

SURVEY REPORT ON INSECT-PESTS OF COTTON IN HISAR AND BHIWANI DISTRICTS

| Date | Villages surveyed (No. of fields surveyed) |
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| 20.08.2020 | Hisar: Neoli Kalan (2) and Bherian (2) Bhiwani: Bakhtawar Pura (2), Mandholi Kalan (3), Isharwal (2), and Kalod (2) |

Thirteen fields of cotton from six villages were surveyed for insect-pests incidence in Hisar and Bhiwani districts and following observations were recorded:

- Adult whitefly population was found to cross economic threshold (ET) (6-8 adults/leaf) in eight fields (2 each fields of Mandholi Kalan & Kalod, 1 each field of Neoli Kalan, Bakhtawar Pura, Isharwal & Bherian). Mean population of whitefly adults ranged from 2.8 to 27.0 adults per leaf across the fields.
- Incidence of thrips was observed in all surveyed fields and none of the field was found to cross ET (10 nymphs & adults/leaf). Mean population of thrips ranged from 0.2 to 1.5 thrips per leaf across the fields.
- Leafhopper population was also observed in all the surveyed fields and none was found above ET (2 nymphs/leaf). Mean population of leafhopper nymphs ranged from 0.1 to 0.9 nymphs per leaf across the fields.
- The infestation of mealy bug was found only on a few plants near to boundary in one field of Bherian.

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 10 randomly plants (3 leaves/plants) on weekly basis and to apply control measures only at ET.
- In case of whitefly population crosses ET in cotton during August-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.
- If the population of thrips crosses ET, a spray of 250-350 ml dimethoate (Rogor) 30% EC or 300-400 ml oxydemeton methyl (Metasystox) 25% EC with 150-175 litres of water is suggested.
- 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 or spinosad 45 SC @ 75 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.