



Inscalis™ Insecticide: A New Insecticide for Piercing-Sucking Pest Management

Craig Kleppe, BASF Corporation
IR-4 Food Use Workshop
September 2018

Inscalis™ Insecticide

Inscalis™ insecticide and the products containing Inscalis™ insecticide were received US Federal Registration on September 10, 2018.

Registration packages have been submitted to US states and BASF is awaiting state registrations.

Any sale of these products after registration is obtained shall be solely on the basis of an approved product label within the countries of registration, and any claims regarding product safety and efficacy shall be addressed solely by the label.

Inscalis™ Insecticide: Overview

Active Ingredient	<ul style="list-style-type: none">▪ Afidopyropen (common name); Inscalis™ (trademark for active)▪ Formulated Products: Versys™, Sefina™, Ventigra™
Chemical Class	<ul style="list-style-type: none">▪ Pyropenes
Origin	<ul style="list-style-type: none">▪ Derived from natural product Pyripyropene A▪ Discovered by Meiji - Seika and the Kitasato Institute; developed by BASF
Registration Status	<ul style="list-style-type: none">▪ Joint Review by US-EPA, CAN-PMRA, Mexico COFEPRIS (submitted March 2016)▪ US registration received, Canada and Mexico expected Q4 2018
Crops	<ul style="list-style-type: none">▪ Fruits and Vegetables, row crops, and ornamentals
Pest Spectrum	<ul style="list-style-type: none">▪ Piercing and sucking pests
Mode of Action	<ul style="list-style-type: none">▪ Chordotonal organ TRPV channel modulator▪ IRAC Classification: Group 9 – Chordotonal Organ TRPV Channel Modulators, <u>New Subgroup 9D - Pyropenes</u>
Rates Tested	<ul style="list-style-type: none">▪ Ranging between 10 and 50 g ai/ha
Route of Exposure	<ul style="list-style-type: none">▪ Oral / contact

Inscalis™ Insecticide: Key Target Pests



Aphids

- Controls most aphid species on vegetable and tree crops
- Rate tested - 10 g ai/ha
- Long residual control



Whiteflies

- Controls *Bemisia tabaci* (B & Q biotypes) and greenhouse whitefly
- Activity on whitefly eggs, early immatures, and adults
- Rates tested - 35 - 50 g ai/ha
- May be applied alone or with an adjuvant



Asian citrus psyllid

- Vector of HLB disease
- Controls ACP eggs, immatures, and adults
- Rate tested - 50 g ai/ha
- May be applied alone or with an adjuvant

Other insects: some scales

Inscalis™ Insecticide: Key Features

- Favorable environmental and toxicological profile
- Internal & external laboratory studies have shown that **Inscalis™ insecticide** have low impacts to pollinators and non-target organisms
- EPA approved label contains no pollinator restrictions

Predatory Mites

- *Amblyseius swirkii*
- *A. californicus*
- *Euseius tularensis*

Parasitoids

- *Aphidius colemani*
- *Aphelinus certus*

Predators

- *Coccinella septempunctata*
- *Chrsoperla carnea*
- *Orius insidiosus*
- *Hippodamia convergens*
- *Macrolophus pygmaeus*

Pollinators

- *Apis* spp.



Inscalis™ Insecticide: Key Features



Controls multiple life stages of insects

- Effectively controls whitefly early instars and adults
- All life stages of ACP



Fast Acting

- Fast acting to stop feeding within few hours of exposure thereby reducing disease transmission by whiteflies and Asian citrus psyllid



Feeding deterrent

- First step in insect-transmission vectored disease prevention
- Demonstrated in ACP host selection – an important component of HLB management



No known cross-resistance to other compounds

- Good IRM partner in IPM programs

Optimized formulation that can be used with or without an adjuvant

Inscalis™ Insecticide - Uses and Formulated Products

Foliar Applications

Crop or Crop Group	Target Pest	Formulated Products	First Year Sales
Brassica head and stem vegetables	Aphid	Versys™ Insecticide	2019
Leafy vegetables	Aphid		
Pome and Stone fruit	Aphid		
Citrus	AC Psyllid, Aphid	Sefina™ Insecticide	
Cotton	Aphid, Whitefly		
Cucurbits	Aphid, Whitefly		
Fruiting Vegetables	Aphid, Whitefly		
Soybean	Aphid		
Tuberous & Corm (Potato)	Aphid, Whitefly	*	
Tree nuts	Aphid		
Ornamentals, Vegetable transplants	Aphid, Mealybug, Scales, Whitefly	Ventigra™ Insecticide	

* 2019 sales to be determined

Inscalis, Sefina, Versys, Ventigra are trademarks of BASF

Inscalis™ Insecticide - Active Projects For Future Registrations

Foliar Applications

Crop or Crop Group	Target Pest	Formulated Products	Submission / Registration
Alfalfa	Aphid	Sefina™ Insecticide	2018 / 2020
Sorghum	Aphid		
GH production vegetables*	Aphid, Psyllid, Whitefly	Ventigra™ Insecticide	2018 / 2020
Fruiting Vegetables, Cucumber			
Strawberry			

* Specialty Crop & Minor Use organization projects (IR-4 & PMC)

BASF welcomes new additional specialty crop projects from IR-4



We create chemistry