



Entrust[®] Organic

INSECTICIDE

A sustainable farm for a sustainable future

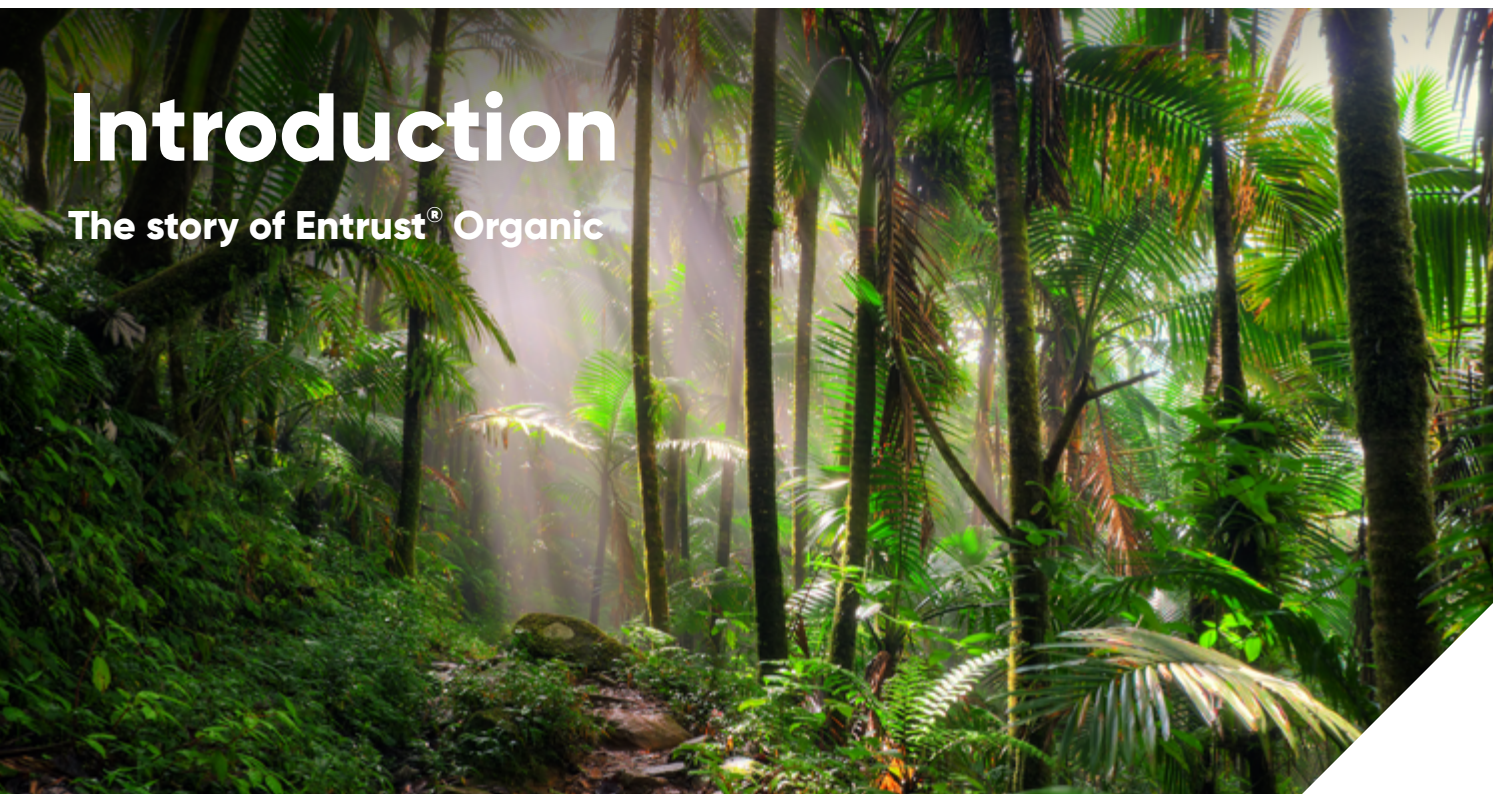


**Restore balance to
your crop protection
program**

Entrust[®] Organic works alongside conventional technologies, delivering proven efficacy and sustainable productivity for your business.

Introduction

The story of Entrust® Organic



In the summer of 1982, a research scientist took a well-earned holiday in the sunny Caribbean. While touring the local sights with his wife, he visited an abandoned rum distillery on a tiny tropical island.

