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Ventigra™ Insecticide

Technical Information Bulletin

Ventigra Insecticide

Ventigra™ Insecticide is a pioneering solution from BASF that provides effective control of potentially devastating piercing-sucking insect pests in production and landscape ornamentals and vegetable transplants for the home consumer market. **Ventigra** Insecticide offers a unique mode of action subgroup with no known cross-resistance with key commercial insecticide classes, making it an excellent resistance management tool and an ideal choice for controlling insect pests that have developed resistance to other insecticides. **Ventigra** Insecticide exhibits a favorable environmental profile with low acute toxicity to mammals, fish, birds, insect predators and pollinators. **Ventigra** Insecticide delivers long-lasting control of problem pests, resulting in clean plants of exceptional quality.

Features of Ventigra Insecticide

- Rapid onset of action which stops insect feeding quickly
- Long residual control
- Unique MOA subgroup with excellent fit in rotational and IPM programs
- Compatible with beneficial insects and mites

Benefits of Ventigra Insecticide

- Effective control at low use rates with low cost per use
- Effective aphid and whitefly control up to 21 days
- New chemical class and rotational tool for resistance management
- Controls pest strains resistant to existing insecticides
- Easily incorporated into many IPM programs

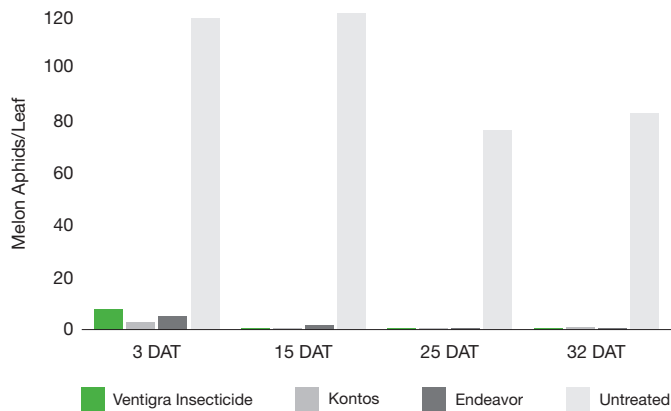
Key Pests Controlled

| Pest | Application Rate fl ozs/100 Gallon | Use Directions |
|---|---------------------------------------|---|
| Aphids such as: Cotton/Melon aphid (<i>Aphis spp.</i>) Green peach aphid (<i>Myzus spp.</i>) Rose aphid (<i>Macrosiphum spp.</i>) | 1.4 | <p>Ventigra is not a rescue treatment and should be applied at the onset of pest infestation.</p> <p>For use in production of vegetable transplants for the home consumer market.</p> <p>DO NOT make applications at intervals shorter than seven days.</p> <p>DO NOT apply more than the maximum seasonal use rate of 14 fl ozs of Ventigra (0.09 lb afidopyropen ai) per acre per crop season.</p> <p>For indoor greenhouse use on ornamental plants, DO NOT apply more than the maximum seasonal use rate of 17 fl ozs of Ventigra (0.11 lb afidopyropen ai) per acre per crop season.</p> <p>DO NOT apply more than the annual maximum use rate of 42 fl ozs of Ventigra (0.27 lb afidopyropen ai) per acre per calendar year.</p> <p>Minimum spray carrier volume (per acre): 20 gallons for ground; 5.0 gallons for air.</p> <p>Resistance Management. DO NOT make more than two sequential applications of Ventigra before using an effective insecticide with a different mode of action.</p> <p>See Table 3. Dilution Rate Conversion for Ventigra for information on use rates and respective spray volumes.</p> <p>When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.</p> |
| Whiteflies such as: Greenhouse Whitefly (<i>Trialeurodes spp.</i>) Silverleaf Whitefly (<i>Bemisia spp.</i>) | 4.8 to 7.0 | |
| Mealybugs such as: Citrus mealybug (<i>Planococcus spp.</i>) Long-tailed mealybug (<i>Pseudococcus spp.</i>) | 4.8 to 7.0 | |
| Suppression of: Mexican mealybug (<i>Phenacoccus gossypii</i>) | | |
| Scale (nymphs and crawlers): Suppression of: Euonymus scale (<i>Unaspis spp.</i>) Tea scale (<i>Fiorinia spp.</i>) | 4.8 to 7.0 | |

