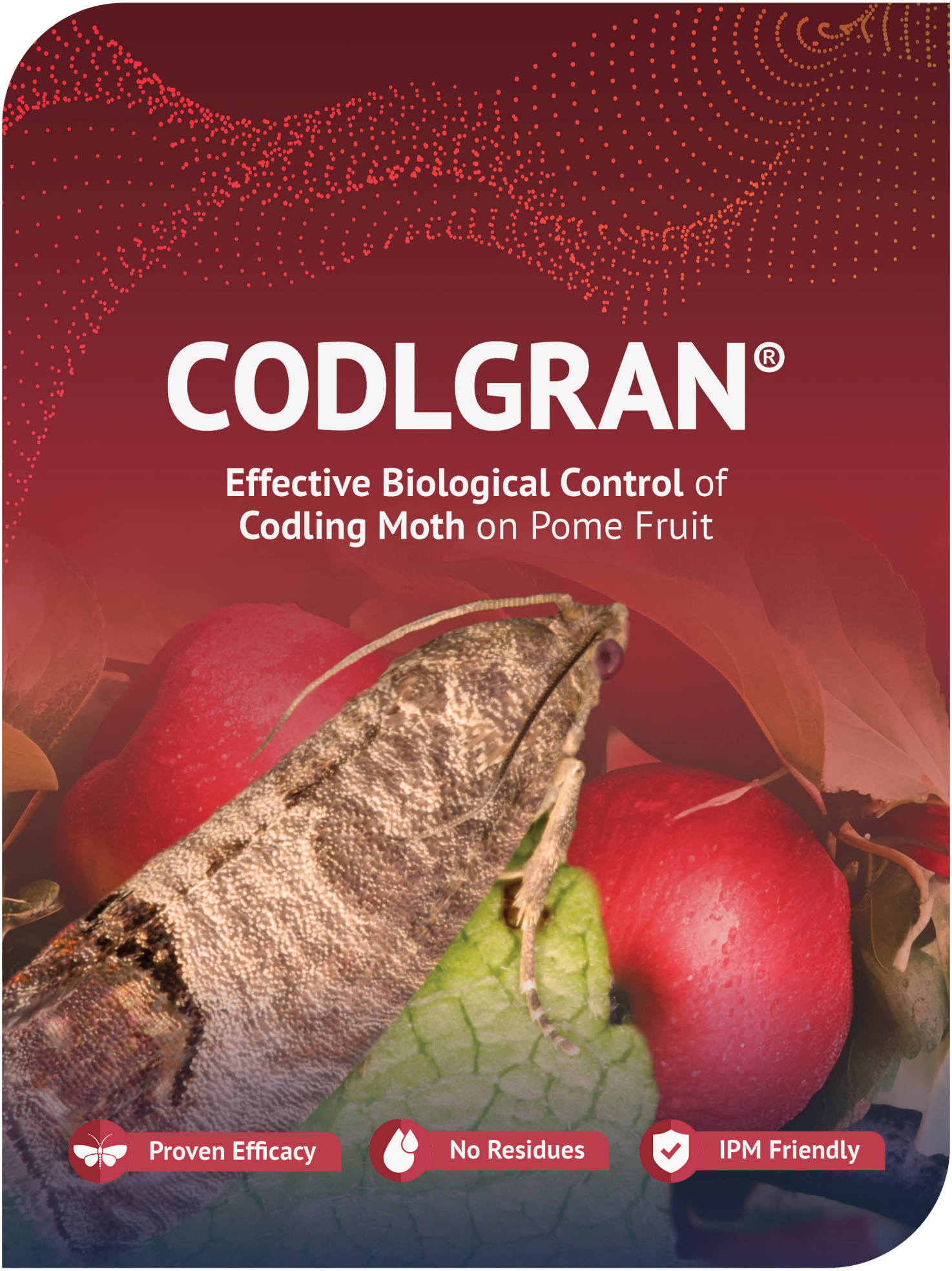
CODLGRAN®

Effective Biological Control of
Codling Moth on Pome Fruit



Proven Efficacy

No Residues

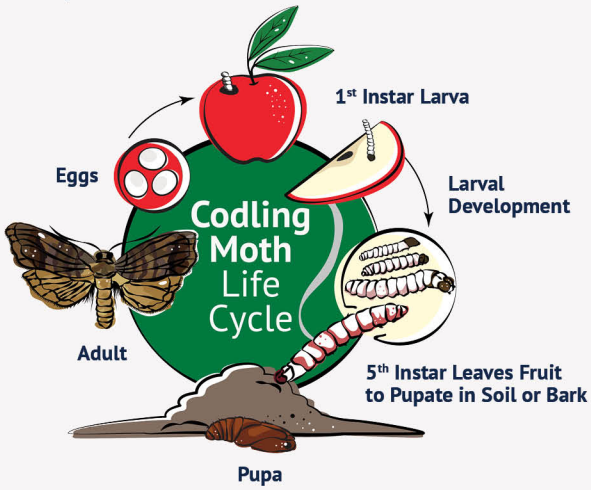
IPM Friendly

River Bioscience

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The Problem:

Cydia pomonella, also known as the codling moth, is a key pest of fruit in both local and international markets. This moth belongs to the family Tortricidae and the species is particularly well known for the damage they inflict to pome fruit, such as apples and pears. Injury to the crops is caused by larval feeding, which can render the fruit unmarketable. If left untreated, codling moth infestations can lead to significant losses in yields within the pome fruit industry.