Quietly wandering through the old buildings, he was struck by the ghostly, eerie silence. In a climate where the incessant buzz of insect life droned 24 hours a day, the sudden quiet was deafening.

Intrigued, he took some soil samples and transported them back to the United States for testing. What he and his team discovered was a unique soil bacterium that produces active metabolites (spinosyns) that gave excellent control of certain insect pests.

Years of development and exhaustive testing followed, culminating in the release of Entrust Organic, a product characterised by its efficacy equivalent to synthetic insecticides, but with the safety and environmental profile of a biological.

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Product overview

Entrust[®] Organic

INSECTICIDE

Entrust Organic Insecticide uniquely combines the efficacy of synthetic insecticides with the benefits of biological insect pest control for use in both organic and conventional farming.



Derived from nature








IPM compatible



Highly active at low rates



Fast acting

-  240 g/L spinosad as a suspension concentrate (SC) formulation
-  Contact or ingestion – 2 modes of entry for increased control
-  Patent-protected organic formulation
-  Group 5 insecticide; spinosyns
-  Pack size: 1 L

Target pests

Highly effective on:

- Caterpillar pests including heliothis, tuber moth, leaf roller, diamond back moth, cluster caterpillar and looper
- Thrips, including western flower thrips
- Cherry slug and leaf miner

Key features & benefits

- Excellent safety and environmental profiles
- Organic certification
- Fast acting – pests stop feeding almost immediately after exposure
- Effectively controls eggs and all larval growth stages of caterpillars. For best results target neonates and early instar larvae
- Contact and ingestion – two modes of entry for increased control
- Translaminar activity – moves through the leaf surface to control leaf miners and prevent wash-off

How to use

- Apply as a foliar spray
- Always refer to the label for application directions
- Use as part of an integrated approach to pest management (IPM). Biological and cultural controls can aid in maintaining pest numbers below economic thresholds
- Ensure optimum coverage for best results
- Maximum 4 applications per season in most crops
- A maximum 3 consecutive sprays can be applied for western flower thrips
- Do **not** spray when bees or wasps are actively foraging. Time applications for when these pollinators are not foraging (e.g. early in the morning or after dusk)
- When used as part of an insect resistance management strategy, reference the permissible application timing and frequency of the strategy

Scan the QR code to access the full product label



Safety profile

Entrust Organic has an excellent user and environmental profile.

User safety

Toxicological profile is very favourable – classified as reduced risk by the U.S. EPA

- Low mammalian toxicity:
 - low oral, dermal and inhalation toxicity
 - very slight eye irritant
 - not a skin sensitizer
 - non-carcinogenic, non-mutagenic, non-teratogenic
 - no effect on mammalian nervous system
- Does not accumulate in body or food chain
- Spinosyns have a wide margin of safety for farm workers and they may re-enter treated crops once the spray is dry

PPE advice for spraying



Use eye protection, gloves and a long-sleeve shirt.

Environmental safety

Entrust Organic's environmental profile is very favourable – spinosyns are non-persistent and are immobile in the soil.

- Major breakdown by UV light on plant and soil surface
- Microbial breakdown in soil – half-life is 9-17 days
- Broken down to CO₂ and water
- Binds to soil – will not leach
- Non-volatile
- Safe to earth worms



Ladybird

Ladybird larvae

Lace-wing nymph

Lace-wing adult

Spider

Safety to beneficial species

Spinosyns have low impact on predatory arthropods including ladybird beetles, lacewings, big-eyed bugs, pirate bugs, damsel bugs, apple dimpling bugs, and spiders.

These beneficial arthropods can aid in the extended natural control of insect pests and reduce the likelihood of secondary pest outbreaks.

