Bolldex® (L8895)

Reg. No. L8895, Act No. 36 of 1947

Biomanagement




Andermatt
Madumbi

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A suspension concentrate of a Nucleopolyhedrovirus (HearNPV) for the control of African Bollworm (*Helicoverpa armigera*) on all crops. A highly effective population management tool.

Why use *Bolldex*®?

Advanced virus technology for suppression of African Bollworm larvae, manufactured to highest standard by world renowned virus specialists, Andermatt Biocontrol.

Features	Benefits
Unique virus mode of action	Ingestion of even one virus particle ensures mortality. There is no sub-lethal dose. This makes *Bolldex*® a highly effective population and resistance management tool and ideal for IPM programs
Correct timing of application can offer up to 90% control with minimal crop damage	Many opportunities exist for the target pest to ingest virus particles, starting when the eggs hatch. This improves population reduction and damage control to the crop
Highly concentrated SC formulation	*Bolldex*® can be applied at low volume application rates
Bolldex® has no residue limits	This allows for effective pest management right up to harvest and gives you residue options for other management needs
Highly specific target range	As the *Bolldex*® virus is highly specific it will not harm beneficial insect populations. *Bolldex*® can be applied without risk to bee populations and secondary pest outbreaks
Good compatibility and excellent shelf life (24 months at 4 °C and infinite when frozen)	*Bolldex*® is user friendly and easily incorporated into chemical programs as long as pH of the spray tank is managed
Natural product with no chemical additives, suitable for organic use	Non-toxic, no MRL, completely natural, safe for applicators and has no withholding period

How does *Bolldex*® work?

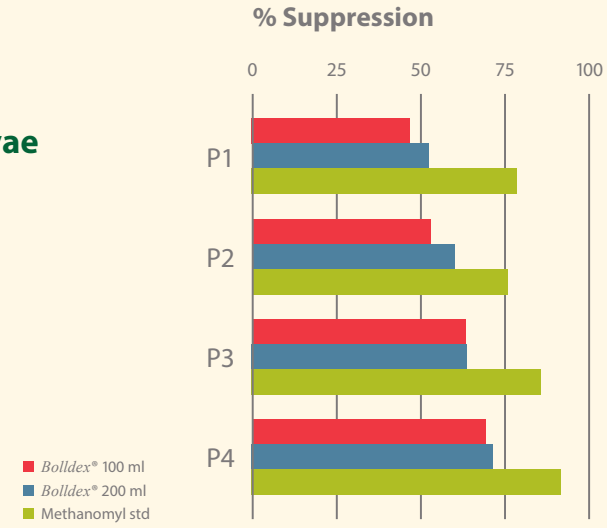
Bolldex® virus particles must be ingested to be effective. Ingestion chances are high by the African Bollworm, due to virus particle concentrations dispersed per application. 1 – 2 virus particles are enough to cause mortality.

Pictured right: An illustration of the size of a virus particle in comparison to the mandible of an African Bollworm larvae.

When virus particles are ingested, they travel into the midgut of the larvae (as illustrated on the right). The high pH environment causes the dissolution of the protective capsule surrounding the virus and releasing it. These virus particles infect the cells lining the midgut and replicate. These new virus particles are released into the haemolymph and go on to infect other cells, where replication continues. The widespread infection of the larval cells cause the insect to stop feeding and death occurs. The production of enzymes, such as chitinase, cause liquefication, releasing viruses that can serve as a secondary source of inoculum to infect other larvae.

Trial data:

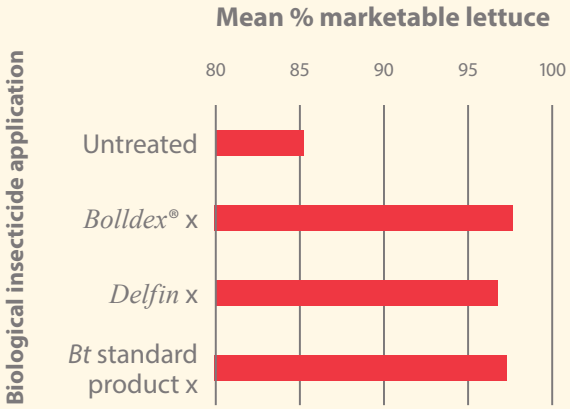
Bolldex® application of 100 ml and 200 ml on sun°o wers, gave up to 71 % suppression of Bollworm infestation which makes it an ideal tool for the reduction of bollworm larvae in an integrated program.



