

Nature of damage: Nymphs and adults suck oil from the kernels of mature pods especially after harvest making them unfit for use. Bug hides within rubbish heaps of semi-dry leaves.

Nymph: Pinkish in colour.

Adult: Dark brown bugs.

10. Millipede, *Spirostreptus* sp., Spirostreptidae, Spirostreptidae

Symptom of damage: Empty pods with hole.

Nature of damage: Young one and adult bores into soil attack developing pods and eaten away internal kernel.

Adult: Elongated body with annular ring-like segments with two pairs of legs in each segment, brown in colour.

SAP FEEDERS

11. Aphids, *Aphis craccivora*, Aphididae, Hemiptera

Symptom of damage: Wilting of tender shoots during hot weather. Leaves mottled with chlorotic or dark green spots and plants stunted.

Nature of damage: Nymphs and adults suck the sap from tender shoots. Vector of groundnut rosette. In cowpea and blackgram it can transmit yellow mosaic.

Nymph and Adult: Reddish to dark brown coloured aphids.

12. Leafhopper, *Empoasca kerri*, Cicadellidae, Hemiptera

Symptom of damage: Tip yellowing in leaves in the form of 'V' shape later turn brown, dry and brittle, called 'hopper burn'. Also cause distortion and whitening of veins, leaf curling and plants stunted.

Nature of damage: Nymphs and adults suck the sap from leaves and thus reducing plant vitality and yield. Attack the crop upto one month.

Egg: Eggs are inserted in the leaf tissue (vein).

Nymph and Adult: Elongate, active wedge shaped green insects found on the under surface of leaves.

13. Thrips, *Caliothrips indicus*, Thripidae, Thysanoptera

Symptom of damage: Older/lower leaves showing white spots/marks or streaks intermingled with black excreta on the upper surface.

Nature of damage: Nymphs and adults suck the sap from tender shoots.

Nymph and Adult: Dark blackish brown with fringed wings. Forewings have three pale white coloured bands.

14. Thrips, *Scirtothrips dorsalis*, Thripidae, Thysanoptera

Symptom of damage: Tender leaves showing yellowish green patches on the upper surface and brown necrotic areas and silvery sheen on the lower surface.

Nature of damage: Nymphs and adults suck the sap from tender shoots.

Nymph and Adult: Creamy to white nymph and black adult.