Performance and Efficacy

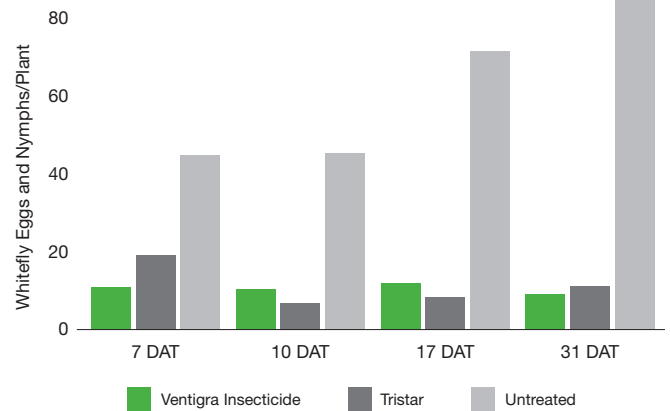
Ventigra Insecticide controls piercing-sucking insects including aphids, whiteflies, mealybug and has suppression for certain species of scale. These key pests cause damage by direct pest feeding injury and the spread of insect-vectored plant diseases. **Ventigra** Insecticide stops insect feeding quickly, thereby reducing the spread of insect-vectored plant viruses. In addition, **Ventigra** Insecticide provides long-lasting residual control of piercing-sucking insects.

Melon Aphid (*Aphis gossypii*) Control on Chrysanthemum



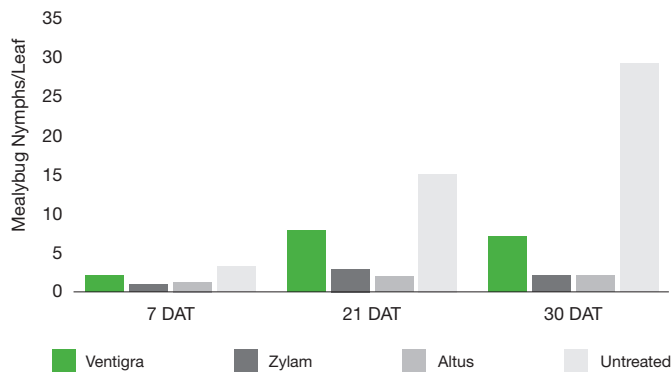
Chrysanthemum. Pre Counts = 153 aphids/leaf. Single application Aug. 26, 2014-Capsil 0.05% v/v with all treatments. Buzz Uber, Crop Inspection Services, Valley Center, CA. Use rates: Ventigra Insecticide 1.4 fl oz, Kontos 3.3 fl oz, and Endeavor 5 oz.

Whitefly Control (*Bemisia tabaci*) on Poinsettia

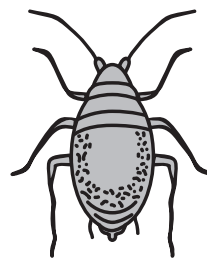


Poinsettia var. 'Prestige Red'. Two applications Oct. 13 and 20th, 2017 – Capsil 6 fl oz/100gal with all treatments. Buzz Uber, Crop Inspection Services, Valley Center, CA. Use rates: Ventigra Insecticide 7 fl oz/100gal, Tristar 8.5 fl oz/100gal.

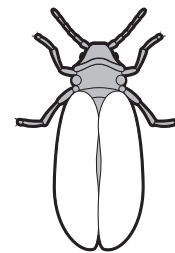
Medeira Mealybug Nymph (*Phenacoccus madeirensis*) Control on Coleus



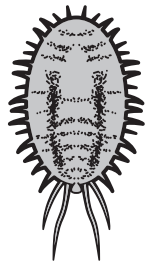
Coleus var. 'Crimson Gold'. Per counts = 3.0 nymphs/plant. Two Applications Aug. 29 and Sept. 12, 2018. Dr. JC Chong, Clemson University, Florence, SC. Use rates: Ventigra 6.8 fl ozs/100gal, Zylam 14.6 fl oz/100gal, Altus 14 fl ozs/100gal.



