

Best Management Practices

Aphids

Background: Aphids are the most important pest in greenhouses, and are also important in nursery and ornamental settings. A great number of different species of aphids occur in greenhouses, and one or more of them attacks almost every species of ornamental plant grown. The aphids differ somewhat in size, appearance, host preference and the color of their bodies. Some are green, others brown, reddish or black in color, while woolly aphids are covered with a white, cottony substance. But they all have basically the same biology and behavior, preferring to feed on tender, new plant growth.

Description/Biology: Aphids are soft-bodied, pear-shaped insects less than 1/10 inch long. They may be winged or wingless. Winged forms are more common when aphid population density is high. Under greenhouse, southern nursery, and, temperate zone summer conditions the life histories of aphids are similar, although the development time varies from species to species. Under these conditions all aphids are female and generation after generation produces females that upon maturity give birth to live young without being mated. These environmental conditions are similar to those in tropical and subtropical regions; thus, the true sexes do not appear nor does reproduction occur through eggs until temperatures drop in the fall. In temperate areas, eggs are the overwintering stage, hatching into nymphs the following spring. Aphids are homopteran insects. They feed by sucking the sap from tender plants, often causing plant deformation, curling and shriveling of leaves and in some cases, the formation of galls on the leaves. The aphids further injure the plants by vectoring diseases, especially viruses, and by secreting excess sap through a pair of tiny tubes at the end of the abdomen. This substance, called honeydew, is a sweet liquid, which is attractive to ants and on which sooty mold grows. Ants will often defend their "farms" of aphids from predatory beneficial insects and move them to new plants when necessary.

There are many aphids that can attack greenhouse and nursery crops including:

Chrysanthemum aphid (*Macrosiphoniella sanborni*)

Pea aphid (*Acyrtosiphon pisum*)

Rose aphid (*Macrosiphoniella rosae*)

Spirea Aphid (*Aphis citricola*)

Green peach aphid (*Myzus persicae*)

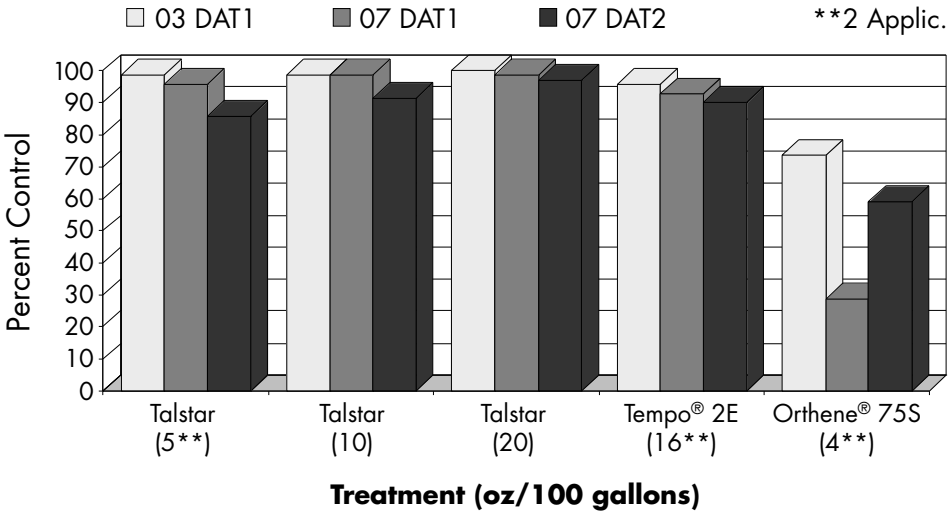
Melon aphid (*Aphis gossypii*)

Control Measures

Rotation of pesticides is critical for control of aphid infestations in greenhouses due to their ability to develop tolerance to several types of insecticides. It is advisable to rotate modes of action between organophosphates, pyrethroids and other chemical classes on a regular basis. Applications should be made on a 7-14 day schedule depending on the level of infestation and the nature of the crop.

For control of aphids apply Talstar® Nursery Flowable insecticide/miticide or Talstar® Flowable insecticide (greenhouse) at 5-10 ounces per acre (5-10 ounces/100 gallons).

Talstar® Data Summary Spirea Aphid Control in Ohio



Trial conducted by: Dr. Dave Nielsen; Ohio State University; 1995
(PD950832)

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