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Redheads beware

The red hairy caterpillar (RHC), *Amsacta albistriga*, is a pest of several rainy season crops in Asia. The RHC infestation is sporadic, but the devastation is widespread. Due to the prolonged diapause, larval migratory behavior and irregular adult emergence, chemical protection alone is not sufficient.

The red hairy caterpillar

Farmers manage the pest by manually collecting and destroying the larvae. However, investment and timely availability of labor in large areas make this method impractical. ICRISAT's research resulted in utilization of the Nuclear Polyhedrosis Virus (NPV) to kill the RHC. Further studies to find effective virus production strategies led to the utilization of field-collected larvae for NPV production.

The RHC larval populations were collected from three hotspots in Andhra Pradesh (Nalgonda, Ananthapur and ICRISAT sites) during August 2004–05. Studies revealed a second generation of the pest, which, together with the prolonged emergence of moths, confirmed the widespread occurrence of RHC.

RHNPV was isolated and multiplied at ICRISAT laboratories. The mass production technique involved putting up an aluminum or polythene grid/enclosure (10 cm height) to confine the larvae inside the shaded enclosure. RHC larvae (3–5 instars) were released into the enclosure, and fed with plants already inoculated with the virus. The infected larvae showed the mortality symptoms from the 5th day after inoculation.

Eco-friendly options for larvae collection

- Apply NPV 15–20 days after crop sowing and repeat the spray at 10-day interval with RHNPV @ 5 ml in 1.5 x 10^{12} POBs per ha.
- Fix polythene sheet (12" wide strip) along the border of the crop too provide a barrier and to divert the migrating larvae into a trap.
- Use sunflower (10–12 plants/sq m) as a trap crop and two rows of cowpea or field bean as border crop along the main fields.
- Dust the inside of a trench (12" deep and 12" wide) around the field with chemical, either with malathion or carbaryl or quinolphos.
- Place *Jatropa* or *Ipomoea* or *Calotropis* twigs on the field bunds to attract larvae.

Aluminum grid to confine larvae.

The field technique for rearing larvae is advantageous, particularly in avoiding the handling of huge larval populations, rearing and inoculation. This would also facilitate farm level production and access to the biopesticide at the village level. The technique can serve as an option in the armory of the plant protectionist and would be an asset in managing the RHC pest.

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