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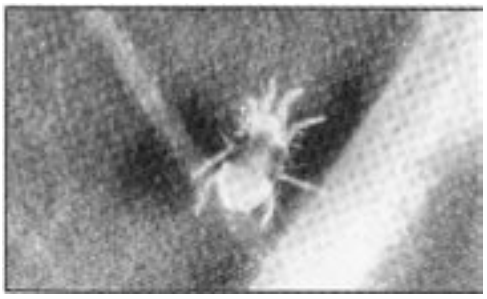
Two-Spotted Spider Mite

Tetranychus urticae



TWO-SPOTTED SPIDER MITE, *Tetranychus urticae*, see color print, Fig. 11, on publication B-1013.

Order:	Acarina (mites and ticks)
Family:	Tetranychidae (spider mites)
Metamorphosis:	None (egg-immature-adult)
Mouthparts:	Piercing and sucking in nymphs and adults

Spider mites are not insects but are closely related to ticks, spiders, and harvestmen. They have eight legs and produce webbing on the undersides of leaves. Spider mites are found on many crops and are particularly troublesome in greenhouses, on corn, and on beans.

Body Form

Eggs: Eggs are spherical and yellowish. They are very small (less than 1/32 inch in diameter) and are laid within the area of mite activity.

The Young: The general appearance of young spider mites is similar to adults, but they are smaller. The nymphs pass through three growth stages before becoming adults.

Adults: Adult mites are very small, approximately 1/32 inch in length. Their bodies are oval and vary from green to brown in color. They have four pairs of legs and a pair of red spots on either side of the abdomen positioned between the center of the body and the head. The number and positioning of the spots is one feature used to distinguish two-spotted spider mites and Banks grass mites. They do not have wings.

Life History

Females and eggs overwinter in sheltered sites including plant debris and the crevices of tree bark. They become active in early spring. Eggs are laid on the undersides of leaves and hatch in 3 to 10 days once spring and summer conditions are prevalent. Spider mites can be found in the open on a leaf or under a protective webbing of silk when populations are high. There are multiple generations per year; one generation can be completed in 10 days during the summer. All life stages can occur on the same leaf.

Plant Injury

Spider mites pierce plant cells and suck out the liquid contents. The leaves then become covered with chlorotic spots. With continued feeding, more damage occurs, and the entire leaf may die back. Two-spotted spider mite activity may be found on any vegetative part of plant. If leaf damage is severe, fruits may be undersized or fail to form. Spider mites and other related mites can cause this type of damage. Two-spotted spider mites cause damage to beans and corn. Many wood plants, including conifers, are host plants for spider mites.

Management

Yellow spotting and a silvery appearance on the lower leaves of plants are indicators of spider mite activity. Water-stressed plants associated with hot, dry weather may be particularly susceptible to spider mite feeding. When damage is suspected, plants should be monitored at least weekly. When searching for mites, check the underside of leaves near the base of a plant. Initially, concentrate on leaves with damage symptoms. Look for webbing but also look on leaves without webbing. Webbing often goes unnoticed when mite populations first establish. Once mites are detected, a random sample of leaves should be inspected to determine the extent of activity in the field. Mites will appear as small moving dots. Shaking foliage onto a white piece of paper may be helpful because mites will be more visible against a white background.

Spider mites are often kept under control by predatory mites, thrips, and minute pirate bugs. Predatory mites are available for purchase. The use of predators appears particularly viable on high-value greenhouse plantings. They have also been used in corn in areas where mite activity is consistently troublesome. At times, miticide use is warranted on corn and beans, particularly during hot, dry weather. It is important to distinguish the two-spotted spider mite from the Banks grass mite because the efficacy of miticides varies in controlling these two species. Plantings may require increased miticide use if good cultural practices are not followed. For example, poor watering and high temperatures can increase mite activity. Cultural practices that encourage plant health will reduce the likelihood of spider mite problems.

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