

## Spider Mites

Mites are not insects, but are related to ticks and spiders. Adult mites have one sack-like body region, lack a distinct head, and have 8 legs. Spider mites feed only on plants and are very small, about the size of a period on this page. Spider mites are various colors. The name “red spiders”, frequently seen on miticide labels, refers to any reddish spider mite species. The two-spotted Spider Mite is light yellowish-green with 2 black spots, and the Spruce Spider Mite is grayish brown.

### Life Cycle and Description

Spider mites develop through 5 stages from egg to adult. In hot weather, the generation time may be as short as one week. There may be up to 20 generations in a year depending on the weather. During hot summer weather the female of the Two-Spotted Spider Mite lives about 30 days and produces about 100 eggs. This is why spider mite populations often build up so rapidly. Spider mite activity can occur any time after plants leaf out in the spring until early fall. The Spruce Spider Mite attacks many conifers. Unlike other mites it prefers cooler temperatures. It is most active in early spring and late fall. Most species of spider mites overwinter as white, brown, or red eggs. The Two-spotted Spider Mite overwinters as orange adult females that hide in bark crevices. The most common spider mite species in homes and greenhouses is the Two-Spotted Spider Mite

### Damage

As spider mites feed they suck out the green chlorophyll in leaves. The result of this feeding appears as minute white dots or flecks called “stipples”. Heavy mite feeding causes yellowing, browning of leaves, and eventual leaf death. During feeding some mite species may inject toxins that cause varying degrees of leaf discoloration and distortion. Some spider mite species may produce webbing that covers leaves and stems when populations are high. The Two-spotted spider mite feeds mainly on the undersides of the leaves. Spruce mites feed on the needles of conifers and infestations usually begin near the bottom of the tree and progress upwards.



*Spider Mite damage*



*Spider Mites*

### Monitoring

During the growing season landscape plants should be monitored every 1-2 weeks for evidence of spider mite damage. Because indoor temperatures are relatively high and constant, plants should be checked on a weekly basis. Examine both sides of leaves; use a magnifying lens if necessary. Signs of active mite infestations include various instars of mites, eggs, webbing, and stippling. If damage is visible, but no live mites are found check leaves or branches higher up on the plant. Mites generally work their way up a plant and often the best place is directly above where the damage is most noticeable. A simple technique for sampling, (especially conifers) is to tap a few terminals or leaves over a piece of white paper. Wait a few seconds and watch for movement. The mites may take a short time before they begin crawling on the paper.

## Control

### Non chemical Control

1. Small house plants can be rinsed off in the sink once a week until mites are no longer detected. Be sure to rinse off both upper and lower surfaces of the leaves.



*Spider Mites on  
Boxwood*



**Indoors:** Purchase either a premixed or concentrate material that is registered for use INDOORS. Follow label directions carefully. **Make sure that the plant is on the label** since house plants may be damaged by chemical sprays.

**Outdoors:** The following pesticides are preferred if they are labeled for the plants you want to spray: Safer® Insecticidal Soap, Horticultural Oil (e.g. Sun Spray, Volck Oil, etc.). These materials are the safest to use and have the least impact on beneficial insects and mites. The only drawback is that they are short-lived and retreatment may be necessary. Acceptable control will depend on thorough coverage of infested plants, including upper and lower surfaces of leaves. Horticultural oils may also be used at a rate of 3-4%, during the dormant season to control overwintering forms of spider mites on bark.

2. Outdoor plants and small trees can be hosed down periodically with a strong spray of water. (The force of the water will depend on the plant.) Be sure to get good coverage of the lower surface of the leaves. On conifers, thoroughly wash down the entire plant.

### Biological Control

There are several species of predatory mites available commercially. The predatory mites are usually shipped in containers with pollen for food. They are sprinkled on the plants that are infested with spider mites. The rates will vary with the species of predator purchased. Many garden supply catalogs and biological control businesses sell predatory mites. They will recommend release rates and the species best suited for your needs.

### Chemical Control

Chemicals should always be considered as a last resort. Use them only if non-toxic methods have failed. When purchasing a miticide or insecticide be sure the plant you wish to spray is on the label.

**Always read the label directions for dilution rates, application instructions, and safety precautions.**

**Authors:** Mary Kay Malinoski, Regional Specialist, Home and Garden Information Center, John A. Davidson and Michael J. Raupp, Extension Entomologists, Department of Entomology, University of Maryland.

This publication revised from: Davidson, J.A. and M.J. Raupp 1988. Spider Mites. M.C.E.S. Entomology Leaflet #107.

#### References:

Johnson, W.T. and H.H. Lyon, 1991. *Insects That Feed on Trees and Shrubs*, 2nd. Ed. Ithaca, NY: Comstock Publishing Associates, Cornell University Press. 560 pp.

Pirone, P.P. 1978. *Diseases & Pests of Ornamental Plants*, 5th Ed. New York: John Wiley & Sons. 566 pp.

Olkowski, W., S. Daar, and H. Olkowski. 1991. *Common-Sense Pest Control*. Newtown, CT: The Taunton Press. 715 pp.

Mention of trade names in this publication does not constitute an endorsement by the Maryland Cooperative Extension.

**HAVE A PEST OR GARDENING QUESTION??  
CALL THE HOME AND GARDEN INFORMATION CENTER AT  
1-800-342-2507**

[www.hgic.umd.edu](http://www.hgic.umd.edu)