

#### **Emamectin-benzoate:**

- Emamectin-benzoate is a natural fermentation product deriving from soil bacteria and has limited systemic activity but will penetrate translaminary the plant tissues to provide residual control.
- Molecular Formula: C<sub>49</sub>H<sub>75</sub>NO<sub>13</sub>
- Mode of Action: Emamectin-benzoate has a unique mode of action which is different from any other insecticide. Emamectin-benzoate interferes with the pest's nervous system, causing them to loose cell function and stop feeding. The larvae die in 2-4 days.
- IRAC Group: 6

# Indoxacarb:

- Indoxacarb belongs to the Oxidiazine chemical group.
- Indoxacarb is a new class of chemistry with a new mode of action.
- Molecular Formula: C<sub>22</sub>H<sub>17</sub>CIF<sub>3</sub>N<sub>3</sub>O<sub>7</sub>
- Mode of Action: Interferes with a group of ion channels by inhibiting the flow of sodium ions into nerve cells.
- IRAC Group: 22A

Insecticide with stomach and contact action for the control of Leafminers, Lepidoptera pests, Thrips and Spidermites on vegetables, ornamentals and broadacre crops.

**Enigma 200 SC** effectively combines active ingredients with different and highly complementary modes of action.

- Important new tool in resistance management programs.
- Cross resistance to other insecticide groups is highly unlikely to occur.
- Indoxacarb is characterized as a "Reduced Risk and Organophosphate" (OP) Alternative Pesticide" by the EPA-USA

#### What exactly does that mean?

- Low impact on human health
- Low toxicity to non-target organisms (birds, fish, plants)
- Low potential for groundwater contamination
- Low application rates
- Low pest resistance potential
- Compatibility with Integrated Pest Management practices

### **Enigma 200 SC Advantages:**

- · Highly effective
- Novel mode of action (Indoxacarb and Emamectin-benzoate content)
- Stable under adverse environmental conditions
- · Broad-spectrum of activity
- Synergistic effect of the 2 Active Ingredients
- Suitable for use on a wide range of crops
- Translaminar action
- · Not phytotoxic when used as directed





# **Directions for proper use**

- Enigma 200SC should be mixed with water to be ready for use.
- It may be applied with any type of spraying equipment.
- Ensure thorough and even coverage of the canopy.



In Colombia, during 2017 and 2018, **Enigma 200 SC** was extensively tested for the control of Tuta absoluta in Tomato.

#### **Field Trials**

Extensive field research has proven the increased efficacy of **Enigma 200 SC.** 

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## Rate of Application:

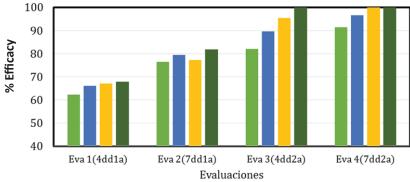
Crop	Pests	<b>Application Rate</b>
Vegetables	Leafminers, Lepidoptera pests, Thrips, Spidermites	0.2-0.3 L/Ha
Soybeans	Leafminers, Lepidoptera pests, Thrips, Spidermites	0.2-0.3 L/Ha
Cotton	Leafminers, Lepidoptera pests, Thrips, Spidermites	0.2-0.3 L/Ha
Citrus	Leafminers, Lepidoptera pests, Thrips, Spidermites	0.2-0.3 L/Ha
Ornamentals	Leafminers, Lepidoptera pests, Thrips, Spidermites	0.2-0.3 L/Ha
Tobacco	Leafminers, Lepidoptera pests, Thrips, Spidermites	0.2-0.3 L/Ha
Maize	Leafminers, Lepidoptera pests, Thrips, Spidermites	0.2-0.3 L/Ha

% Efficacy of Enigma 200SC (Indoxacarb 160 g/L + Emamectin- benzoate 40 g/L) against water-control.

Photographic treatment comparison:



Treatment	Product	Rate	3	Enigma 200SC	300 ml/Ha
1	Enigma 200SC	100 ml/Ha	4	Enigma 200SC	400 ml/Ha
2	Enigma 200SC	200 ml/Ha	5	Water - Control	-



- T1. Emamectin-benzoate + Indoxacarb 0.1L/Ha T2. Emamectin-benzoate + Indoxacarb 0.2L/Ha T3. Emamectin-benzoate + Indoxacarb 0.3L/Ha T4. Emamectin-benzoate + Indoxacarb 0.4L/Ha
- Note that at the label recommend rates, the % Efficacy was up to 100%!