Aphid



Whitefly

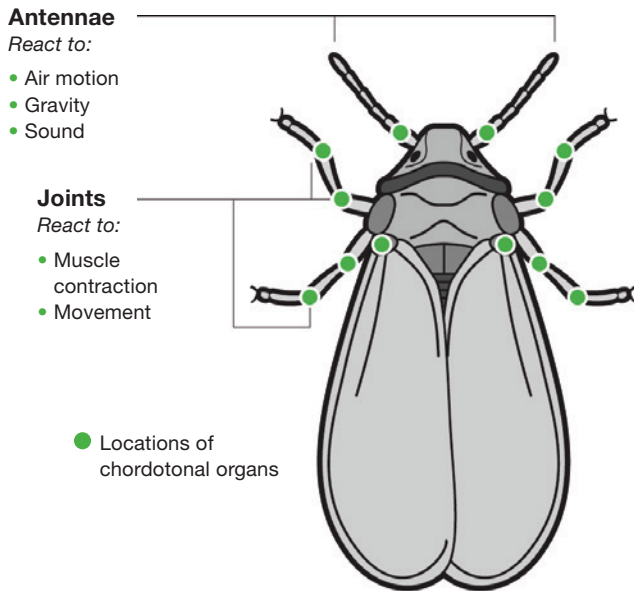


Mealybug

Mode of Action

Ventigra Insecticide is a novel member of a group of insecticides known as chordotonal organ TRPV channel modulators and has been classified as **the only member of the new mode of action subgroup 9D**. **Ventigra** Insecticide selectively binds to the TRPV ion channels, causing them to open and generate continuous chordotonal nerve signals independent of joint movement. This false stretch signaling makes it impossible for the brain to detect sound, gravity or the position or movement of body parts. **Deaf, disoriented and uncoordinated, insects treated with Ventigra Insecticide rapidly cease feeding and die from dehydration and starvation.**

Chordotonal Organs in Insects



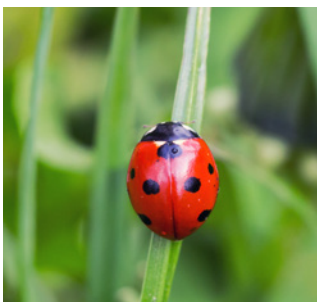
Chordotonal organs (left), present throughout the insect's body, are biological stretch receptors that span joints and provide insects with their senses of hearing, gravity perception and body movement and position. **Ventigra** Insecticide disrupts the signaling from these receptors causing disoriented, uncoordinated insects that rapidly stop feeding.

Favorable Environmental Profile and Low Toxicity to Beneficials

Ventigra Insecticide meets the high regulatory standards for modern crop protection compounds featuring low acute toxicity to mammals, fish, birds and important beneficial arthropods. **Ventigra** Insecticide has been shown to exhibit minimal impact on many common beneficial arthropods including predatory mites, parasitoid wasps and pollinators.

Ventigra Insecticide is compatible with the following biological control organisms.

| Beneficial Insect/Mite | Type of Beneficial |
|----------------------------------|-------------------------------------|
| <i>Apis mellifera</i> | Pollinator |
| <i>Amblyseius swirskii</i> | Predatory Mite |
| <i>Euseius tularensis</i> | Predatory Mite |
| <i>Aphidius colemani</i> | Parasitoid Wasp |
| <i>Chrysoperla carnea</i> | Insect Predator - Lacewing |
| <i>Coccinella septempunctata</i> | Insect Predator - Lady Beetle |
| <i>Orius insidiosus</i> | Insect Predator - Minute Pirate Bug |



Application Information

| Ventigra Insecticide | |
|--|--|
| Active Ingredient | Inscalis |
| Common Name | Afidopyropen |
| Formulation | 0.83lbs of afidopyropen/gal, formulated as dispersion concentrate (DC) |
| Signal Word | Caution |
| REI | 12 hours |
| Maximum seasonal use rate per acre per crop season | 17 fl ozs |
| Maximum annual use rate | 42 fl ozs per acre per calendar year |

Use Sites

Ventigra Insecticide can be used on ornamentals in the following use sites:

- Commercial and retail nurseries, field and container
- Commercial, public and recreational gardens
- Commercial and residential landscapes, including golf courses, parks and recreation areas
- Forest tree and conifer nurseries and plantations
- Greenhouses, shadehouses and lathhouses
- Interiorscapes

Ventigra Insecticide can be used on:

- Annual bedding plants
- Perennials, herbaceous and woody
- Flowering and foliage plants
- Woody plants and trees
- Juvenile fruit and nut trees, vines, brambles and bushberries grown in commercial ornamental production nurseries.

Ventigra Insecticide can be used on vegetable transplants for the home consumer market.

Plant Safety

Ventigra Insecticide has been applied to a wide variety of common ornamental plants without observed plant injury. Because many cultivars within a plant species vary in tolerance to chemical applications and growing conditions, test the product accordingly on a small group of representative plants for tolerance to **Ventigra** Insecticide before large scale use.

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betterplants.basf.us

Always read and follow label directions.

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