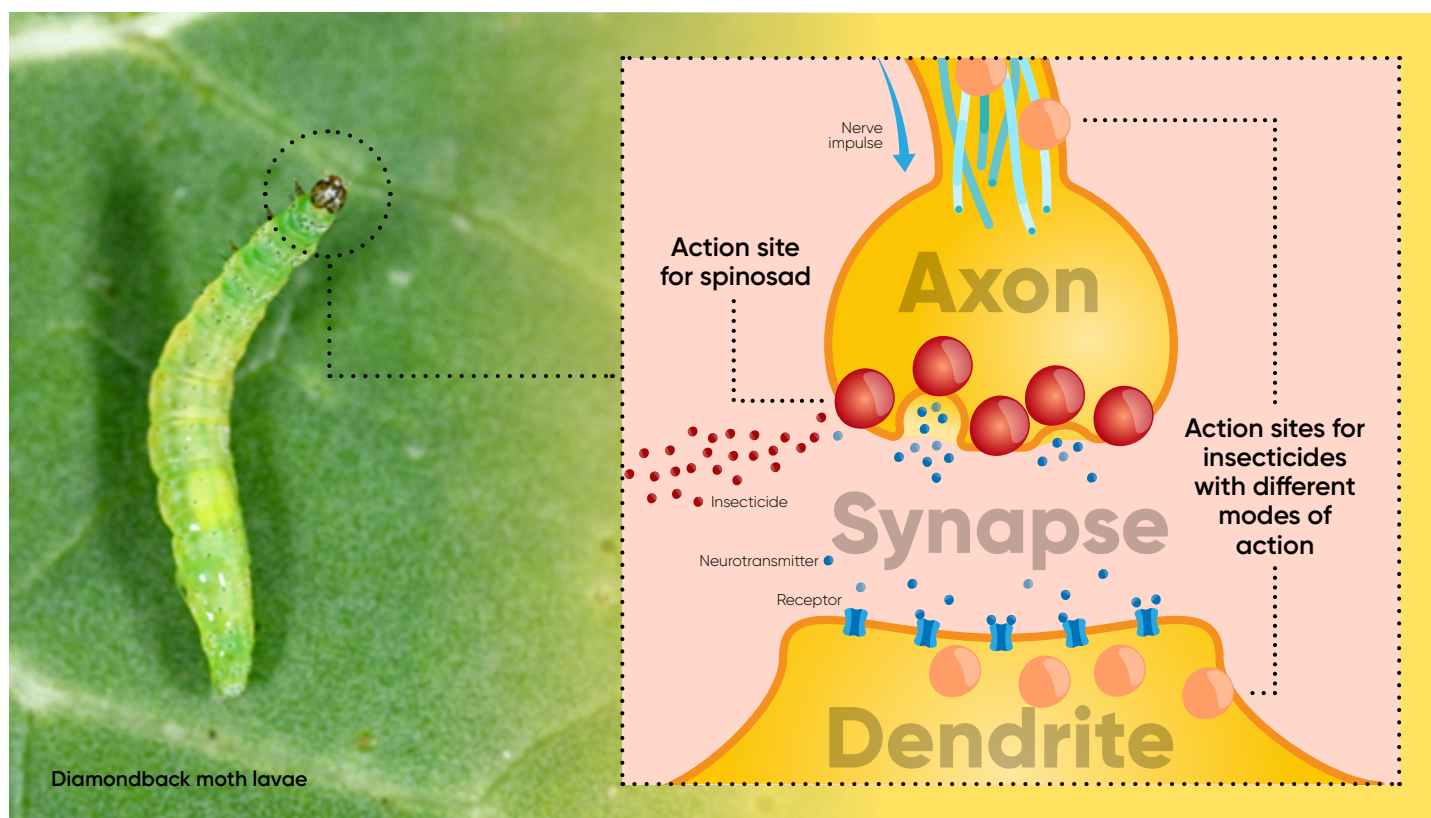
Spinosyns are toxic when sprayed directly onto parasitoid wasps and honeybees, but once this spray has dried, residues on treated surfaces have negligible effect.

How Entrust Organic works

The Mode of Action of Entrust Organic is distinct from all other organic insect pest control products.

Because of the unique Mode of Action (MoA), Entrust Organic can be successfully integrated into an insecticide resistance management strategy (IRMS) and rotated with other insecticide MoA.

Mode of Action



Diamondback moth larvae

Entrust Organic contains **spinosad** to attack the insect's nervous system.

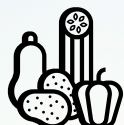
Under normal conditions, nerve impulses reach the synapse and release neurotransmitters which travel across the synapse triggering a new impulse in the dendrite.

Spinosad disrupts the insect's normal neural activity by binding to the axon terminal and over stimulating certain sites within the nervous system.

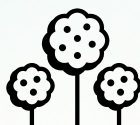
Spinosad has a **unique action site** in comparison to other organic products in the market.

Application

Use Entrust Organic to protect:



Vegetables



Tree crops



Vine crops



Timing

Carefully monitor crops for eggs and larvae of pest species by regular field scouting.

Target sprays against mature eggs and newly-hatched larvae when numbers exceed spray threshold.

Apply repeat applications at 7-14 day intervals as new infestations occur or as specified under critical comments (refer to product label).

