

Mites on Ornamental Plants ¹

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Spider mites (Figure 1) are among the most common pests which attack ornamental plants in Florida. They are not insects, but more closely related to spiders and ticks. Adult mites, spiders and ticks have eight legs. Mature mites are usually less than 1/50 inch in length and generally found on the undersides of the leaves. Mite infestations are often not detected until the plants are severely damaged.

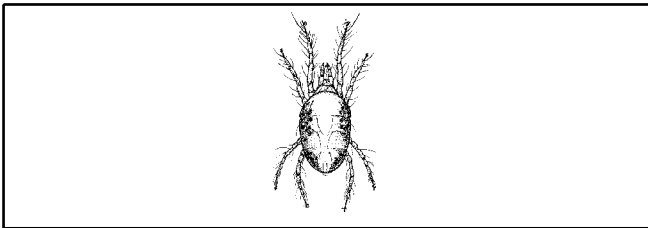


Figure 1. Two-spotted spider mite. Credits: University of Florida

Mites have needle-like, piercing mouthparts with which they puncture the leaf and suck the plant juices. Damage from light infestations appears as yellow or gray stippled patterns on the leaves. The undersides of infested leaves usually have fine silken webbing spun across them (Figure 2). Heavy infestations cause the leaves to turn yellow, gray or brownish and eventually drop off. Webbing may be spun over entire branches or in the case of small

plants, over the entire plant. Examine the undersides of the leaves for mites using a 10 or 15 power magnifying glass. Mites can be seen more easily by shaking the foliage over a white sheet of paper and observing any mites present. They may be reddish, green, yellow, purple, black or virtually colorless. The body contents sometimes show through their transparent body wall giving them a spotted appearance. Cast skins may also be seen among the live mites imparting a grayish residue to the undersides of the leaves. There are many species of mites and their development differs somewhat, but a typical life cycle is as follows. The adult female mite is capable of laying several hundred eggs during her life. The eggs are attached to the fine silk webbing and hatch in approximately three days. The immature mites molt three times before reaching the adult stage. The length of time from egg to adult stages varies greatly depending on temperature. Under optimum conditions, (approximately 80 degrees F), mites complete their development from egg to adult in 7 to 10 days. There are many overlapping generations per year.

Some of the plants on which mites are frequently found include african violet, azalea, camellia, chrysanthemum, citrus, eleagnus, holly, ligustrum,

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Figure 2. Two-spotted spider mite webbing on strawberries. Credits: Lyle Buss, University of Florida

pyracantha, orchid, rose and viburnum as well as others. Mite damage is much more severe during dry weather. Large numbers of mites are commonly seen during the spring months, especially April and May, and also again in September and October.

Control of Mites

Many homeowners can remove mites and keep populations below damaging levels by spraying their landscape plants with a forceful stream of water. Use a garden hose with an adjustable nozzle and spray undersides of leaves when mites appear.

One of the most important aids in successful mite control is to begin treatments before damage becomes severe. Inspect your plants frequently with the aid of a magnifying glass and treat promptly when damage begins to become evident (See Table 1). Two applications 5 to 6 days apart are required for satisfactory control. Spray the plants to the point of run off. Be especially careful to spray the undersides of the leaves thoroughly. Continue to inspect your plants throughout the year and apply a miticide again if needed followed with a second application 5 to 6 days later. Soil treatments are relatively slow in action but are effective for long periods of time (usually five to six weeks). See Table 1.

Beneficial Mites and Insects

Insect predators including lady beetles, praying mantis, assassin bugs and tiny parasitic wasps prey upon harmful mites. Many mite species are actually predators, and do not damage plants. Every effort should be made not to destroy these beneficial

organisms. Do not apply an insecticide unless plant damage is becoming evident.

Table 1. Miticides labeled for use by professional applicators in residential areas or interiorscapes.

Brand Name	Active Ingredient	Chemical Class	Use Sites ¹	Target Pests
Avid	Abamectin	Macrocyclic Lactone	L	Broad, cyclamen, eriophyid and spider mites
Cinnamite	Cinnamaldehyde	Cinnamon oil	F, H, L, V	Mites
Conserve	Spinosad	Naturalyte	L, T	Spider mites
DeltaGard	Deltamethrin	Pyrethroid	L	Mites (suppression)
Floramite	Bifenazate	Carboxamide	IN, L	Spider mites
Hexygon	Hexythiazox	Carbazate	IN, L	Spider mites
Horticultural Oils	Paraffinic oil	Oil	F, IN, L, V	Spider mites and eriophyid mites
Insecticidal Soaps	Potassium salts of fatty acids	Soap	F, H, IN, L, V	Spider mites
Kelthane	Dicofol	Organochlorine	F, L, T, V	Broad, cyclamen, and spider mites
Sanmite	Pyridaben	Pyrazole	L	Broad and spider mites
Scimitar	Lambda-cyhalothrin	Pyrethroid	IN, L, T	Broad and spider mites
Shuttle	Acequinocyl	Naphthoquinone derivative	L	Spider mites
Sulfur	Elemental sulfur	Inorganic	F, L, V	Broad and spider mites
Talstar	Bifenthrin	Pyrethroid	IN, L, T	Mites
Triact	Neem oil	Botanical	IN, L, T	Mites
Vendex	Fenbutatin-oxide	Organotin	L	Spider mites

¹ Key for use sites: IN-interiorscape T-turf L-landscape ornamentals F-fruit V-vegetables H-herbs