



Spider Mites A General Discussion

Spider mites are frequently encountered microscopic pests of ornamental plants and shade trees. Due to the nature of spider mite injury and the unavoidable deterioration of samples while in transit to the laboratories, the ability to diagnose spider mite injury and detect their presence on the plant in the field is desirable. The objectives of this report are to provide basic information concerning spider mite nomenclature, hosts, injury, detection, and control.

NOMENCLATURE

Mites, red spiders, two-spotted spider mites, red spider mites, and red mites are several of the non-specific common names used when describing or discussing spider mites. These various names allude to the general appearance and color of some spider mites, but do not accurately describe all spider mites. The accuracy of these names is not important here. The important point is that these names are variously used on the labels of pesticides, which are registered for the control of spider mites.

HOSTS

Spider mites are cosmopolitan and feed on nearly all native, exotic, deciduous, broadleaf evergreen, and needle-bearing evergreen ornamental or shade trees.

INJURY

Spider mites injure plants by sucking plant juices and chlorophyll from leaves and other tender parts of the infected host.

Infested foliage becomes mottled or pale, and may ultimately turn brown and drop prematurely. Most of the injury caused by spider mites occurs during warm, dry weather. These weather conditions are favorable for the rapid buildup of tremendous spider mite populations and are unfavorable for the host plant.

Since plant foliage, which is infested with sapsucking insects, also exhibits symptoms similar to spider mite injury, the plant should be examined to determine whether spider mites or insects are causing the injury.

DETECTION

The field technique for detecting the presence of spider mites is to shake or strike a suspected infested branch of the infested plant with one hand while holding a piece of white cloth (handkerchief) or white paper under the branch's foliage with the other hand. If spider mites are present, they can be seen moving about on the cloth or paper when the cloth or paper is held in bright light.

Suspected spider mite infested foliage can also be rubbed or patted lightly between the palms of both hands or white cloth. If spider mites are present, streaks of reddish-brown spider mite "blood" will be seen.

Webbing, which is used by spider mites to get from one area of a leaf to another, is often conspicuous on the underside of

leaves or among needles of spider mite infested plants. Do not get spider and spider mite webs confused.

CONTROL

The intent of this section is not to discuss specific miticides. A discussion of specific miticides will become outdated with the development of newer miticides and the enactment of various state and federal regulations. For the latest information concerning specific miticides and their usage, check your particular state's guidelines or our Insect and Disease Control Manual.

Some insecticides kill spider mite predators; therefore, a miticide should be combined with these insecticides to prevent future spider mite problems. Also, an alternative insecticide, which is less detrimental to spider mite predators, can be substituted.

When spraying waxy plants, a spreader-sticker combined with the miticide will increase deposition.

Since mites feed and oviposit on the lower surface of foliage, these areas should be thoroughly sprayed. In fact, a forceful stream of water applied to the lower surface of infected foliage will dislodge mites and their eggs.

An application of dormant oil or oil plus insecticide will also effectively control mites. **CAUTION:** Check a phytotoxicity list before applying dormant oil.