Always refer to the product label for application directions. Scan the QR code to be directed to the label on our website.



Key considerations

- Entrust Organic has strong translaminar activity but is not systemic
- Thorough coverage of the crop is essential
- Do not apply in hot, windy conditions or prior to rain. Avoid spray drift
- Ground application apply a minimum 250 L/ha spray volume. Minimum 30 L/ha by air
- Entrust Organic can be applied as a dilute or concentrate spray to tree and vine crops
- The use of an organically certified adjuvant can improve efficacy in some crops (refer to label)
- Entrust Organic is compatible with many key fungicides and insecticides. Where the physical compatibility of two or more products are unknown, conduct a simple bucket test by mixing products and water at proportionate rates and allow to stand for 30 min. Consult Corteva Agriscience for more detail on compatibility
- Water with pH between 6-8 is optimum
- Entrust Organic does not cause phytotoxic damage to crops
- Applying Entrust Organic will not flare secondary pests such as mites

Crop registration and controlled pests

	Caterpillars	Thrips	Cherry & pear slugs
Vegetables			
Brassicas	●	●	
Cucurbits	●	●	
Culinary herbs	●		
Fruiting	●	●	
Leafy	●	●	
Legume	●	●	
Ornamentals	●	●	●
Root & tuber	●		
Stalk & stem	●		
Sweet corn	●		
Tree & vine			
Avocados	●		
Berryfruits	●	●	
Citrus fruits	●		
Grapes	●		
Pome fruits	●	●	●
Stone fruits	●	●	●
Tropical fruits	●	●	



Caterpillars:

Cabbage cluster caterpillar, cabbage white butterfly, cabbage centre grub, loopers, heliothis, diamondback moth, potato moth, leaf-rollers, grapevine moth, flower-eating caterpillars, tip-borers, oriental fruit moth and others.

Entrust will also control eggs that have been directly sprayed.



Thrips:

Western flower thrips, banana thrips, red-banded thrips.



Cherry and pear slugs

Check the label for specific crop registrations.

Withholding periods



Domestic Harvest

Withhold for:*

Citrus, sweet corn
and tropical fruit

Not required

Berries, celery, rhubarb
and tomato



1 day

Brassica veg, cucurbits,
leafy veg, legumes, root &
tuber, pomefruit, stonefruit
and culinary herbs



3 days

Peaches, coffee
and kiwifruit



7 days

Grapes



14 days (domestic)†



Grazing

Crop stubble, orchards,
plantations and vineyards



14 days

*When used according to the label. Check the label for specific crop registrations..

†AWRI export wine timing

Do not apply after
EL-31 berries pea size
(not >7mm diameter);
bunches hanging down.

Check with your
exporter for appropriate
withholding period.



Protected cropping

The use of Entrust Organic in protected cropping is permissible when used in conjunction with a proven Insect Resistance Management Strategy (IRMS).



DO NOT apply to seedlings of edible crops for transplanting. I.e. seedlings intended for food production.

DO NOT apply to vegetable or herb seedlings in a production nursery system.



Resistance management

With limited insecticide control options in organic production, Entrust Organic resistance management requirements must be strictly adhered to.

An integrated approach to pest management (IPM) will help to reduce the dependence on insecticides for pest control, thereby helping to prevent the early onset of resistance.

Label Statement

DO NOT make more than four (4) applications to any crop in any one (1) season, except where otherwise indicated in the critical comments and/or the RESISTANCE statement (refer to product label).

Do not make more than three (3) consecutive applications of Entrust Organic before switching to an approved product from another chemical group.

Consult with your local industry group to ensure that applications are aligned with localised resistance management strategies.

Western Flower Thrips Resistance Management Strategy

Make three (3) consecutive applications at either 3-5 day intervals when temperatures are greater than 20°C or at 6-12 day intervals when temperatures are less than 20°C.

For any further sprays required, use an approved product from another chemical group.



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INSECTICIDE

Entrust[®] Organic is the biological insecticide that restores balance to your crop protection program. It works alongside conventional technologies, delivering proven efficacy and real benefits for your business. With Entrust Organic, you can build sustainable productivity for this generation and secure the future of your farm for the next.

To register your interest, contact your Territory Sales Manager or visit entrust-organic.corteva.com.au



Visit us at corteva.com.au

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grower's alliance with science

We're on a mission to develop integrated pest management strategies that result in high quality, high yielding crops. We are working with growers like you to continue to innovate and meet your ever-changing needs.

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