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## Case Study

### Application of Nematode Solutions Against Caterpillars on Brassicas

Caterpillar infestations caused significant damage to outdoor brassicas grown on a hotel estate in 2024. As the vegetables are intended for use in the estate's own kitchen, the gardening team was seeking sustainable and chemical-free pest control.



#### The Situation

As part of its research into effective biological control methods for pest control, leading horticultural products supplier East Riding Horticulture (ERH) trialled the use of *Heterorhabditis bacteriophora* nematodes at the estate. It compared the traditional watering can application method with using PSP's **Nematode Spraying Kit** Spraying Kit (with 7.6L Guarany Compression Sprayer) and the Guarany Dosimeter Valve.



East Riding  
Horticulture Ltd  
Family Business since 1989

#### The Trial

The trial was conducted one week after brassica seedlings were transplanted into the ground, laid out in 10 rows of 62 plants each, over weed-controlling ground cover. The challenge was delivering the nematodes efficiently and accurately to the base of each plant, despite ground cover and closely planted rows.

Five rows were treated with the dosimeter and five rows were treated by watering can. The same dosage was applied for both methods with each brassica receiving two 25 ml doses.

#### The Product

##### The Nematode Spraying Kit



SCAN & SHOP



Guarany 7.6 L Handheld  
Compression Sprayer



Guarany Dosimeter Valve  
Calibrated at 25 ml



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### About the Guarany Dosimeter Valve

This innovative valve, featuring a trigger mechanism and application pipe, easily attaches to any standard sprayer to deliver precise, consistent volumes of fluid with every squeeze. Its pressure-retaining system ensures reliable performance regardless of pressure fluctuations in the sprayer. The delivery volume is fully adjustable between 2 ml and 25 ml per stroke, allowing for exceptional control and repeatability.



### The Results

The Nematode Spraying Kit enabled precise and controlled application at the base of each brassica. The specially adapted compression sprayer allowed free passage of the nematode solution without clogging.

Unlike the watering can, which resulted in overspray onto ground cover and leaves, the Dosimeter allowed the grower to direct the solution exactly where needed - at the stem and soil interface. Small lab dishes confirmed that nematodes remained active after passing through both the Dosimeter and watering can.

The grower found the Dosimeter method far more accurate and less wasteful than the watering can approach. While the watering can required constant attention to speed and mixture levels, the Dosimeter provided a measured, repeatable dose to each plant. This reduced guesswork and minimised overspray.

On follow-up inspection (9th June 2025), all treated brassicas remained free from caterpillar damage. On inspection in mid-July 2025, some caterpillar damage was noted but this was minimal compared to the previous year.

ERH's Melanie Breillat, who ran the trial, said:

*"Our estate client found the application of nematodes using the Nematode Kit and Dosimeter Valve very effective. This method is more accurate and avoids wasting the mixture on the ground cover. Our client is delighted and will be using it again for outdoor vegetables."*