

COMPARISON OF ULV AERIAL SPRAY WITH CONVENTIONAL METHOD ON

HELIOTHIS ARMIGERA Hbn. on cotton

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Summary

To study the effectiveness of ULV spray system on mortality of the Bollworm (*Heliothis armigera* Hbn.) in comparison with conventional spray system, experiment was conducted in Gorgan (northern province of Iran) in 1969.

The chemical applied in conventional system was DDT plus Lindan at a dose of 1.5+0.450Kg active material per hectare. In the ULV system Malathion+Thiodan and Malathion (at 2 liter per hectare) and cottinex (at 4 liter per hectare) were applied.

Spraying was done by Piper PA-18 with 14 nozzles of 8001 type made by Sprayings System Co. The plane was used in ULV system with a 40-45 Psi pump pressure. In conventional system the chemicals were applied at a pressure of 40 Psi by 28 nozzles.

The experiment design used was completely randomized block design with four replications. The amount of infestation by the Bollworm at spraying time was at least 4% damaged bolls, buds, or flowers.

Result

1. In ULV spraying system cottinex had an effectiveness of 57-67%, but it caused severe phytotoxicity. Therefore it can not be recommended unless further experiments show that on producing smaller droplets by Micronaire, the insecticide does not cause phytotoxicity.

2. DDT plus Lindan, Malathion+Thiodan, Cottinex, and Malathion showed mortality of 64-77%, 60-76%, 57-76%. In all cases highest mortality was obtained on smaller larvae.

3. Residual effect of DDT plus Lindan, Malathion+Thiodan and Cottinex was almost the same up to 12 days after spraying.

References

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