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 Registered organic with AUSTRALIAN ORGANIC Cert no. AI222.

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 vitrii, 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?**

**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.

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

**Figure 3:** Green lacing (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**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Pests</th>
<th>Rate</th>
<th>Critical Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ornamental, floriculture crops, vegetables and Rubus spp.</td>
<td>Two-spotted mite (T. urticae) Aphids</td>
<td>375-500 mL of product to 100 L of water or 5 mL of product to 1L of water</td>
<td>Regularly monitor plants for two-spotted mite and aphids 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 re-infestation but not within 7 days of last spray. Spray both upper and underside of leaves to run-off. DO NOT apply more than three sprays to a crop within a 4-8 week period.</td>
</tr>
<tr>
<td>Nursery and greenhouse grown tomato, cut flower and ornamental crops</td>
<td>Greenhouse Whitefly &amp; Silverleaf Whitefly (Trialeurodes vaporariorum)</td>
<td>500 mL of product to 100 L of water or 50 - 75 mL of product to a 15 L knapsack</td>
<td>Apply spray when pest first appears in the crop. Apply two sprays 3-5 days apart. Repeat applications at signs of re-infestation but not within 7 days of last spray. Complete coverage of the target pest is necessary. Spray both upper and underside of leaves to run-off. DO NOT apply more than three sprays to a crop within a 4-8 week period.</td>
</tr>
<tr>
<td>Olive trees</td>
<td>Black scale</td>
<td>1L of product to 100L of water</td>
<td>Apply at early signs of Scale. Apply two sprays at 7 day intervals. Repeat applications at signs of re-infestation. Spray upper and underside of leaves and branches to run-off.</td>
</tr>
<tr>
<td>Citrus</td>
<td>Citrus leafminer</td>
<td>1L of product to 100L of water</td>
<td>Begin applying when the new flush growth is about 4 cm long. Apply every 5 to 14 days with presence of new flush growth. Ensure that the new flush leaves are sprayed both upper and underside of leaves to run-off. Do not apply any more than 8 times per season.</td>
</tr>
</tbody>
</table>

For more information contact Organic Crop Protectants on 1800 634 204
Available through LANDMARK, RURALCO, ELDERS, AgLink members and other independent outlets.
www.ocp.com.au