



# *Delfin WG* (L9761)

Reg. No. L9761, Act No. 36 of 1947



Backed by Science. Loved by Nature.

**BioManagement**



**Andermatt**  
Madumbi



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A granule formulation of *Bacillus thuringiensis* solids, spores and lepidopteran active toxins, subspecies kurstaki strain SA-11, for the suppression of a wide range of lepidopteran pests. *Delfin WG* is a biological larvacide for resistance and residue management.

### **Why use *Delfin WG*?**

A natural biological larvacide highly effective for management of lepidopteran larvae.

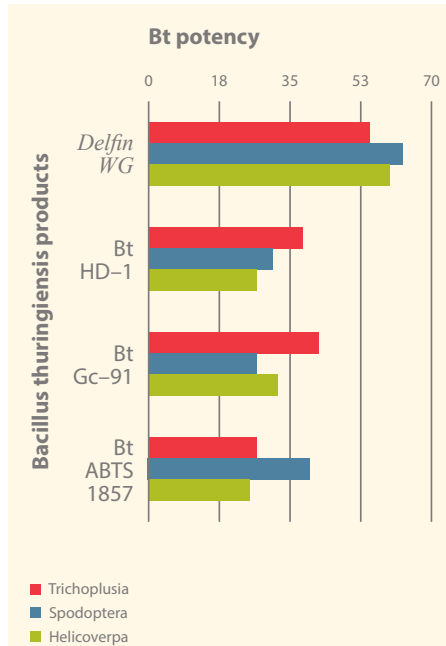
<b>Features</b>	<b>Benefits</b>
<i>Bacillus thuringiensis</i> (Bt) is a beneficial soil bacteria highly adaptive to different environments	<i>Delfin WG</i> can be used in a wide range of areas and environments
Based on one of the first commercialised biocontrol actives	Well established and recognised biocontrol active
Manufactured by bioproduct specialists Certis USA	Excellent formulation and extensively researched and tested. Ensures a high quality isolate with proven successful results
Internationally recognised product	<i>Delfin WG</i> has an extensive international label for the suppression and management of a wide range of lepidopteran larvae
Versatile application, excellent compatibility and shelf life	<i>Delfin WG</i> is very user friendly and easy to integrate into existing spray programs
Isolate SA-11 contains an extensive cry toxin profile and potency factors	<i>Delfin WG</i> is faster acting and more effective than Bt products with a less extensive profile
Active compounds produced by Bt in <i>Delfin WG</i> are specifically toxic to lepidopteran larvae	<i>Delfin WG</i> is target specific and has no effect on non-target beneficial insects
Unique mode of action different from synthetic chemistry	<i>Delfin WG</i> is an ideal tool for resistance management and IPM programs
Non-toxic, completely natural and OMRI listed	Safe for applicators, consumers and the environment, has no withholding period and can be used in organic operations

### **How does *Delfin WG* work?**

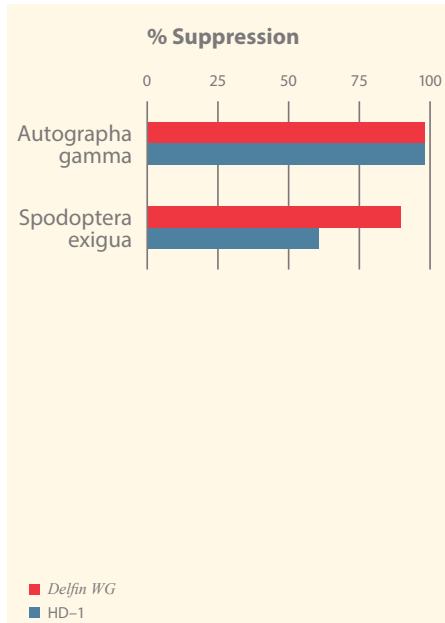
Biological insecticides, or Bt bio-larvicides (based on *Bacillus thuringiensis*), are the most proven, widely-used and successful of the known biological pesticides. Each Bt cell produces a unique crystalline proteins known as Cry toxins. These toxins cause mortality when ingested by pest larvae. Very specific gut enzymes, which only function in the alkaline conditions of the caterpillar gut, dissolve the crystals to form the toxin. This disrupts the pest's digestive tract causing the pest to stop eating and then die due to paralysis of the mid gut, osmotic shock and septicaemia. This process is depicted on the right.

