

AFFIRM[®] insecticide in canola



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Diamondback Moth (*Plutella xylostella*) is a major insect pest of brassicas crops worldwide, including canola, which has the ability to rapidly defoliate plants and thus reduce yields.

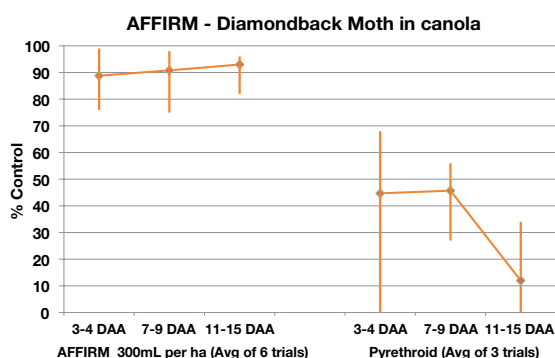
How does AFFIRM work?

AFFIRM's high activity on Diamondback Moth and relatively low ecological impact make it the ideal solution for growers who want to maximise the result and minimise any effect on beneficial species.

Emamectin, the active ingredient of AFFIRM, comes from a novel type of chemistry naturally derived from a soil bacteria. Its mode of action results in paralysis of the larvae after intake of the product.

AFFIRM is rapidly absorbed into green foliage, building a reservoir of active ingredient within the leaf. This reservoir provides:

- Residual control
- Rainfastness 2 hours after application
- Rapid photo-degradation of remaining residues on the leaf surface limits impact on beneficial species.



Mode of action

Field populations of Diamondback Moth have developed resistance to some insecticide groups in Australia in recent years, including pyrethroids.

AFFIRM is from the Group 6 or "mectin" group of insecticides. The mode of action of AFFIRM is via activation of the chloride channel within the nervous system. This mode of action is different to organophosphates (Group 1A) and pyrethroids (Group 3A).

It is important to note that some naturally occurring insect biotypes resistant to AFFIRM and other Group 6 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if AFFIRM and other group 6 insecticides are used repeatedly.

Canola application rates

(refer to product label for all directions of use)

Pest	Use Rate
Diamondback Moth (<i>Plutella xylostella</i>)	150 to 300mL/ha Add a non-ionic surfactant at recommended label rate. Maximum of 2 applications per season.

Application

AFFIRM requires thorough spray coverage to be effective. Ensure spray volumes are at least 100L/ha for ground application and 20L/ha for aerial application. DO NOT apply as a ULV application for aerial application.

DO NOT enter treated crops until the spray deposit has dried.

Compatibility

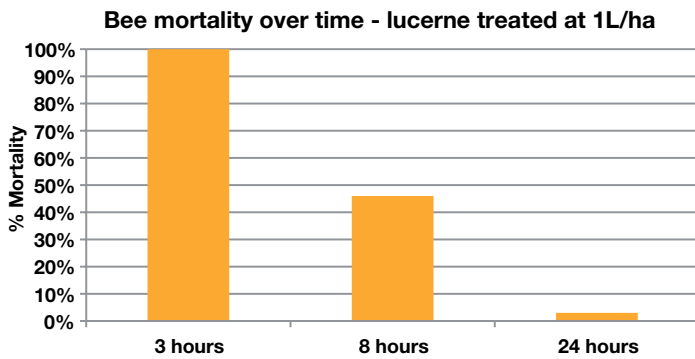
AFFIRM is compatible with PIRIMOR[®] and KARATE ZEON[®] where broader spectrum insect control is required.



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Beneficial insects

AFFIRM is highly damaging to bees that come into direct contact with the spray however it has minimal impact when bees land on treated surfaces 24 hours later. Avoid spraying when bees are actively foraging. If crops have commenced flowering, make applications just after dusk when bees have returned to the hive.



Impact on beneficial species

Beneficial species	Pest species controlled	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
<i>Aphidoletes aphidimyza</i>	Aphids	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Spiders	Heliothis	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Apple Dimpling Bug	Mites	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Ladybird	General predator	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
<i>Cotesia spp.</i>	Diamondback Moth	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
<i>Diadegma insularis</i>	Diamondback Moth	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
<i>Diglyphus begini</i>	Heliothis	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Red and Blue Beetle	Heliothis	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Ants	Heliothis	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Predatory bugs	General predator	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
<i>Microhymenoptera</i> wasps	Heliothis	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Lacewings	Aphids	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Rove Beetles	Caterpillars, slugs	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Spined Soldier Bug	Caterpillars	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
Cabbage White Parasite	Cabbage White Butterfly	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption
<i>Trichogramma spp.</i>	Heliothis	Very low (<10%) disruption	Low (10-20%) disruption	Moderate (20-40%) disruption	High to v. high (>40%) disruption



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