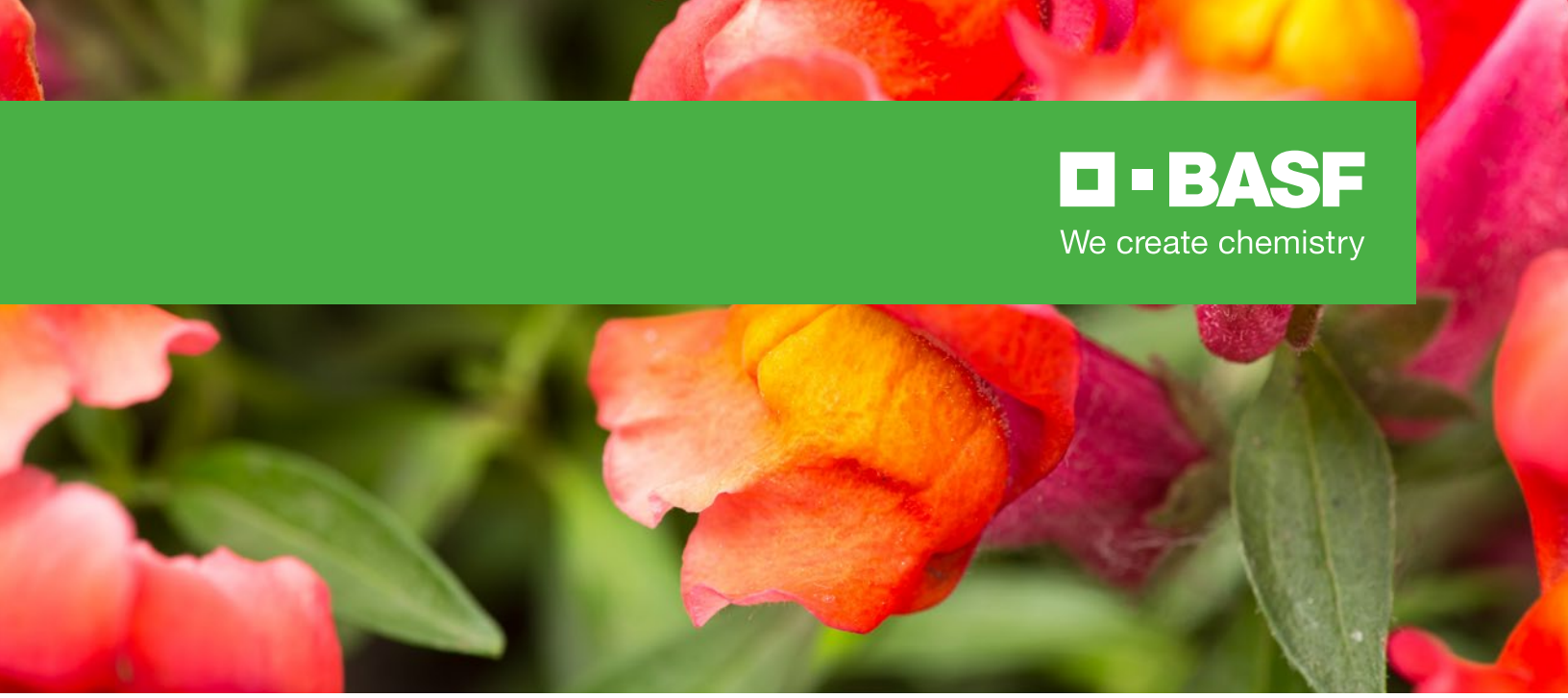


BASF
We create chemistry

Ventigra™ Insecticide

Technical Information Bulletin

Ventigra™ Insecticide is a pioneering solution from BASF that provides effective control of aphids and whiteflies in greenhouse and outdoor ornamentals. **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

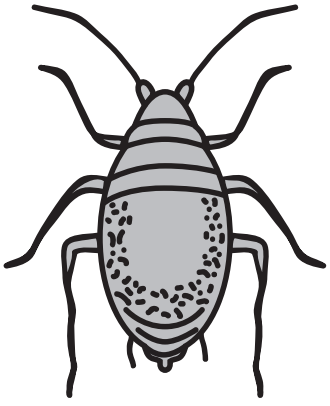
- Rapid onset of action which stops insect feeding quickly
- Long residual control
- Unique MOA subgroup with excellent fit in rotational and IPM programs
- Compatible with beneficial insects and mites