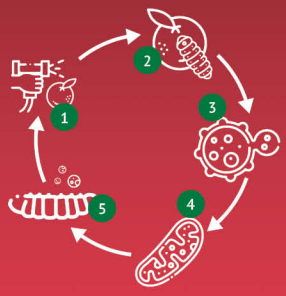
How Does Codling Moth Damage Your Crops?

- Adult moths lay eggs on fruit, which typically hatch in 5-12 days. Eggs are difficult to detect and can only be found through a thorough inspection.
- There are two types of damage caused by codling moth larvae: stings and deep entries.
- Stings are caused by newly hatched larvae, which feed on the surface of the fruit. This initial feeding results in shallow excavated areas. Stings are often caused by larvae that have fed but have subsequently died due to natural enemies or insecticidal sprays.
- Stings can be unsightly and lead to secondary infections.
- Deep entries are caused by larvae that have successfully bored into fruit. Larvae tunnel toward the core of the apple, where they feed on the pulp and seeds.
- Fruit flesh around the deep entries breaks down due to bacteria and tunnels are often plugged by excreta (frass), which can be seen exuding from the entry hole.
- In ripe fruit, penetration holes eventually become sunken and brown as damaged tissue decays. Internal injury can lead to premature ripening and fruit drop.
- Larvae often enter via the calyx in the early season. These entries are difficult to detect without cutting the fruit, making fruit sanitation challenging. Side entries in the later season are easier to identify.

The Solution: CODLGRAN®

Codlgran® is an insect pathogenic virus formulation designed to target codling moth larvae before they damage the fruit.

How Does Codlgran® Work?



1. Codlgran® is sprayed onto crops.
2. FCM larvae ingest the virus from the surface of the fruit.
3. Protective protein layer of virus is digested by high pH of midgut.
4. The virus is absorbed by microvilli. The virus replication begins in nuclei of midgut cells.
5. The virus spreads throughout larvae and secondary replication occurs.

   The larvae dies and releases virus particles into the surrounding environment causing secondary infection.

Codlgran® Benefits:

IPM Friendly

Codlgran® is highly IPM compatible. This means that it does not contribute to secondary pest outbreaks and can be used safely in a programme with augmented beneficial insect releases.

Environmentally Friendly

No impact on beneficial insects and other life forms.

No Phytotoxicity

In all field trials, no phytotoxicity was observed for any rates of Codlgran®.

MRL Management

Codlgran® can be used up to harvest for control of codling moth larvae as there are no residues.

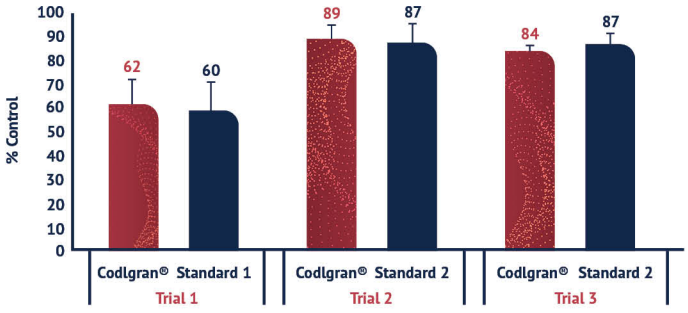
Effective

Scientific trials and performance data have demonstrated that Codlgran® is as effective as conventional treatments.



Codlgran® Efficacy & Trial Data:

Cumulative damage reduction was observed across multiple applications, with control measured up to 42 days after the final treatment. Codlgran® was comparable to other industry standards.



Trial 1 faced high levels of infestation, highlighting the importance of incorporating Codlgran® into an integrated pest management program for high-pressure scenarios.

The above treatment results are based on our label rate of 100ml/ha.

River Bioscience

Scan for more info

Codlgran® - Reg. No. L11508 Act No. 36 of 1947
NOT CLASSIFIED AS HAZARDOUS UNDER GHS | Active Ingredient: *Cydia pomonella* granulovirus Mexican isolate (CpGV-Mex) at least 3 x 10^{10} occlusion bodies (OBs)/ml
READ THE LABEL BEFORE USE | Use only as directed
Registration Holder: River Bioscience (Pty) Ltd. | admin@riverbio.com | +27 41 373 1409 | www.riverbioscience.co.za | 5th Floor, Fairview House, 66 Ring Road Greenacres, PE, 6045