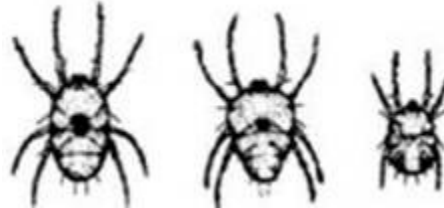




## Spider Mites & Their Control

Spider mites are not insects but are more closely related to spiders. These arachnids have four pairs of legs, no antennae and a single, oval body region. Most spider mites have the ability to produce fine silk webbing. Spider mites are very tiny, being less than 1/50 inch (0.4mm) long when adults.



Southern Red Mite  
Female, Male & Larva

Many species of spider mites can be found in Ohio landscapes. The two-spotted spider mite and spruce spider mite are the most common pests. Other species with fewer host plants include: European red mite, found on apple trees; honeylocust spider mite; southern red mite, on a variety of plants; boxwood spider mite; and the oak mite.

### Types of Damage

Spider mites have tiny mouth parts modified for piercing individual plant cells and removing the contents. This results in tiny yellow or white speckles. When many of these feeding spots occur near each other, the foliage takes on a yellow or bronzed cast. Once the foliage of a plant becomes bronzed, it often drops prematurely.

Heavily infested plants may be discolored, stunted or even killed. Web producing spider mites may coat the foliage with the fine silk which collects dust and looks dirty.

### Life Cycles and Habits

Spider mite species seem to be warm weather or cool weather active pests. The two-spotted, European red, honeylocust, and oak spider mites do best in dry, hot summer weather. The spruce and southern red spider mites do best in cool spring and fall weather.

All spider mites go through the same stages of development. Adult females usually lay eggs on their host plants. The eggs hatch in days to weeks into the first stage, called a larva. Larvae are round bodied and have only three pairs of legs. The larvae feed *for a few* days, seek a sheltered spot to rest and then molt into the first nymphal stage. The first nymph now has *four* pairs of legs. The first nymphs feed a *few* days, rest and molt into the second nymph. The second nymphs *feed*, rest and molt into the adult stage. The males are usually the size of the second nymph and have pointed abdomens. The females have rounded abdomens and are the largest mites present.

Most spider mites spend the winter in the egg stage but the two-spotted spider mite over winters as adult females resting in protected places.

### Two-spotted Spider Mite

The two-spotted spider mite is an example of a 'warm season' mite. This pest has been reported from over 180 host plants including field crops, ornamental plants, house plants and weeds.

The females over winter in the soil or on host plants. The females become active in April and May when they seek out the undersides of leaves on suitable hosts. Each female may lay over 100 eggs. A single generation may require as much as 20 to as few as five days, depending on the temperature. These mites prefer hot, dry weather and often do not reach damaging populations in cool, rainy periods.



*Two-spotted Spider Mite Stages*

### **Spruce- Spider Mite**

The spruce spider mite is a common 'cool season' mite. This pest can be found on all types of conifers and pines to junipers and arborvitae.

This mite spends the winter in the egg stage attached to host plants. The eggs hatch in March to April and the mites can complete development in 3 to 4 weeks. If summer temperatures are constantly over 90 F, this mite becomes dormant and lays resting eggs. These eggs and adults resume activity in the fall when cooler temperatures return.

Conifers often react slowly to the feeding of this mite. Yellowing and bronzing of the needles may not become apparent until the heat of the summer, even though the damage may have occurred the previous fall and spring.

### **Control Strategies**

Early detection of spider mites, before damage is noticed, is important. The tiny spider mites can be detected by taking a piece of white paper or cardboard and striking some plant foliage on it. The mites can be seen walking slowly on the paper. If 10 or more mites per sample are common, controls may be needed.

**Option 1: Cultural Control – Syringing**-Since rainy weather seems to knock off spider mites, using a forceful jet of water from a hose (syringing).can perform the same task.

**Option 2: Cultural Control - Quarantine and Inspection**-The two-spotted spider mite is often introduced on infested bedding and house plants. When purchasing new plants, carefully inspect the lower leaf surface for any signs of mite activity.

**Option 3: Biological Control- Predators** There are numerous insects (lacewings and lady beetles) that prey on spider mites. However, the most commonly sold predators are other types of mites. Predatory mites can be purchased and released onto infested plants.

**Option 4: Chemical Control - "Soft Pesticides"**- Most spider mites can be controlled with insecticidal oils and soaps. Horticultural oils can be used on perennial and woody ornamentals during the summer. Higher rates of horticultural oil or dormant oil are useful for killing mite eggs and dormant adults in the fall and spring. The insecticidal soaps are useful in the warm season. Remember that mites are very tiny and soaps and oils work by contact only. Therefore, thorough coverage of the plant is necessary for good control.

**Option 5: Chemical Control – Miticides**-Spider mites are usually not killed by regular insecticides so be sure to check the pesticide label to see if "miticide" is present. Pesticides claiming "for mite suppression" are usually weak miticides and will not perform well. There are few products available to the homeowner.

Information obtained through the Ohio state University Extension Factsheet HYG-2012-92



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