Research Paper :

Attraction of male moth catches of boll worms toward sex pheromone traps in Bt. cotton

J.K. PATEL, M.V. VEKARIA, I.S. PATEL AND P.S. PATEL

International Journal of Plant Protection (October, 2010), Vol. 3 No. 2 : 332-334

See end of the article for authors' affiliations

Correspondence to :
I.S. PATEL
Department of Entomology, C.P. College of Agriculture, S.D. Agricultural University, SARDARKRUSHI-NAGAR (GUJARAT) INDIA

SUMMARY

The results revealed that the attraction of male moths of *Helivoverpa* to pheromone traps commenced during the first week of September. Maximum attraction of male moth was trapped during the second week of October (13 /trap). The attraction of spotted boll worm started in the beginning of the last week of September to first week of February. It was maximum during between second week of October to first week of November. The attraction of male moths of pink boll worm started in the beginning of the fourth week of November and continued till the first week of March. The maximum trapped moths were in the last week of January (19 /traps/week) and maximum moths were 112/traps. The attraction of *Spodoptera* started during the second week of August. The maximum attraction of male moths was in the second week of September (38 moths/trap/week).

Key words : Bt. cotton, Cotton boll worms, Sex pheromone

Accepted : September, 2010

In cotton, boll worms are the most destructive pests which cause severe loss in terms of quality and quantity of cotton. Some times, serious outbreak of the boll worm has been found to cause loss up to 40 to 50 per cent in yield and even total failure of the crop. For the management of cotton boll worm, sex pheromone trap is one of the components of integrated pest management. Before developing any spray schedule programme, study on attraction of male moths toward sex pheromone traps in cotton crop is very essential. Attempt was therefore made on cotton during *Kharif*, 2007-08.

MATERIALS AND METHODS

Bt. cotton crop was sown in the 1st week of July during *Kharif* 2008-09 in plots of 800 m^2. Four sex pheromone traps were installed in the centre of 200 sq.m. cropped area and a single rubber septa *viz.*, *Helicoverpa armigera* for helilure, *Earias vittella* for ervitlure, *Pectinophora gossypiella* for gossyplure and *Spodoptera* for spodolure was placed separately in each pheromone trap. The rubber septae changed at 15th days intervals and traps were positioned just above the canopy height of cotton crop. Male moth catches in each trap of each boll worm were counted daily and mean catches per trap per week of each boll worm were computed.

RESULTS AND DISCUSSION

The results obtained from the present investigation have been discussed under following sub heads :

American boll worm:

The attraction of male moths of *Helivoverpa* to pheromone traps was commenced during the first week of September 2008-09. Maximum attraction of male moth was 13 in during the second week of October. It was gradually declined in the second week of December. Throughout the crop season, 82 male moths /trap were trapped in sex pheromone trap. The present findings are similar to the results of Gupta *et al.* (1996) who reported that the American boll worm started in the end of July and higher during the middle of November to middle of January when cotton crop had maximum fruiting bodies. Pawar *et al.* (1984) also observed more moth catches of *H. armigera* during August-September and November-December.

Spotted boll worm:

The attraction of male moths of spotted boll worm (*E. vettella*) started in the beginning of the last week of September to first week of