



Twospotted Spider Mites

One of our most common landscape pests is the two-spotted spider mite (*Tetranychus urticae*).

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Twospotted spider mite (*Tetranychus urticae*) Photo:
David Cappaert, Michigan State University, Bugwood.org

This plant pest seems to feed on just about everything in the landscape. Twospotted spider mites reproduce faster and have more generations per year when the weather is hot, consistently in the upper 80's. Its host range is vast including annual flowers, ornamental grasses, herbaceous perennials, and woody trees and shrubs.

Why think about this pest in the spring if it is most active during the summer? The reason is that this mite overwinters as an adult either in leaf debris or in a protected bark crevice. When spring arrives and new foliage is available, females lay eggs and the first generation begins. The eggs hatch between 7-20 days depending on temperature - hotter temperature, faster egg hatch. There can be 10-5 generations each year, again depending on temperature. If you scout for this pest in late May or early June, you have the chance to detect a potentially problematic population before it has caused any significant plant damage. This allows more time to monitor the plants and review the management options.

Mite feeding damage is called "stippling." They use their mouthparts to drain individual leaf cells. With the loss of chlorophyll, the foliage takes on a light brown, white, or yellow appearance. Depending on the plant and mite population, there can also be leaf distortion. Some plants drop their leaves prematurely if the population is severe, particularly if the plant is also under stress from drought.

There are a number of predatory insects and mites that feed on twospotted spider mites. It is important to conserve their populations. One valuable predator is the spider mite destroyer (*Stethorus punctum*). This is a lady beetle species who feeds on all stages of mites both as an adult and larva. There are a number of species of predatory mites that feed on their plant feeding relatives. These include *Amblysius* sp. and *Phytoseiulus* sp. along with others. Other important predators include lacewing immatures (*Chrysoperla* sp.) and minute pirate bugs (*Orius insidiosus*).

Management

If the mites are causing damage, you will have to make a decision as to what to do. First, you can let the mites feed and see what the beneficials can do for you, particularly on annuals that will not be staying around more than this growing season. Second, if the plant foliage is tough enough to withstand a blast from a garden hose, you can have the client dislodge the mites. Mites that are blown off will not make their way back onto the plant. This probably will not dislodge all the mites or their eggs, but can still have a significant impact.

Finally, apply a miticide if these non-chemical options have not provided adequate control. These miticides are selective for plant feeding mites and have minimal to no impact on non-target organisms. These include: acequinocyl (Shuttle), clofentezine (Apollo or Ovation, nursery only), etoxazole (TetraSan), fenbutatin-oxide (Meraz Miticide, ProMITE, Vendex), fenpyroximate (Akari) and hexythiazox (Hexygon). Horticultural oil and insecticidal soap are also affective miticides, which work on all stages of twospotted spider mite. These products work on all life stages of the mite and have no residual effect, thus they have less detrimental impact on the beneficial species in your landscape.

There are numerous insecticides that have mite pests listed on the label. They do impact the mite population, but usually have a significant negative impact on beneficial insects including predators, parasites and pollinators. Twospotted spider mites primarily feed on the underside of foliage so it is imperative to spray this area in order to have any effect.

Miticide Resistance Management

Though you have heard it many times, read the product label. It is a legal document. A number of miticides state to only use them once each growing season. This is part of resistance management. Since twospotted mites have multiple generations per year, there is the risk of creating a resistant population by constant exposure to the same chemical mode of action. Wear the personal protective equipment as described on the label. Also, target or spot spray (treat only the area or plant affected). Finally, spray only at the proper time for the pest. Spraying too early or late does not provide optimum control.

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