



Spear® LEP is Vestaron®'s revolutionary insecticide for fruits, vegetables, and other high-value field and orchard crops. Targeting lepidopteran pests such as loopers, worms, and caterpillars, field trials with Spear LEP show performance that is equivalent to conventional insecticides. With no known resistance or cross resistance, Spear LEP works as a standalone or in rotation with conventional insecticides. Spear LEP is an excellent IPM and resistance management tool.

Combining the power of synthetics with the safety and sustainability of biologicals, Vestaron's Spear insecticide solutions are created using short chains of amino acids, or peptides. The resulting products overcome existing insecticide resistance issues while offering a desired safety profile for workers, beneficials, and the environment.

PRODUCT INFORMATION

PCP #	34678
AI	GS-OMEGA/ KAPPA-HXTX-HV1A
FORMULATION	LIQUID
IRAC GROUP	32
SIGNAL WORD	CAUTION
REI	4 HOURS
PHI	0 DAY
PACKAGE SIZE	5 LITER, 2X5 LITRE CASE
USE RATE	1.2 - 2.3 L/ha PLUS <i>Bacillus thuringiensis</i> (Btk)
SURFACTANT	For best performance use with a NIS or spreader/sticker at labeled rates

KEY FACTS

- New IRAC Group 32 supporting resistance management
 - Mode of Entry: Ingestion
 - Mode of Action: Disruption of the nicotinic acetylcholine receptor
- Highly specific for lepidopteran larvae with very low risk to beneficials
- Spear LEP must be tank-mixed with a gut disrupting facilitator such as *Bacillus thuringiensis* (Btk)
- MRL Exempt
- Low risk of phytotoxicity

MAIN CROPS

(refer to label for full list of crops)

- APPLE
- BRASSICAS - HEAD & STEM
- CELERY
- CRANBERRIES
- LEAFY GREENS
- LETTUCE
- PEACH
- PEAR
- TOMATO





HOW IT WORKS



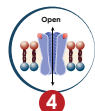
1 Pest ingests plant tissue treated with Spear LEP and a low dose of Btk.



2 Btk crystal proteins damage the gut cells allowing Spear LEP access to the nervous system.



3 Spear LEP helps neurotransmitters to bind and open the receptor's ion channels.



4 The open channel causes persistent depolarization of the nerve cell.



5 The affected cells are unable to reset and transmit new electrical signals.



6 This causes paralysis and death of the insect.

* When ingested together, the non-lethal dose of Btk proteins perforate the insect mid-gut allowing the Spear peptide to access the target receptor in the nervous system, killing the pest.

PESTS CONTROLLED

(refer to label for full list of pests controlled)

- BEET ARMYWORM
- CABBAGE LOOPER
- CODLING MOTH
- DIAMONDBACK MOTH
- GREEN SPANWORM
- IMPORTED CABBAGEWORM
- OBLIQUE-BANDED LEAFROLLER
- ORIENTAL FRUIT MOTH
- TUFTED APPLE BUD MOTH



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