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Fact sheet

Insect Pests of the Home Garden Series

Melon Aphid

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Winged adult.

Nymphs and wingless adult.

Damaged leaves.

Fruit and leaves with honeydew.

Injury:

Melon aphids, *Aphis gossypii* Glover, have an extensive host range, and readily feed on asparagus, beans, beets, eggplant, cucurbits, okra, peppers, spinach and tomatoes. It also attacks many weeds, including bindweed, jimsonweed, milkweed, pigweed, and plaintain. In New Jersey, melon aphids are a serious pest of the cucurbits, with cucumbers and melons being highly susceptible, followed by squashes, gourds, pumpkins, and then watermelons. Aphids prefer to feed on the leaf undersides, where plant sap is extracted, causing leaves to curl downward and pucker. Plants become yellowish and wilted, have loss of vigor, and drop their leaves. The honeydew secreted by aphids makes plants sticky and encourages development of black sooty mold on the foliage and fruit. Damage is most severe after vines begin to run. Aphids also transmit several plant virus diseases, including cucumber mosaic, zucchini yellow, and watermelon mosaic. These diseases can be more destructive than the actual feeding by the aphids.

Description:

Adults are pear-shaped, soft-bodied insects that range from pale to dark green in cool seasons to lemon yellow in hot seasons. Winged adults are 1–2

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mm long and have a black head and thorax. Apterous (non-winged) adults are 0.9–1.5 mm long. Winged and wingless forms and all of the various colored individuals may be present on a single leaf. Eggs are yellow when first laid but later turn brownish-black. Nymphs are similar in shape and color to wingless adults but are smaller in size. Adults and nymphs generally can be recognized by the dark, almost black, short cornicles (or "tailpipes"), which are projections on the end of the abdomen common to aphid species.

Life History:

Aphids overwinter as eggs on the live-forever plant and other weeds. In spring, the eggs hatch and wingless females are produced. In June, winged females develop and may fly to other host plants, including cucurbits, and give birth to live wingless, female nymphs. Each female produces an average of about 85 nymphs, and under favorable conditions, nymphs mature in about 5 days and begin producing their own progeny. When certain environmental conditions occur, such as overcrowding, host plant decline, or shortened daylength, winged adults are produced which fly to the overwintering plants, mate with winged males, and deposit the eggs that will overwinter. Wingless females that remain on cucurbit plants perish when frost destroys the plants.

Management of Melon Aphids:

1. Plant in well-prepared, fertile seedbeds to produce a vigorous crop that will withstand an aphid attack. However, avoid overfertilizing with nitrogen.

2. Maintain a weed-free garden, and destroy weeds around the garden area, especially weeds on which aphids overwinter, such as live-forever.

3. Keep ornamental plants as far away from the garden as possible. Melon aphids thrive on begonia, clover, catalpa, ground ivy, gardenia, hydrangea, violet, and others.

4. Lady beetles and their larvae are aggressive predators of aphids. Keep dust down to encourage parasitism and predation.

5. Row covers applied at planting and removed at first bloom exclude melon aphids.

6. Reflective mulches, although expensive, are effective in repelling aphids, thus reducing or delaying virus infection. Mulches are effective until expanded foliage covers the reflective surface.

7. Watch for wilting or curling leaves, or shininess of the leaves—the first signs of a building aphid infestation. Control is difficult once the curling progresses.

8. Natural enemies help keep aphid populations under control until late in the season. If a high population level of aphids appears to be causing wilted plants or excessive honeydew, use a pesticide other than carbaryl for the infested area, (use of carbaryl will increase the aphid problem). Read and follow all label directions, restrictions, and precautionary statements. Days to harvest after last application vary depending on crop and pesticide—refer to label for appropriate time intervals.

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