

Trojan® Insecticide for Russian Wheat Aphid Control in Cereals

Trojan® Insecticide, formulated with gamma-cyhalothrin, now offers cereal growers a potent tool in combating this destructive pest. Russian Wheat Aphid (RWA), *Diuraphis noxia*, threatens cereal crop yields Australia wide, notably Western Australia, South Australia, Victoria, New South Wales, and Tasmania.

Trojan® Insecticide is the most potent synthetic pyrethroid insecticide available. Highly effective against a wide range of pests. Now registered to control Russian Wheat Aphid.

Trojan® Insecticide offers both fast knockdown and extended control of insect pests. Control occurs primarily through direct contact of the insect pests with collapsing microcapsules. Larger capsules remain intact, gradually releasing the gamma-cyhalothrin over time giving long-lasting control.

Formulated to give MORE, from LESS, for LONGER.

- Ultra-low dose rate – 5 Litres of Trojan® treats up to 143 hectares of crop.
- Smaller pack size reduces the need for large, heavy bottles to be handled.
- Consistent high performance, offering excellent rain-fastness and temperature tolerance.
- Significant residual activity offered.

Formulated for Safety

Trojan® is the only Schedule 5 (Caution signal heading) synthetic pyrethroid registered in Australia for use in broadacre cropping. It also has a significantly reduced risk of paresthesia (skin and face burn or irritation).

Characteristics and Lifecycle:

Invasive populations of Russian Wheat Aphid reproduce primarily through asexual reproduction, with females giving birth to live female offspring. This reproductive capability results in the rapid population growth potential of RWA from early tillering through to stem elongation.



RWA Identification

Their general small size up to 2mm, green (wingless), dusky abdomen (winged) colour, elongate shape, very short antennae (wingless) and apparent lack of siphuncles are characteristics that readily distinguish RWA from other aphids found in Australian cereal crops.

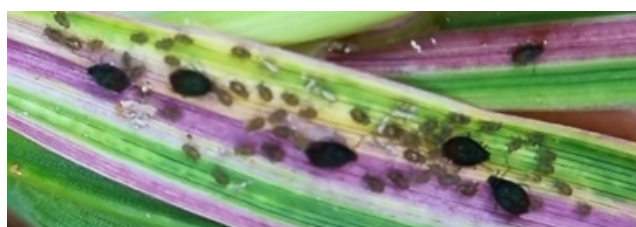
Scouting

RWA infestations typically start from crop edges on windward side, neighboring crops, or areas of sparse planting.

Symptoms of RWA feeding:

- White or purple chlorotic streaks on the leaf blade,
- Stunted growth, and
- Rolling of the leaf sheath

These symptoms can be mis-diagnosed as nutrient deficiencies or herbicide damage. Monitoring for RWA infestations is crucial.



Finding RWA in your crop:

- Look at the base and sheath of younger leaves.
- Within leaves curled lengthwise.
- On the newest leaves of plants and are often found on the last two leaves unfurled.
- At high densities they can be found on any foliar parts.

Scout crops regularly following seedling emergence. In wheat and barley, damaged leaf tissue does not recover. If aphids are controlled, new growth typically proceeds normally.

IPM and Beneficial Insects:

Recent studies performed by CESAR Australia and the University of Melbourne have shown Trojan® Insecticide to be an important synthetic pyrethroid (Group 3A), demonstrating moderate mortality effects on some beneficial insects. Notably, hoverflies, parasitoid wasps, and spiders exhibited lower susceptibility compared to other insecticides in the same group, such as lambda-cyhalothrin, alpha-cypermethrin, and bifenthrin, which displayed higher mortality effects.

IPM profile of Trojan® Insecticide vs. Other Synthetic Pyrethroid chemicals:

Active Ingredient	Mode of Action	Rate (g ai/ha)	Ladybird Beetles	Rove Beetles	Hoverflies	Aphid Patasitoids	Lepidopteran larval Parasitoids	Egg Parasitoids	Predatory Bugs	Lacewings	Predatory Mites	Spiders
Gamma-Cyhalothrin	3A	4.5*	VH	L	L	L-M	VH	VH	VH	VH	L-VH	L
Synthetic Pyrethroid (excl. Gamma-Cyhalothrin)	3A	Variable	H-VH	M	H	L-VH	VH	VH	H-VH	VH	L-VH	VH



Mortality									
L	<30%	M	30-79%	H	80-99%	VH	>99%	-	Data not yet available

* RWA g ai/ha rate is 5.25.

This work represents a collaboration between CESAR Australia, and the University of Melbourne, with investment from the Grains Research and Development Corporation as part of the Australian Grains Pest Innovation Program, CESAR 2023.

When applying Trojan® insecticide, always follow label instructions:

PEST	STATE	RATE mL/ha	WHP days	CRITICAL COMMENTS
Russian Wheat Aphid (<i>Diuraphis noxia</i>)	NSW, ACT, VIC, TAS, SA, WA only	35	14 H, G	<p>Initiate application when the spray threshold is reached (found at www.grdc.com.au). Thorough spray coverage is essential by matching appropriate spray volumes to crop size and a medium spray quality to treat all parts of the crop canopy, including the undersides and in between leaves where possible.</p> <p>Aphids present in tightly rolled leaves may not be completely controlled.</p>

ALWAYS READ THE LABEL. FOR FURTHER INFORMATION CONTACT YOUR LOCAL FMC REPRESENTATIVE.

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