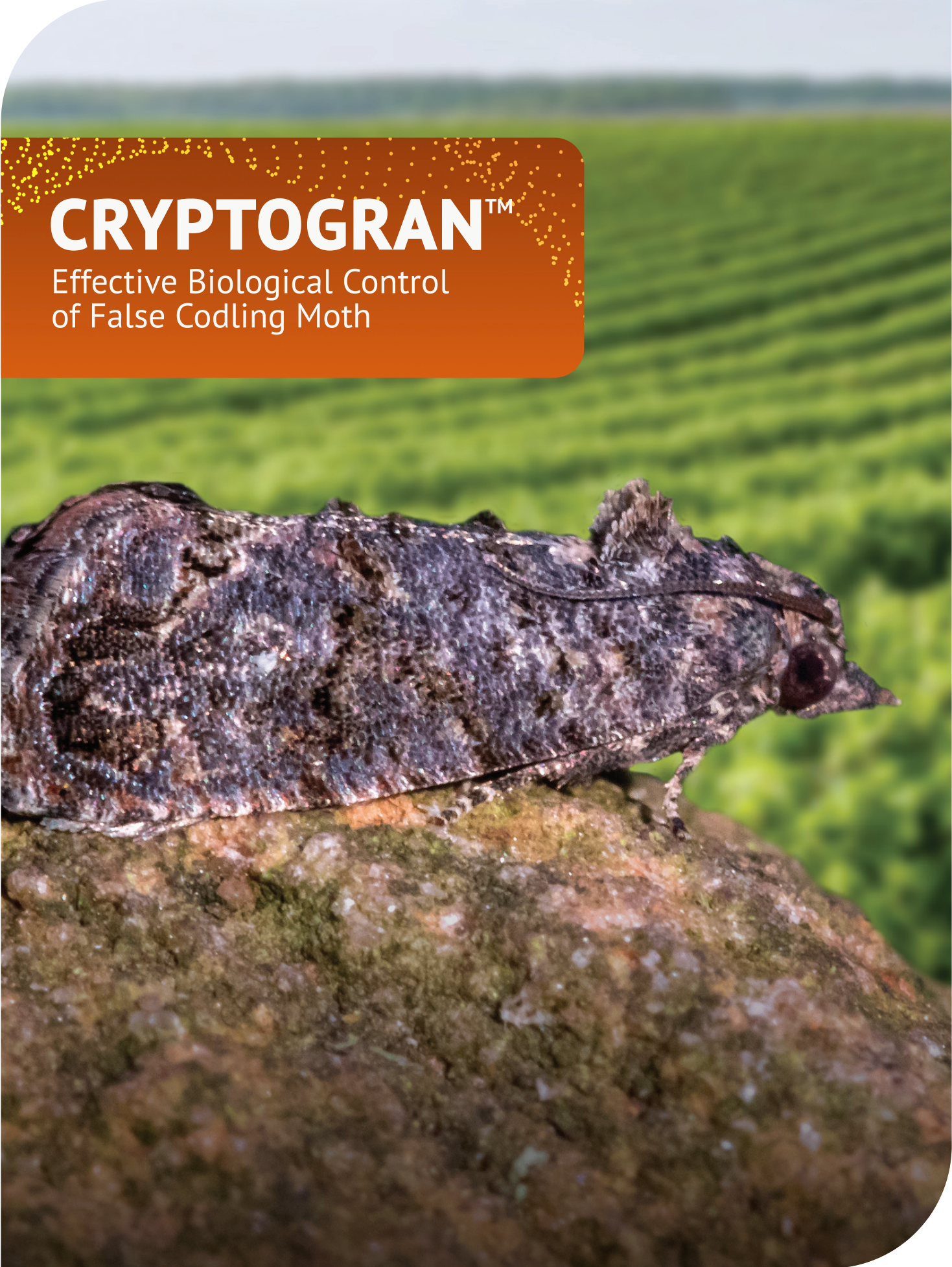


A close-up photograph of a False Codling Moth (Cryptoblabes gnathellus) resting on a mossy rock. The moth has a dark, mottled pattern on its wings and a prominent, spiky structure on its head. The background is a blurred green field.

