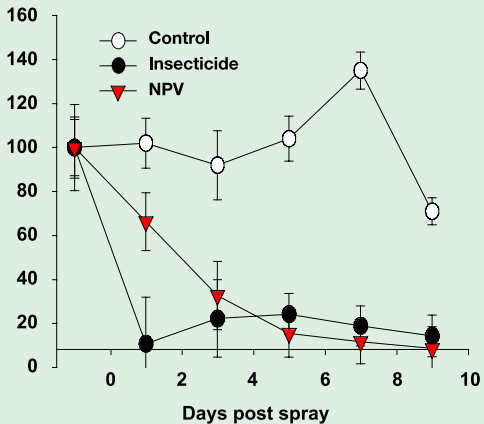


Improved armyworm control is linked to the development of a forecasting system. This incorporates local village level scouting using pheromone traps that specifically attract the armyworm male moths using the artificial scent of mating armyworm females.

The catches of armyworm in these traps when combined with satellite weather data and armyworm population models are used to forecast armyworm outbreaks.

Ground spray trial, Tanzania 2004



Community Pheromone Trap

This leaflet is an output from a research project R8408 funded by the United Kingdom Department for International Development for the benefit of developing countries. The views expressed are not necessarily those of DFID Crop Protection Programme.

Produced by the Ministry of Agriculture and Food Security, Pest Control Services, Tanzania and Natural Resources Institute, UK.



NPV a new biological control for Armyworm in Tanzania

For further information please contact:

Wilfred Mushobozi

Pest Control Services
PO Box 7473
Arusha
Tanzania

Tel: (255) 27 2553249
E-mail: wilfred.armyworm@satconet.net

David Grzywacz

Natural Resources Institute
University of Greenwich at Medway
Central Avenue
Chatham Maritime
Kent ME4 4TB, UK

Tel: +44 1634 883360
E-mail: d.grzywacz@greenwich.ac.uk



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

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.

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.

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.

Armyworm killed by NPV

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.

The trials of NPV both applied by both ground spraying and aerial application have shown that spraying NPV onto armyworm can kill off the outbreaks of armyworm before they do serious damage. These trials have shown that NPV can be as effective in controlling armyworm as chemical insecticide. The NPV does takes 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.

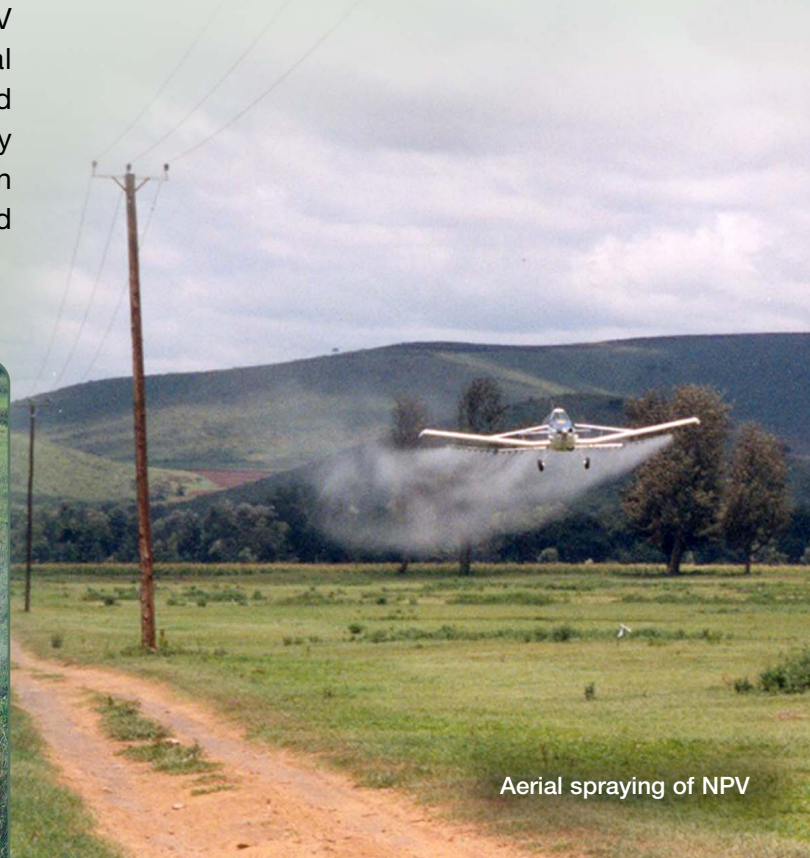


Ground application of NPV

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 provide a new, safe control method for armyworm that can be produced and used in Tanzania. This would be much cheaper than insecticides and so there will be enough for all the needs of all farmers.



Aerial spraying of NPV