

eco-oil[®]

ORGANIC MITICIDE / INSECTICIDE



**HIPPO
ENHANCED**

ATTRACTS BENEFICIAL INSECTS INTO YOUR CROP

NEW eco-oil HIPPO ENHANCED is a non-toxic botanical oil based miticide/insecticide that controls Two-spotted mite, Aphids, Whitefly, Citrus leafminer and Scale in crops without leaving any potentially harmful residues. eco-oil HIPPO ENHANCED combines the insecticidal properties of natural oils, and unique plant extracts called HIPPOs that attract beneficial insects into your crop.



eco-oil HIPPO ENHANCED HAS FOUR MODES OF ACTION

1

eco-oil HIPPO ENHANCED penetrates the skin and breathing parts of insects reducing their ability to expel carbon dioxide resulting in carbon dioxide poisoning.

2

The thin protective skin of insects and their eggs are removed by eco-oil HIPPO ENHANCED which causes death by dehydration

3

The HIPPO enhancement actively attracts beneficial predators and parasitoids into the crop ensuring more effective biological control.

4

When dry on leaf surfaces eco-oil HIPPO ENHANCED residues act as a mild insect repellent reducing the chance of egg laying and forms a sticky trap for very small juvenile pests.

THE BENEFITS OF USING eco-oil HIPPO ENHANCED

- Due to eco-oil HIPPO ENHANCED's physical mode of action there is no potential for spray resistance from overuse. Hence it will help growers control resistance sensitive pests like mites, aphids and whitefly year after year.
- eco-oil HIPPO ENHANCED will attract beneficial insects into treated crops which enhances biological control.
- eco-oil HIPPO ENHANCED is botanical-oil based and therefore has a lower potential to burn plants compared with mineral oils.
- eco-oil HIPPO ENHANCED carries no withholding periods, or re-entry restrictions.
- eco-oil HIPPO ENHANCED can be used within IPM systems in a preventative manner.
- eco-oil HIPPO ENHANCED is BioGro NZ Certified.

eco-oil HIPPO ENHANCED COMPATIBILITY WITH IPM

eco-oil HIPPO ENHANCED will attract beneficial insects into crops and is also safe to use within already established populations of beneficials, making it an ideal IPM tool. A residual toxicity study with eco-oil HIPPO ENHANCED demonstrated that it had very little effect on the survival rates of adult Whitefly parasitoids *Encarsia formosa*. Trials on other species of commercial beneficial insects like predatory mites *Phytoseiulus persimilis*, *Amblyseius vitoriensis*, *Neoseiulus cucumeris* and predatory bugs like *Orius armatus* have also demonstrated excellent compatibility of eco-oil HIPPO ENHANCED with these commercial species. Since there is little effect on beneficial insects, eco-oil HIPPO ENHANCED makes an attractive alternative in IPM systems where the variety of miticides/insecticides that can be used is very limited.

HOW EFFECTIVE IS **eco-oil** HIPPO ENHANCED AGAINST PESTS?

