

SURVEY REPORT ON INSECT-PESTS OF COTTON IN BHIWANI DISTRICT

Date	Villages surveyed (No. of fields surveyed)
10.09.2020	Bakhtawarpura (1), Salempur (1), Beran (4), Kharkhari (1), Singhani (1), Jhumpa Kalan (1), Jhumpa Khurd (1) and Barwas (1)

Eleven fields of cotton from eight villages were surveyed for insect-pests incidence in Bhiwani district and following observations were recorded:

- Adult whitefly population was found to cross economic threshold (ET) (6-8 adults/leaf) in eight fields (2 fields of Beran; 1 each field of Salempur, Kharkhari, Singhani, Jhumpa Kalan, Jhumpa Khurd and Barwas). Mean population of whitefly adults ranged from 4.5 to 18.8 adults per leaf across the fields. Besides, a low to medium nymphal population of whitefly was also observed in these fields.
- Incidence of thrips was not observed in any surveyed field. Incidence of leafhopper was observed in a few fields and population of nymphs ranged from 0.0 to 0.2 nymphs per leaf which was below ET (2 nymphs per leaf).

Predictions and suggestions

- Activity of spiders, coccinellids and *Chrysoperla* sp. which feed on sucking pests was observed in most of the fields. Therefore, farmers should refrain from unnecessary insecticide application in order to conserve beneficial insects.
- In case of long dry spell of 15 days or more, the population of whitefly on cotton may increase fast. The leafhopper population on the cotton may increase if rains occur frequently and mean relative humidity remains above 70 per cent. However, the thrips population is likely to remain below ET.
- Farmers are advised to monitor the population of sucking pests on 20 randomly selected plants (3 leaves/plants), and pink bollworm through pheromone traps (2-3 traps/acre) & fruiting bodies (20 flowers or bolls/acre) on weekly basis and to apply control measures only at economic threshold level. The whitefly monitoring can be done twice in a week.
- In case of whitefly population crosses ET in cotton during September, alternate spray of 300 ml of dimethoate 30% EC or oxydemeton methyl 25% EC and neem based insecticide (Nimbecidine/Achook) @ 1.0 litre with 250 litres of water per acre may be applied. Alternatively, neem based spray of spiromesifen (Oberon) 22.9% SC @ 240 ml or pyriproxifen (Daita) 10% EC @ 400 ml with 200-250 litres of water per acre can also manage nymphal population of whitefly. Same insecticide should not be sprayed continuously.
- For the management of leafhopper in cotton, farmers are advised to apply 40 ml imidacloprid (Confidor) 200 SL or 40 g thiamethoxam (Actara) 25% WG in 150-175 litres of water/acre.
- In case of pink bollworm infestation in *Bt* cotton, farmers are advised to inform the Head, Department of Entomology, CCS HAU, Hisar. If the boll damage exceeds 10%, an initial spray of neem based insecticide @ 1.0 litre and neem based spray of quinalphos 25% EC @ 600 ml/ quinalphos 20% AF @ 650 ml or ethion 50% EC @ 600 ml or profenophos 50% EC @ 600 ml with 150-175 litres water per acre can be given. Same insecticide should not be used continuously.
- Farmers were also advised to be vigilant for the invasion of locust swarm in the cotton growing districts adjoining to Rajasthan and inform the state agriculture department/KVK of CCS HAU, Hisar immediately.
- Farmers are suggested to spray only recommended insecticide in right dose and mixing of insecticides should be avoided.