



 **Levo**

**Sophora flavescens  
plant extract  
Biological Insecticide**





## Introduction

**Levo SL™** is a new broad spectrum Biological insecticide for use on a wide range of crops against a wide spectrum of pests. **Levo SL™** shows excellent efficacy against many species of plant-eating spidermites, yet it is able to discriminate and has a low mortality rate against beneficial insects and mites.

**Levo SL™** is a natural derivative from the plant *Sophora flavescens*, a well-known medicinal plant, widely used in various pharmaceutical formulations and traditional medicinal remedies.

**Levo SL™** has a low residue index - This important character qualifies **Levo SL™** to be used in IPM programs as well as in Organic Agriculture and in other cases where low residue products are required.

## Mode of Action

**Levo SL™** exerts its function mainly by direct contact and as stomach insecticide and has additional anti-feeding and repelling effects. The natural active ingredient of **Levo SL™** is extracted and derived directly from the seeds of *Sophora flavescens*. Insects treated with **Levo SL™** display breath inhibition and motion imbalance symptoms related to the Central Nervous System.

## Levo SL™ has a multiple mode of action:

1. **Levo SL™** accelerates the Acetyl Cholinesterase enzyme activity. Due to over activity of the enzyme the insect paralyses and its respiratory fails.

2. **Levo SL™** results in the elevation of the phenol oxidase (PO) enzyme activity. Consequently, when this enzyme activity increases without control, the insect paralyses and dies.

3. **Levo SL™** causes a significant decrease in the activity of carbohydrate hydrolyzing enzymes activity; without it, the insect digestive system fails and the insect paralyses.

4. **Levo SL™** contains a complex of secondary metabolites, which act as a defender against microbial pathogens and invertebrate pests, arming the plants against its parasites. Hence, protecting the plants for a longer period of time and making them less susceptible to secondary infections and pest reoccurrence. Through various field studies it was proven that **Levo SL™** has a repellent and/or deterrent activity that results in a lower food intake by the insects.





## Key Target Pests

- Aphids
- Thrips
- Lepidoptera species such as Diamond-back moths
- Spidermites

## Advantages

- High efficiency against a wide range of pests
- Pest Resistance Management programs compliant
- Ideal for IPM program due to **Levo SL™** safety to Beneficials, such as *Phytoseiulus sp.* and bumblebees
- Low MRL Index
- Stimulates crop growth and general well-being, making plants less vulnerable
- Suitable for application as foliar pesticide as well as drenching with irrigation water
- Can be used in Biological and Organic agriculture.

## Directions for Use:

Plants	Target Pests	Application Rate per Ha	Usage stage
 	Diamondback moths, Cutworms, Armyworms	0.8 - 1.0 Lt	Foliar spray from egg stage to 2nd nymph. Spray equally and thoroughly.
	Aphids	0.6 - 0.8 Lt	
	Cabbage worms (Pieris brassicae)	0.8 - 1.0 Lt	
	Spidermites	0.6 - 0.8 Lt	Spray 3-5 days before prosperous stage. Ensure complete coverage of the plants.
	Leafminers	0.8 - 1.2 Lt	Complete coverage of both leaf surfaces (upper and lower) is important.
Cotton	Aphids (Aphis gossypii), Russian Aphids (Diuraphis noxia) and Whiteflies	0.6 - 0.8 Lt	Apply as a full cover foliar spray. Complete coverage of both leaf surfaces.  
	Jassids and Leaf hoppers (Empoasca devastans), Thrips	0.8 - 1.2 Lt	
	Lepidoptera, Bollworms (Heliothis sp.) and Armyworms	0.8 - 1.0 Lt	
Pome and Stone Fruits	Pear psylla, Spidermites and Peach fruit borers	0.8 - 1.0 Lt	Spray at the immature stages of the insect. Foliar spray from egg stage to 2nd nymph. Spray equally and thoroughly.
Tobacco	Aphids, Leafminers, Budworms	400 - 800 ml/ 1000 Lt water	Full cover spray to both surfaces of the leaf at first signs of pest infestation. Ensure even coverage of the foliage.
Ornamentals	Two-spotted spidermites, Aphids, Thrips and Lepidoptera	0.8 - 1.0 Lt	Spray at the prosperous stage of nymph and early stages of infestation.
Coffee, Tea & Cocoa	Aphids and Mirids	0.6 - 0.8 Lt	Spray from the egg stage to the 2nd nymph stage.

\* The rates given are reference rates only.

When using the product, always test a small area first before commencing commercial use.

### Important Note:

The Indicated Crops and Recommended Rate of application on this Product informative sheet may not be applicable in country where the product is intended to be used. User must refer and use the product only as per the officially Register and approved uses by the ministry of Agriculture authorized authorities. The supplier cannot be held responsible or liable if the use of this product is performed on Crops which are not listed on the official label as approved by the ministry of Agriculture authorized authorities.





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