

# NPV a new biological control for Armyworm in Tanzania

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## African Armyworm

African armyworm is a major pest in Tanzania and East Africa that causes large scale damage to cereal crops and pasture.



Amyworm on Maize crop

## What is NPV?

There is a natural disease (the NPV) that causes massive epidemics killing armyworm and helping to control its outbreaks. The NPV disease is caused by an insect virus that occurs naturally in Tanzania. When NPV infects armyworm outbreaks, dead insects can be seen hanging from plants.



Amyworm killed by NPV

This dead insect will contain 2000 million infective particles each capable of infecting and killing another armyworm. Each insect killed by an NPV spray will be a new source of NPV to spread and continue control.



NPV seen as bright particles under microscope x1000

## Is NPV safe to us?

Yes the NPV ONLY infects the armyworm and cannot harm man, domestic animals, plants or even other insects. A recent international report concluded NPV use is safe and does not cause any health hazard

## NPV development in Tanzania

While NPV can kill armyworm naturally it spreads too slowly naturally to stop damaging outbreaks of armyworm attacking crops. Work is now underway to evaluate spraying outbreaks of armyworm with the NPV in Tanzania to see if it can be used to control armyworm without the use of expensive and risky chemical insecticides.



Ground application of NPV



Aerial Spraying of NPV

The trials of NPV both applied by ground spraying and aerial application have shown that spraying NPV onto armyworm outbreaks can kill off the outbreaks of armyworm before they can do serious damage. These trials have shown that NPV can be as effective in controlling armyworm as chemical insecticide. The NPV does take longer to kill than chemical insecticides, 3–5 days, but infected armyworms stop feeding before they actually die preventing serious damage. The NPV can be used just like a normal insecticide and requires no special equipment.

## NPV can be produced cheaply

NPV can be made by spraying early outbreaks with NPV. The insects that die afterwards are full of NPV. These can be collected then crushed to release the NPV which can be used to spray more outbreaks. This way NPV can be produced much more cheaply than the cost of chemical insecticide. NPV produced in one year can be stored so that it is available for the next year.

It is hoped this work will give Tanzania a new, safe control method for armyworm that can be produced here in Tanzania. This would be much cheaper than insecticides and so there will be enough for all the needs of farmers.

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