



IP-3 Spider Mites

Key Points

- Spider mites are very common pests on many of our ornamental and vegetable crops.
- Spider mites have many natural enemies, including ladybugs and predatory mites.
- Water management can be an important control.

Identification

Spider mites are common pests in landscapes and gardens and can be found on ornamental trees, shrubs, fruit trees, vegetables, and even on houseplants. They are not insects as they belong to the arachnid family with spiders and ticks. They are small, difficult to see with the unaided eye and resemble tiny moving dots. However, they can easily be seen with a 10X hand lens. Their colors range from red and brown to yellow and green, depending on the species and seasonal changes in their appearance.

Many spider mite species produce webbing, especially when populations are high. The presence of this webbing is a sure sign of mite activity. Damaged areas have a white or yellow speckled look and discolor to light green and yellow. Mites cause damage by sucking plant juices from leaves including chlorophyll. The plant becomes dull and unhealthy looking.

Most mites will feed on the underside of the leaves. Heavy populations can kill a plant. On evergreens the damage occurs in the interior of the plant progressing outward. Mite feeding will cause bronzing or russetting on fruit. Mites can be confirmed by sharply tapping a branch while held above a white piece of paper. Look for tiny moving specks on the paper with the aid of a 10X hand lens. Permanent damage to larger trees, shrubs and fruit trees will not be immediate but can severely damage or defoliate vegetable and bedding plants, reducing yield and possibly causing death.

Management

Spider mites have many natural enemies which can keep populations down significantly. Adequate irrigation is critical as drought stressed plants are most likely to be affected. Spraying with water, insecticidal oils or soaps and finally insecticides is the next best method of control.

Most spider mites will overwinter as adults hidden in the cracks and fissures in the bark. When temperatures begin to rise, they become active. Adult females may lay dozens of eggs within a two week time period. Depending on the weather, the availability of food and natural enemies, populations can seriously fluctuate. When temperatures begin to rise, dormant oil should be used. As temperatures get higher and the season gets dryer, mite populations can soar to tremendous numbers. Dry, hot conditions greatly favor mites and discourage natural enemies.

Biological Control

Every effort should be made to allow natural enemies to build up populations and pesticide sprays should be avoided as long as possible. A group of small dark-colored lady bugs or spider mite destroyers are specialized enemies of mites as well as pirate bugs, big-eyed bugs and predatory thrips. Release of predatory mites should be more effective under hot dry conditions. Release of predators is a hit-and-miss operation from the start as the target pest must be present and available when and where the release is made or the predator starves or moves on. It is best if the predator populations build up naturally.

Cultural Controls

Cultural conditions can have a definite effect on mites as hot, dry conditions will lead to a heavy outbreak. Keep humidity up with water sprays on plants and pathways and avoid dusty conditions. Keep adequate irrigation to plants, washing them off to remove dust and mites.

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Insecticidal Soap and Horticultural Oils

Neem Oil is effective in killing overwintering adults and eggs while plants are dormant; they are applied to trunks and larger limbs during the winter. Lighter horticultural oils like **All Seasons Horticultural & Dormant Oil** can be used during the growing season. Damage to blue, silver or gray plants, such as Colorado blue spruce, could be possible. Complete coverage is essential when using soaps or oils. These materials must contact the insect to kill them, so be sure to spray the undersides of the leaves; several applications may be necessary. Insecticidal soaps are generally not as effective as the oils, specifically Ultra Fine or summer light oils.

Sulfur dust or spray may be used but will burn some species. A thorough understanding of the label is important. Sulfur dusts are skin irritants as well as eye and respiratory hazards so appropriate clothing and dust mask are necessary.

Chemical

After monitoring and other control methods are used and mites continue causing damage beyond what is considered tolerable, chemicals may be used. **Bayer 3-in-1 Insect, Disease & Mite Control** and **Bonide Systemic Insect Control** insecticides are effective for spider mite control. Repeat applications will be necessary in approximately 10-14 days since miticides do not affect eggs. Always be sure to read the label carefully, understand it and then follow it to avoid many problems affecting plants, yourself and the environment.

Revised 7/10

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