Benefits of Ventigra Insecticide

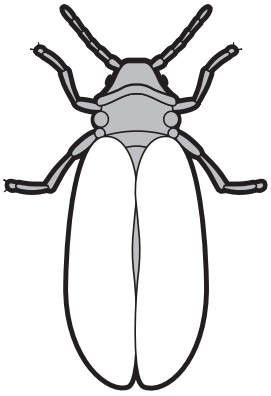
- Effective control at low use rates with low cost per use
- Effective aphid and whitefly control up to 21 days
- New chemical class and rotational tool for resistance management
- Controls pest strains resistant to existing insecticides
- Easily incorporated into many IPM programs
- The DC formulation, or dispersible concentrate, is an innovative new formulation with the benefits of a suspension concentrate (SC) – ease of mixing, lack of residue

Key Pests Controlled

Pest	Application Rate L/ha	Use Directions
Aphids such as: Cotton/Melon aphid *(Aphis spp.)* Green peach aphid *(Myzus spp.)* Rose aphid *(Macrosiphum spp.)*	0.1	**Ventigra** is not a rescue treatment and should be applied at the onset of pest infestation. **DO NOT** make applications at intervals shorter than 7 days. For outdoor ornamental plants: **DO NOT** apply more than 4 applications per year. **DO NOT** exceed 1.25 L/ha per year. For greenhouse ornamental plants (excluding cut flowers) with crop cycles shorter than 1 year (e.g., annual bedding plants): **DO NOT** apply more than 4 applications per crop cycle. **DO NOT** exceed 1.25 L/ha per crop cycle. **DO NOT** exceed 4 L/ha per year.
Whiteflies such as: Greenhouse Whitefly *(Trialeurodes spp.)* Silverleaf Whitefly *(Bemisia spp.)*	0.35 to 0.5	For greenhouse ornamental plants (cut flowers only) with crop cycles shorter than 1 year: • For applications at 0.1 L/ha only: **DO NOT** apply more than 4 applications per crop cycle. **DO NOT** exceed 4 L/ha per year. • For applications that include rates of 0.35 or 0.5 L/ha: **DO NOT** apply more than 1 application per year at 0.5 L/ha or **DO NOT** apply more than 2 applications per year at 0.35 L/ha. **DO NOT** exceed 0.7 L/ha per year. A minimum spray volume of 1000 L/ha is recommended. Use adequate water volume to ensure thorough coverage. **Resistance Management. DO NOT** make more than 2 sequential applications of **Ventigra** before using an effective insecticide with a different mode of action. Always read and follow label directions.



Aphid

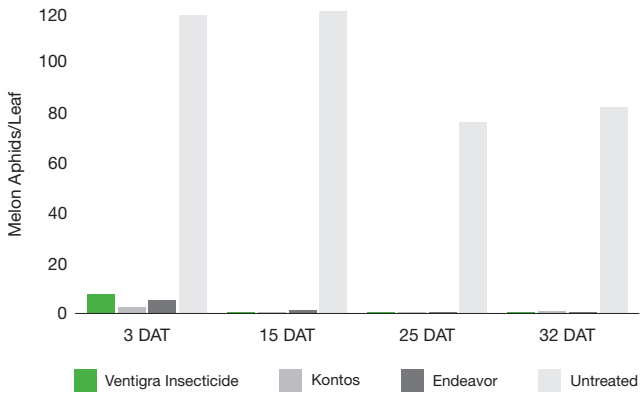


Whitefly

Performance and Efficacy

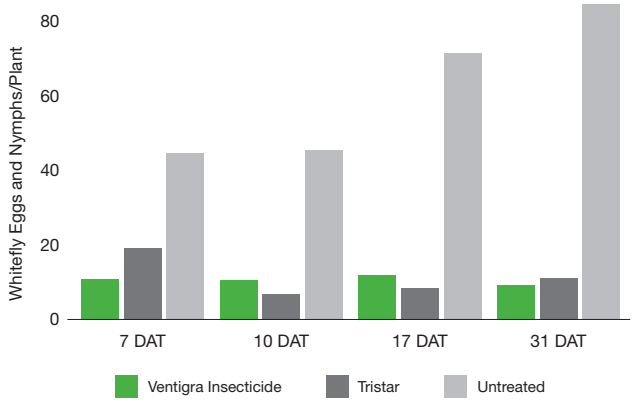
Ventigra Insecticide controls piercing-sucking insects including aphids, whiteflies and mealybug and has suppression for certain species of scale. These key pests cause feeding injury and direct damage to plants while spreading insect-vectored plant diseases. **Ventigra** Insecticide stops insect feeding 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: Kontos – 258 mL/1000L, Endeavor – 391 ML/1000L, Ventigra – 100 mL/1000L.

