

Management of Whitefly

Recognize the problem

Whitefly adults are tiny (about 1 mm long) moth-like insects. They are white to slightly yellowish in colour and their bodies and both pairs of wings are covered with a powdery and waxy secretion. They suck cell sap from the lower surface of the leaves. The symptoms of whitefly infestation are yellowing of leaves, withered plant parts and reduced flowering and fruiting. Sticky substances appear on the leaf surface and sooty mold develops on leaves and fruits, giving the plant a sickly black appearance. In severe infestation, plants start wilting and if the plant is shaken, a cloud of tiny moth-like insects flies out but rapidly resettles.

Background

Whitefly is a common insect pest in Nepal. It is polyphagous, meaning it has a wide host range. It is a serious insect pest of many vegetables particularly tomatoes, eggplants and cucumber. Both nymphs and adults causes damage on crops. Whiteflies also transmit the viruses that cause yellow mosaic and leaf curl disease. They affect the seedling, vegetative growth and flowering stages of the plant.

Management

- Avoid excessive damp and dark crop growing environments in glasshouses
- Do not transplant whitefly infested seedlings
- Intercrop with non-preferred crops such as wheat and barley into the main crop to reduce whitefly infestation
- Avoid the application of excessive nitrogenous fertilizer as succulent and tender plants are vulnerable to whitefly
- Rogue out the virus affected plants as soon as symptoms are observed
- Install yellow sticky traps for monitoring and mass trapping of adult whiteflies
- Spray neem-based insecticides such as Altineem @ 3-5 ml/litre water to manage early instars of whitefly
- If further sprays are needed, spray imidacloprid 200 SL @ 1.5 ml per 8 litres water at 15 day intervals
- If the infestation is severe, apply deltamethrin 2.8EC @ 1 ml/litre at 7 day intervals

Adult of whitefly. (Photo by NBAII)



Symptom of yellow mosaic, which is transmitted by whitefly. (Photo by Mitsuro Kameya-Iwaki)



When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > *Bemisia tabaci*

The recommendations in this factsheet are relevant to: Bangladesh, India, Nepal, Pakistan, Sri Lanka



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