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Management of Mango Hopper

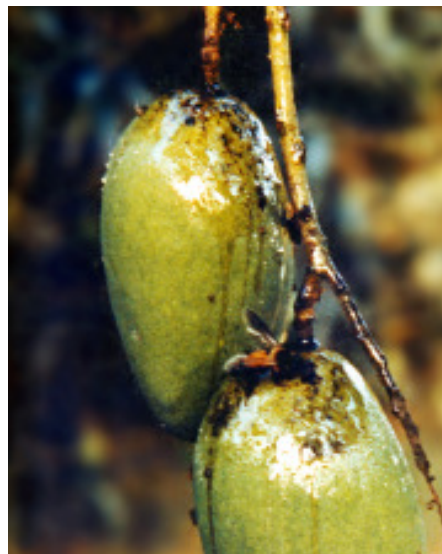


Fig.1 Infestation of mango hopper on leaf and fruit

Hopper is a serious pest of mango which may cause up to 50 per cent crop loss in cases of severe infestation. This pest is expected to emerge from the last week of February to first week of March. *Amritodus atkinsoni*, *Idioscopus clypealis* and *Idioscopus nitidulus* are the most common species of hopper and they can be easily identified on the basis of size, colour and spots on the abdomen. *A. atkinsoni* is bigger in size (4.2 to 5 mm long), dark grey in colour having two spots on abdomen and scutellum. *I. nitidulus* is slightly smaller (4 to 4.8 mm long) with three spots on the scutellum and a prominent band across its light brown wings, whereas *I. clypealis* is the smallest (3.5 mm) with two spots on the scutellum, dark spots on the vertex and light brown in colour.

Adults oviposit from middle of February to March on the floral tissues. They lay egg singly on floral shoots, buds and tender leaves which hatch in a week. After hatching, large number of nymphs and adults puncture and suck the sap of tender parts such as panicles, inflorescence, leaves and fruits, thereby reducing the vigour of the plants and particularly destroying inflorescence and causing fruit drop. Heavy puncturing and continuous draining of the sap causes curling and drying of infested tissues. They also damage the crop by excreting a sweet sticky substance which facilitates the development of sooty mould, a fungi, which affects photosynthesis activities of leaf. A low population of hoppers is normally recorded in mango orchards throughout the year but it peaks up during February to April and June to August. Shade and high humidity are favourable for their multiplication. Such conditions usually prevail in old, neglected and closely planted orchards. In summers the total life of a hopper lasts 2-3 weeks.

How to manage hoppers ?

In order to control mango hoppers, first spray of imidacloprid (0.005%, 0.3 ml per liter of water) should be done at early stages of panicle formation, if hopper population is more than 5 per panicle. The second spray of thiamethoxam (0.005%, i.e., 0.2 g per liter of water) or acephate (1.5 g per liter of water) should be carried out after fruit set. If substantial hopper population still persists, third spray of carbaryl (0.15%, i.e., 3 g per liter of water) should be done before maturity of fruits. Synthetic pyrethroids such as cypermethrin, permethrin, fenvalerate and deltamethrin should not be sprayed in mango as they are harmful to human health. Orchardists are advised not to spray if more than 50 per cent flowering has already occurred because it will affect the pollinator activity leading to low fruit set. Good orchard management practices such as keeping the orchard clean, regular ploughing, removal of weeds and pruning of overcrowded and overlapping branches in the month of December will reduce the hopper population.