Whitefly Control *(Bemisia tabaci)* on Poinsettia

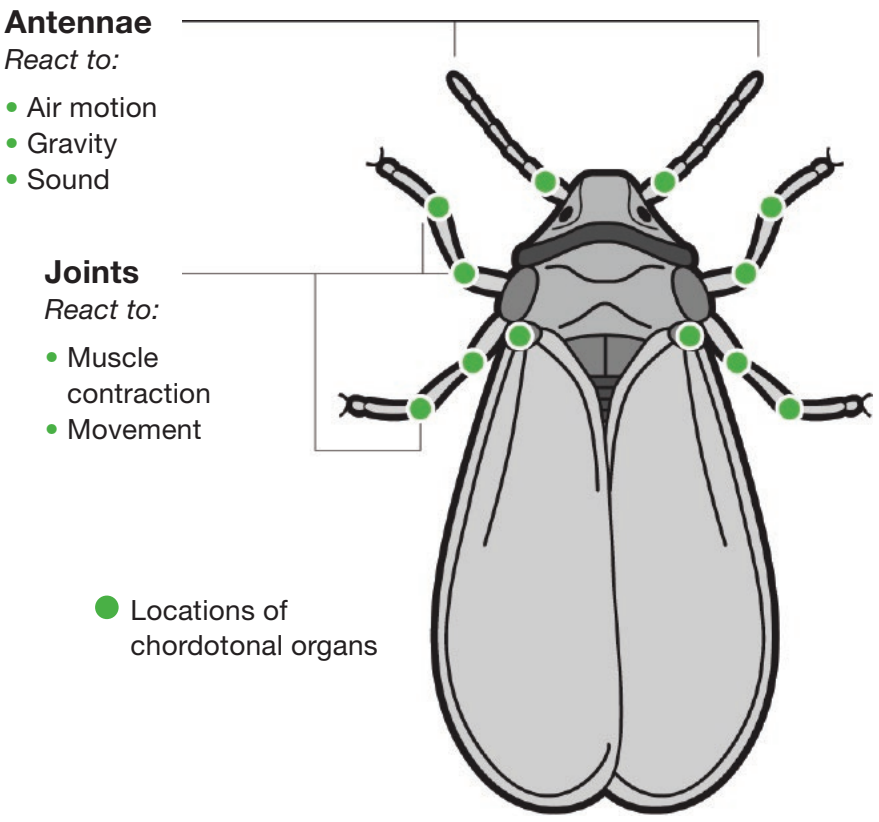


Poinsettia var. 'Prestige Red'. Two applications Oct. 13 and 20th, 2017 – Capsil – 468 mL/1000L with all treatments. Buzz Uber, Crop Inspection Services, Valley Center, CA. Use rates: Ventigra – 500 mL/1000L, Tristar – 664 mL/1000L.

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. **Once deaf, disoriented and uncoordinated, insects treated with Ventigra Insecticide rapidly cease feeding and die from dehydration and starvation.**

Chordotonal Organs in Insects



Chordotonal organs, present throughout the insect’s body, are biological stretch receptors that span joints and provide insects with their senses of hearing, gravity perception, 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
Apis melifera	Pollinator
Amblyseius swirskii	Predatory Mite
Euseius tularensis	Predatory Mite
Aphidius colemani	Parasitoid Wasp
Chrysoperla carnea	Insect Predator - Lacewing
Coccinella septempunctata	Insect Predator - Lady Beetle
Orius insidiosus	Insect Predator - Minute Pirate Bug

Application Information

Ventigra Insecticide	
Active Ingredient	Afidopyropen
Global Brand Name	Inscalis
Formulation	100 g of afidopyropen/L, formulated as dispersion concentrate (DC)
Signal Word	Warning
REI (Restricted Entry Interval)	12 hours
Maximum seasonal use rate per acre per crop season	1.25 L/ha
Maximum annual use rate	Outdoors Ornamentals 1.25 L/ha, Greenhouse Ornamentals <1yr: 4 L/ha, CutFlowers <1 yr: 0.1 L/ha rate = 4 L/ha; 0.35 – 0.5 L/ha rate = 0.7 L/ha

Use Sites

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

- Commercial and retail nurseries, field and container
- Greenhouses, shadehouses and lathhouses

Ventigra Insecticide can be used on:

- Annual bedding plants
- Perennials (herbaceous and woody)
- Flowering and foliage plants
- Woody plants and trees

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.

Applications to Impatiens and Petunia flowers have occasionally shown discoloration; test a small area before large scale application when blooms cannot be avoided. Poinsettia is not tolerant to Ventigra insecticide once bract formation has started; Poinsettia applications should be made prior to bract formation and color change.

BASF Canada Inc.
100 Milverton Dr.,
Mississauga, Ontario
L5R 4H1 CANADA

www.betterplants.ca

Always read and follow label directions.