Peptide-based bioinsecticide receives emergency authorisation to control major tomato pest in Italy

Italy becomes second EU country to grant growers emergency access to a bioinsecticide that tackles tomato leafminer, a pest that can decimate EU tomato crops.

Vestaron Corporation is a leading agricultural biotechnology company specialising in the development of peptide-based crop protection products.

LONDON, UNITED KINGDOM, April 22, 2024 /EINPresswire.com/ -- Italy has become the second country in the European Union to grant emergency access to a novel bioinsecticide that tackles devastating infestations of tomato leafminer (Tuta absoluta) — a pest that has been known to cause yield losses in Europe of up to €350,000/ha.

Italy's Ministry of Health granted an Article 53 Emergency Authorisation in Italy for SPEAR® LEP, a peptide-based insecticide that targets lepidopteran insects such as tomato leafminer while presenting minimal risk to people, pollinators and beneficials.

> "The Tuta absoluta crisis in Europe underscores the need for effective, sustainable pest control products as the use of neonicotinoids and other synthetic pesticides is increasingly restricted."
>
> *Juan Estupinan, Vestaron president and CEO*

In experimental studies conducted in Italy and other European countries, SPEAR LEP, made by the US-based company Vestaron Corporation, has demonstrated efficacy against the target pest under both open-field and protected conditions, including in populations that may be resistant to other commonly used insecticides. Fully approved in the US and Canada, the product was also authorised for emergency use in Greece earlier this year.

Italian grower group Società Cooperativa Agricola Aurora, which petitioned the Ministry of Health for the emergency authorisation, said it was delighted the temporary authorisation had been

granted, giving its members the chance to effectively and sustainably control costly tomato leafminer infestations.

“Having access to effective biocontrols like SPEAR LEP is vital to helping producers reduce pesticide use — supporting profitable production while lowering farming’s impact on the environment,” said Giuseppe Buggea, Aurora’s president.

“With a unique mode of action, SPEAR LEP provides Italian tomato growers with a sustainable solution to use in rotation with other categories of pesticides, helping to protect crop quality and yields while preserving the efficacy of the limited range of products available to combat this prevalent pest.”

Available for growers in Italy to use on tomato plants from March 28 to July 25, 2024, SPEAR LEP is a biological product that is ingested by larvae as they graze on leaves.

Based on naturally occurring peptides found in spider venom and produced using natural fermentation, SPEAR LEP has a unique mode of action (IRAC group 32) with no known resistance or cross-resistance with other synthetic pesticides, making it a useful tool for resistance and integrated pest management.

The tomato leafminer has been known to cause yield losses in Europe of up to €350,000/ha.

Based on naturally occurring peptides from spider venom, SPEAR LEP targets lepidopteran pests such as tomato leafminer, European grape vine moth, coddling moth, loopers, and caterpillars.

When used in conjunction with a low dose of the widely used insecticide Bacillus thuringiensis (Bt), which disrupts the larvae’s gut, the active substance in the product (GS-omega/kappa-HxTx-Hv1a) is able to enter the pest’s blood stream and attack its central nervous system, destroying the larvae within as little as two days.

Fully biodegradable and highly specific to the target pest, SPEAR LEP is also soft on pollinators and has an excellent human and environmental safety profile.

Vestaron Corporation, the company that develops and manufactures the product, said the temporary authorisation adds an important tool to growers' toolboxes at a time when access to effective crop protection products is becoming limited in Europe.

"The Tuta absoluta crisis in Italy and other European countries underscores the need for effective, sustainable pest control products as the use of neonicotinoids and other synthetic pesticides becomes increasingly restricted," said Juan Estupinan, Vestaron's interim president and CEO.

"Peptide-based bioinsecticides such as SPEAR LEP represent a powerful new category of products to effectively control pests while fighting resistance. Such tools are imperative for growers and offer advantages for workers and in-field specialists, beneficials, the environment and consumers."

Under the emergency authorisation, growers will be able to make up to three applications of SPEAR LEP once every 5 to 10 days at a dose of 1.5 to 2.3 L/ha.

SPEAR LEP has been in use in the US and Canada since 2020 and has been submitted to the European Commission for full approval in Europe.

About tomato leafminer (Tuta absoluta)

Originally from Latin America, tomato leafminer (Tuta absoluta) is a lepidopteran pest of tomatoes and other Solanaceae crops. It was first reported in the Mediterranean and South-East climatic zones in 2007, including Italy.

Within 90 minutes of hatching, the young larvae (caterpillars) begin to burrow into the leaves of the crop plants. They will then 'mine' and progressively graze the leaf from inside the lamina, leaving dark 'frass' behind them.

The pest infests both industrial tomatoes and salad tomatoes, in the field and under protected conditions. For Italy, where the pest is present throughout the country, this is a serious problem as there are approximately 65,200 hectares of industrial tomatoes and 25,000 hectares of salad tomatoes grown annually with approximately 7,500 hectares of tomatoes grown under protection (i.e. greenhouse/polythene tunnel/shading) .

Without effective control measures, the tomato crop can easily be destroyed within a few weeks with estimated losses of €350,000/hectare in Europe. Losses due to fruit damage can sometimes exceed €55,000/hectare.

About SPEAR LEP

SPEAR LEP (containing the active substance GS-omega/kappa-HxTx-Hv1a) is Vestaron's novel, peptide-based bioinsecticide for fruits, vegetables and other high-value crops in the field. Based on naturally occurring peptides from spider venom, SPEAR LEP targets lepidopteran pests such as tomato leafminer, European grape vine moth, coddling moth, loopers, and caterpillars, field trials with SPEAR LEP show performance that is equivalent to conventional insecticides. With a unique mode of action (IRAC group 32), SPEAR LEP has no known resistance or cross-resistance and can be used as a standalone or in rotation with conventional insecticides. SPEAR LEP is an excellent resistance and integrated pest management tool and is soft on pollinators and other beneficials.

About Vestaron

Vestaron Corporation is a leading agricultural biotechnology company specialising in the development of peptide-based crop protection products. The company is committed to providing growers with novel, effective chemistries that address proven targets. Its peptides overcome existing resistance issues while offering a desired safety profile for workers, beneficials, and the environment. As part of this, the company has developed a proprietary platform for peptide optimization and fermentation-based peptide production that allows the development of a wide variety of biological crop protection solutions. To learn more, visit www.vestaron.com.

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