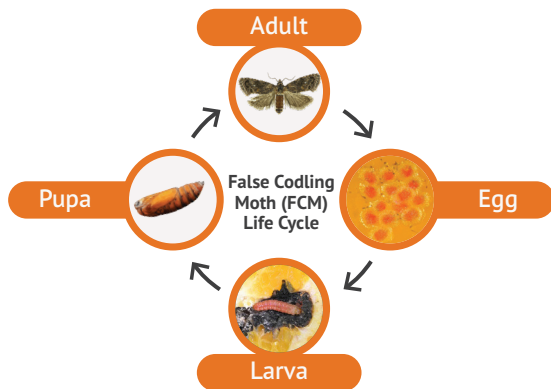
CRYPTOGRAN™

Effective Biological Control
of False Codling Moth



The Problem:

False codling moth (FCM) is a pest species well-known to both local and international fruit producers for the damage they inflict on fruit, which can cause significant loss to crop yields and the producer's return on investment. Phytosanitary implications can have an effect on exporting fruit in certain markets.



How Does FCM Damage Your Crops?

- Newly hatched larvae penetrate the fruit.
- Larval penetration holes in fruit can only be found with the aid of thorough inspection.
- On ripe fruit, penetration holes eventually become sunken and brown as damaged tissue decays.
- An infested fruit usually falls from the tree three to five weeks after penetration by a larvae.
- In the packhouse, it is difficult to identify fruit that becomes infested shortly before harvest - leading to post-harvest decay and potential phytosanitary interceptions in receiving markets.

The Solution: Cryptogran™

Cryptogran™ is a virus based biopesticide developed by River Bioscience to target and kill FCM.

The virus particles are ingested by newly hatched FCM larvae on the surface of the fruit, before fruit penetration occurs. Larvae ingest the virus while feeding on the surface of the fruit and death occurs shortly after.

How Does Cryptogran™ Work?



1. Cryptogran™ 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.

Cryptogran™ Benefits:



Efficacy

Scientific trials and performance data has shown that Cryptogran™ is as effective as chemical applications, and often more effective than other biopesticides.



Curative on FMS

Cryptogran™ is recognised by Phytclean as a corrective control measure for FCM within the FMS, unlike most other biological products.



Early Application

Results of the studies showed that an additional early spray of Cryptogran™ at the first flight peak significantly reduced the cumulative fruit drop compared to applications in November and February only.



Competitive Pricing & High A.I./OB's

Cryptogran™ & CryptoMax™ have the highest active ingredient loading on the market for FCM control, making it the best value for money.



IPM Friendly

Cryptogran™ has an IPM rating of one - 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.



Longevity

Up to 4-12 weeks after Cryptogran™ application, mortality can still be measured.



MRL Management

No chemical residues or MRLs.

Cryptogran™ Efficacy & Trial Data:

River Bioscience (Pty) Ltd has developed an extensive data set from numerous field trials conducted across various regions, that prove the efficacy of Cryptogran™. Third party studies conducted by universities, public research institutes and professional researchers amounted to well over 50 distinct field trials on a wide range of crops including citrus, table grapes, avocados, macadamias, litchis and persimmons.

Examples of Cryptogran™ Use During Trials on Various Crops:

Target: False Codling Moth (FCM) *Thaumotobia leucotreta*

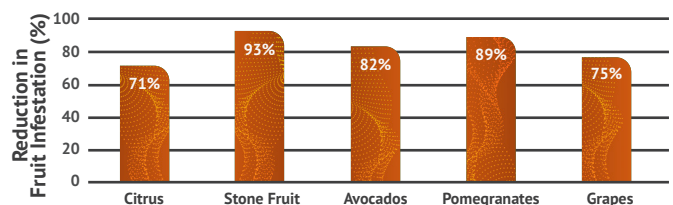
Crops/Rates per 100L Water:

- Citrus	10ml
- Stone Fruit	5ml
- Avocados	10ml
- Pomegranates	10ml
- Grapes	5ml

16 Trials Conducted **5** Types of Crops **9** Seasons

* Refer to product label for crop specific instructions/guidance.

Efficacy data represented as a % reduction in infestation (per crop group)



Crop Types Treated with Cryptogran™

Results show that Cryptogran™ usage reduces FCM infestation by greater than 70% for 4 – 12 weeks after application.



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Scan for more
info & FAQs



CRYPTOGRAN™ L7598
River Bioscience (Pty) Ltd.

Active Ingredient:
Cryptophlebia leucotreta
granulovirus (CrleGV-SA)

At least 5 x 10¹⁰ occlusion bodies (OBs)/ml