# Trial data:

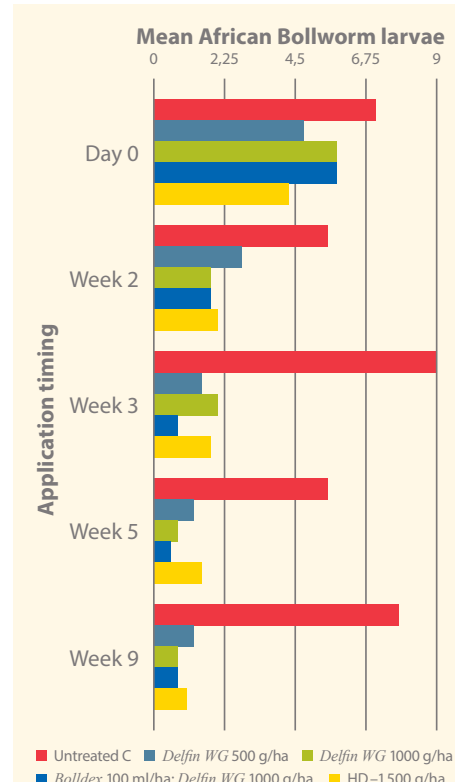
**With regards to potency per Bt product, *Deljin WG* outcompetes all other products when used against *Trichoplusia* (e.g. Cabbage looper), *Spodoptera* (e.g. Armyworm) and *Helicoverpa* (e.g. Bollworm) species.**



**Figure 1:** Relative potency of Deljin against different Lepidoptera larvae compared to a range of other Bt active strains. Data supplied by Certis USA. *Deljin WG* performed above average in the control of *Autographa gamma* (Silver Y Moth) and *Spodoptera exigua* (Beet armyworm) lepidoptera larvae.



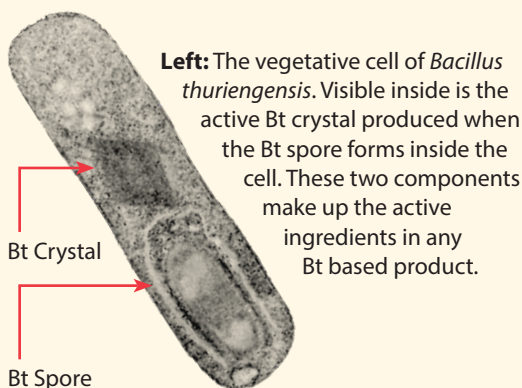
**Figure 2:** Control of Lepidoptera in veggies with commercially used Bt products in Spain, both products applied at 100 g/hL. Data supplied by Certis USA.



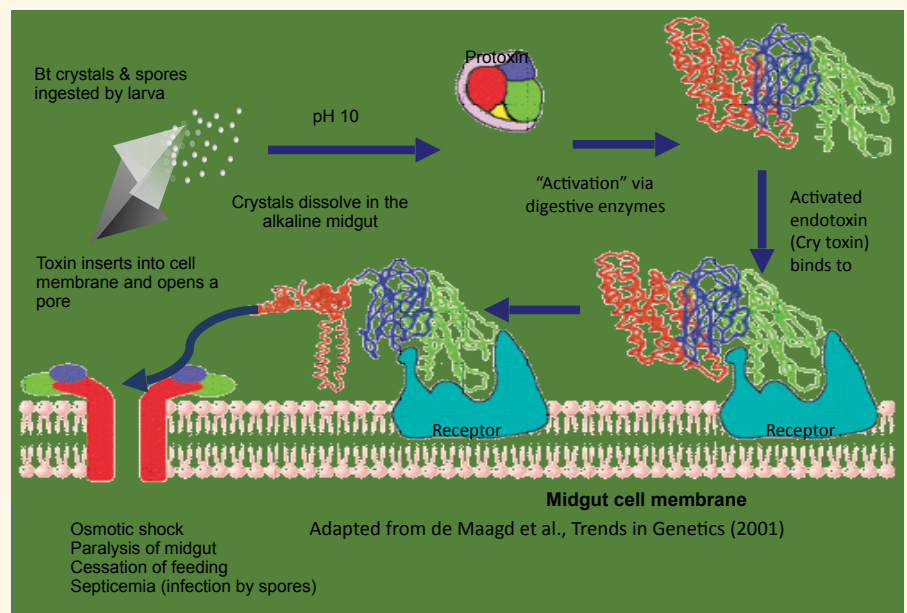
**Figure 3:** Use of Bolldex in a combination with Bt products for suppression of Bollworm on lettuce. In this trial Deljin was applied on its own and in combination with Bolldex. The results demonstrate the impact that a combination approach can have. Where the Deljin application on its own achieved 88% suppression, when combined with Bolldex control was increased to 90%.



**Pictured above:** A target organism for Deljin, African Bollworm larvae.



**Image below:** The mode of action of Cry toxins within *Deljin WG*.



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## Registered uses:

Pest	Crop type	Dose rate
African Bollworm ( <i>Helicoverpa armigera</i> )	Lettuce	General application rate is 1 kg/ha. Apply with detection of pest eggs and continue every 7–10 days. Refer to <i>Delfin WG</i> label for detailed instructions.
<i>Tuta absoluta</i>	Tomato, pepper, eggplant, potato	
Fall Armyworm ( <i>Spodoptera frugiperda</i> )	Barley, cotton, cruciferae (cabbage, broccoli, cauliflower and brussels sprouts), maize, sorghum, soya, sweetcorn, wheat	

Available in: 100 g, 1 kg

Certified by:



Registered, Marketed and Distributed by:



Manufactured by:

