application and use. Advice given in this strategy is valid as at 14 July 2023. All previous versions of this strategy are now invalid.

-
- b. Use blanket sprays where appropriate. However, with pyrethroid products, recent research has shown that the risk of pyrethroid resistance can be minimised through the application of foliar pyrethroids in a 50 m strip with 10 m spacing.³
6. Cultural practices:
- a. Heavy grazing or cutting for hay or cultivation will reduce mite numbers.
 - b. Control alternative hosts such as Capeweed and Paterson's curse.
 - c. Develop damage thresholds.
 - d. Rotate crop and pastures that are more tolerant to the pest.
 - e. Encourage predator survival by judicious use of insecticides.

For more detail on resistance management for RLEM in grain crops and pastures, refer to: and <http://ipmguidelinesforgrains.com.au/ipm-information/resistance-management-strategies/> and https://grdc.com.au/resources-and-publications/all-publications/publications/2020/redlegged-earth-mite-best-management-practice-guide-southern/RedleggedEarthMite_210X148_10.pdf

Notes regarding the application of insecticides:

1. To ensure the most effective control of the pest:
 - a. Product labels should at all times be carefully read and adhered to;
 - b. Full recommended rates of registered insecticides should always be used; and
 - c. Ensure good coverage of the target area to maximise contact.

References

- ¹ Hatch timing tool developed by Cesar to aid with early season monitoring and predict RLEM risk at crop establishment <https://cesaraustralia.com/pestfacts/new-redlegged-earth-mite-hatch-timing-tool/>
- ² TIMERITE tool [TimeRite \(wool.com\)](https://www.wool.com/time-rite/)
- ³ [Strip spraying delays pyrethroid resistance in the redlegged earth mite, Halotydeus destructor: a novel refuge strategy - Maino - 2021 - Pest Management Science - Wiley Online Library](#)

Please note:

This strategy is a guide only and does not endorse particular products, groups of products or cultural methods in terms of their performance. Always follow the product label for specific use instructions. While all effort has been made with the information supplied in this document, no responsibility, actual or implied, is taken for the day to day accuracy of product or active constituent specific information. Readers should check with the Australian Pesticides and Veterinary Medicines Authority's product database for contemporary information on products and actives. The database can be sourced through www.apvma.gov.au. The information given in this strategy is provided in good faith and without any liability for loss or damage suffered as a result of its application and use. Advice given in this strategy is valid as at 14 July 2023. All previous versions of this strategy are now invalid.

