

## **New alternative to methyl bromide**

In the United States, the Environmental Protection Agency (EPA) has registered a novel biochemical pesticide that activates the plant's natural defences against attack instead of working directly to kill agricultural pests. The new Harpin protein, marketed as Messenger™, is an alternative to the ozone-depleting pesticide methyl bromide. The new eco-friendly pesticide has been registered for use on field crops, trees, turf and ornamentals to control a wide variety of fungal, bacterial and viral pathogens as well as several insect pests.

The Harpin protein activates a natural defence mechanism in the host plant, called systematic acquired resistance, which makes the plant resistant to a wide range of pathogens. The protein also protects against certain nematodes and fungal diseases that have few effective controls, except for methyl bromide. The non-toxic pesticide does not pose any risk to human health or the environment. As the product is applied at low rates and it degrades rapidly in the field, no residues are expected on the treated crops. Moreover, studies have demonstrated that there are no adverse effects on many species of wildlife – e.g. birds, fish, honeybees, aquatic invertebrates, non-target plants and algae.

During trials, Harpin was used on tomatoes as a component of an Integrated Pest Management programme. It reduced the need for commercial pesticides by about 70 per cent while outperforming them in effectiveness. (Website: [http://www.gnet.org/filecomponent/newsdetail.cfm?NewsID=10366 &image1=2](http://www.gnet.org/filecomponent/newsdetail.cfm?NewsID=10366&image1=2))