Figures right: Percentage suppression of control of Bollworm larvae on sunflower compared to an untreated control

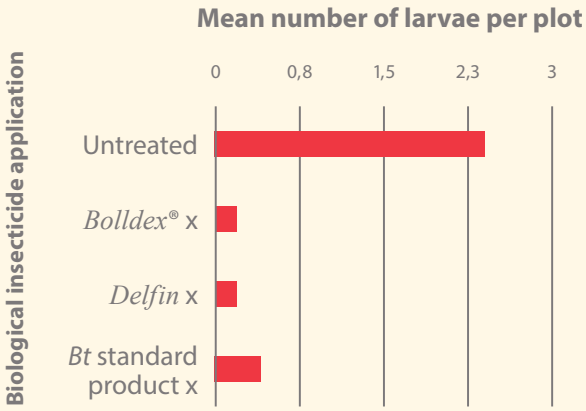
Bolldex®, as well as *Delfin* (*Bacillus thuringiensis*), exhibits very good control of African Bollworm when applied early, ie. when the first activity of young larvae (1st instar) is noticed. *Bolldex*® and *Delfin* compared very well to a standard *Bt* product used commercially.

Three applications every 7 days prior to harvest resulted in higher than 90 % of marketable lettuce.

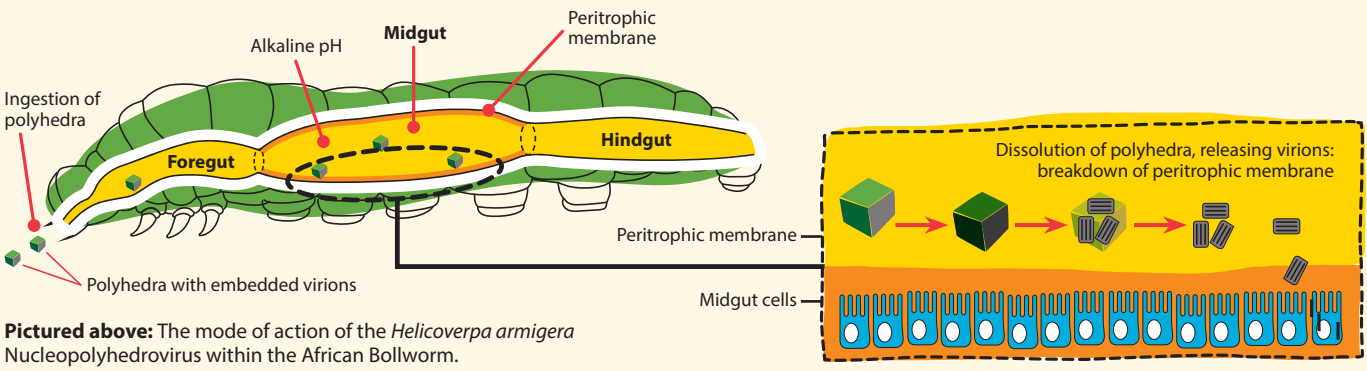


Figures right: The effect of *Bolldex*® and *Delfin* products on the percentage marketable lettuce per plot.

Bolldex® and *Delfin* caused a significant reduction in African Bollworm larvae present on lettuce when compared to the untreated control.



Figures right: The effect of *Bolldex*® and *Delfin* on the number of African bollworm (*Heliocoverpa armigera*) larvae present on lettuce.



Pictured above: The mode of action of the *Helicoverpa armigera* Nucleopolyhedrovirus within the African Bollworm.

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Registered uses:

Pest	Crop type	Dose rate
African Bollworm (*Helicoverpa armigera*)	All crops	General application rate of 200 ml per ha and 100 ml per ha aerial application for row crops. Refer to *Bolldex*® label for detailed instructions.

Available in: 500 ml

Certified by:

OMRI LISTED For Organic Use

Registered, Marketed and Distributed by:

Andermatt Madumbi

Manufactured by:

Andermatt Biocontrol