

A Note on Effectiveness of Light Traps for the Control of Gujarat Hairy Caterpillar *Amsacta* spp.

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Gujarat hairy caterpillar, *Amsacta* spp. which is popularly known as *Katra*, was considered as one of the most serious pests of early *kharif* crops in the northern part of Gujarat during forties. Jhavery (1921) reported that the use of light trap over a period of 6 years on the Government Farm, Nadiad during the years 1911 to 1916 resulted in declining the moth populations, egg masses and larval populations year after year and the pest finally disappeared from the area after 1917 onwards. Similarly Milne (1927) also recommended the use of light traps for the control of the pest in Punjab. This confirmed the usefulness of light trap in controlling the pest. Thereafter due to extensive use of DDT and other chlorinated hydrocarbon insecticides in several agricultural crops, the pest population dwindled automatically and remained at sub-economic level until early sixties so much so that it was either forgotten or overlooked by the farmers and extension workers. During late sixties, the pest began to appear sporadically but was satisfactorily controlled by dusting with 5 or 10%

BHC or 2% methyl parathion on hedges or borders of fields about a week after the first rain (Patel *et al.* 1966; Ramswammy *et al.* 1968 and Patel and Shah, 1969). Of recent, the pest is again building up high populations year after year to cause reasonable damage to early sown *kharif* crops such as *bajra*, sesamum, groundnut, paddy, tobacco nurseries etc. The high fluctuations in pest population are attributed to the introduction of improved high yielding varieties or hybrid varieties of crops and subsequent changes in our agro-ecosystem and increased pesticides tolerance by the pest. Since the pest is sporadic in nature and the farmers do not take up control campaign on co-operative basis, the problem is gaining increasing importance year after year.

The pest has only one generation and the phototrophic adults emerge soon after the first rain. Use of light traps on co-operative basis in the affected area for about a week beginning from the first rain would therefore prove very useful and effective to control *Katra*.

In an effort to demonstrate the control of white grubs, *Holotrichia consanguinea* Blanch., a campaign was organised in July 1979, in a village named Vyasji-na-Muvada of Kapadwanj taluka by spraying 0.2% carbaryl on the host trees and setting up a total

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of nine light traps in the fields to trap the white grub adults. The first rain was received in the area on 26th June 1979. The traps comprised of 250 watt bulb or a petromax overhanging a 40 cm diameter shallow plastic container containing kerosinised water.

The average number of moths collected per day per trap was 99.68 at 250 watt electric bulb and 82.73 at the petromax. This shows that there is no apparent difference in the total collection of moths per day per trap between two sources of light. Although setting up of these light traps was delayed by 3-4 days, it may be mentioned that most of the females collected were gravid.

With a view to determine the effect of this adult destruction by using a light trap, the populations of *Katra* larvae were randomly recorded after 20 days from a patch of 6 m x 6 m at five different locations from the trapped area of Vyasji-na-Muvada. Similar observations on larval population were also made at five different locations from the surrounding villages like Telnar, Nirmali, Palaiya and Ramatalavdi and from pockets of Vyasji-na-Muvada where light traps were not used. The average larval popula-

tion observed in 6 mx 6 m trapped area was 29.7 as against 62.81 in the untrapped areas.

This shows light trapping to be quite useful and effective in regulating the *Katra* population. If the traps are set on co-operative basis in the whole area soon after the first rain, the pest can be controlled very easily at nominal cost only.

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* Original not seen.