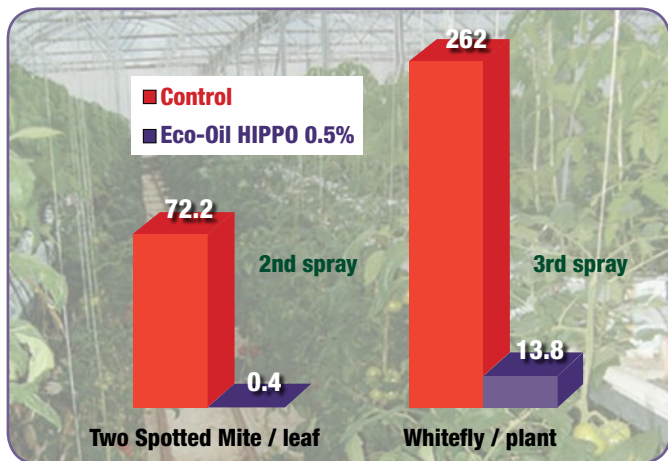


Figure 1: National Centre for Greenhouse Horticulture, Gosford

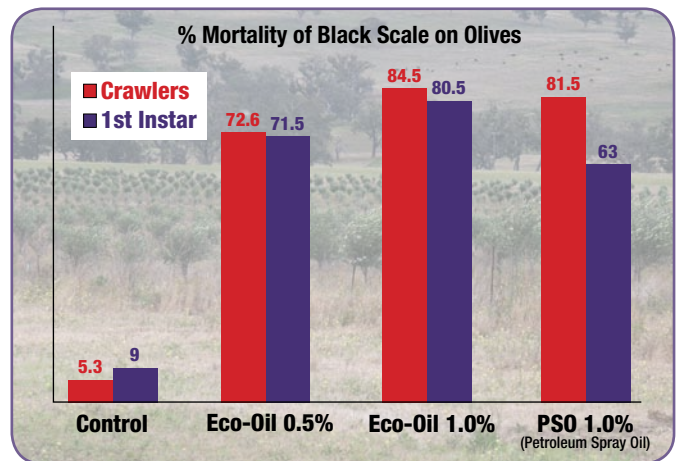


Figure 2: University of Western Sydney, Hawkesbury, 2003

HOW EFFECTIVE IS **eco-oil** HIPPO ENHANCED AT ATTRACTING GOOD BUGS?

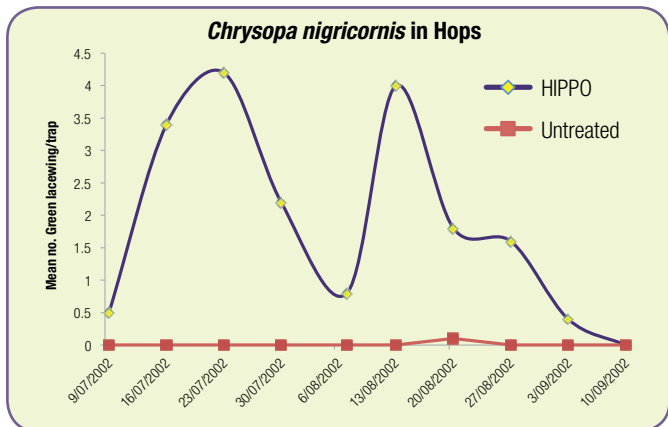


Figure 3: Green lacewing (*Chrysopa nigricornis*) attraction in Hops treated with HIPPO (Dr. David James, Department of Entomology, Washington State University, Irrigated Agriculture Research and Extension Center, 2002)*

* Full reports are available on request

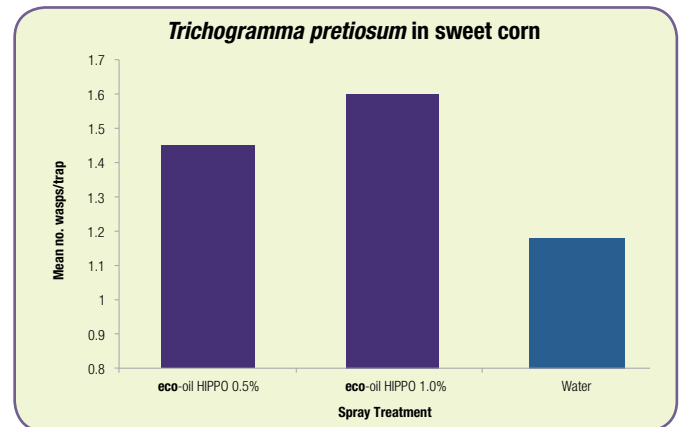


Figure 4: Attraction of parasitoid wasps into Sweet corn sprayed with Eco-oil HIPPO ENHANCED (Dr. Marja Simpson, Charles Sturt University, 2008)*

HOW TO APPLY **eco-oil** HIPPO ENHANCED

CROPS	PESTS	RATE	CRITICAL COMMENTS
Tree, Vine and Vegetable crops, Home garden and commercial ornamental & floriculture crops and protected cropping including Shadehouse, Glasshouse & Polyhouses	Two-spotted mite (<i>T. urticae</i>), Green peach aphids, Greenhouse whitefly and various Scale pests	Use 5 – 10 ml / L OR 75 - 150 mL/15 L (knapsack) OR 500 ml – 1 litre/100 L Use the higher rate for scale pests	Regularly monitor plants for pest infestation and apply spray when they first appear. Apply two sprays 3-5 days apart. Use the higher rate when numbers are high. Repeat applications at signs of reinfestation but not within 7 days of last spray. Spray both upper and underside of leaves to run-off. A minimum spray volume of 1000L/ha is recommended.

Compatibility: eco-oil HIPPO ENHANCED is compatible with most commonly used agricultural and horticultural products except: DELAN™, BORDEAUX or Captan. DO NOT APPLY eco-oil HIPPO ENHANCED within 10 days of a EUPAREN™ application.



Distributor:



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