



# Mighty Mites to the Rescue

**Y**ou may want to try beneficial mites for two-spotted spider mite problems.

Two-spotted spider mites have proven to be a formidable enemy in the interior landscape. Their minute body size allows them to do most of their damage, while remaining relatively unnoticed - you usually see the symptoms before the actual mites. When found on plants, immediate action is necessary to fully eradicate the pests.

## Egg Beaters

Depending on the temperature, a single generation's life expectancy can vary. In cooler environments, it may take up to 20 days, while in warmer climates it may only take five days for a spider mite to complete its life cycle.

Adult, female spider mites live two to four weeks and are capable of laying several hundred eggs during their life. They are also more abundant than male spider mites. In other words, they reproduce fast and can quickly get out of hand!

Choosing the right control method for two-spotted spider mites can be difficult. Currently, there are few chemical miticides on the market labeled for the interiorscape. In some situations, you may have ideal contortions to spray, but what if you are concerned about resistance management? What if there are people working in treated

areas? Is spray coverage a problem?

If you said yes to either of these questions, you might consider biological control agents, such as *Phytoseiulus persimilis*.

*P. persimilis* belongs to the family Phytoseiidae. Its taxonomic name is *P. persimilis*. Commonly, it is called a predatory mite or P-mite. When ordering or investigating mites, be sure not to get common names confused between species. Taxonomic names are always your best choice, offering less chance of confusion.

*P. persimilis* females are approximately 0.5 millimeters long, and red to orange in color with a pear-shaped body. Once persimilis mites are released onto host plants, they scour leaves' surfaces for the webbing of two-spotted mites. They oviposit salmon-colored, oval eggs in the webbing, as well as feed on all life stages of their prey. Eggs continue to be laid until the female dies from old age in about 50 days, at 63 to 81 degrees Fahrenheit. They hatch in two to three days and begin feeding when they reach the nymph stage. They consume up to seven adult spider mites, or 20 eggs, per day.

## Apply Yourself

Before applying your first application of *P. persimilis*, you should consider these points:

1. Have the plants been sprayed with any chemicals that might leave a residue? You must examine your spray log. Check with your biological supplier to see if the spray

products, previously applied, are compatible with the predatory mites.

2. Two-spotted spider mite populations must be under control. You cannot release predatory mites expecting they will clean up heavy infestations. You may need to go in and do a knock down with a spray that is compatible with your predators.

Keep in mind they are living creatures. Bottles or vials of mites should come packed in a cooler with a cold pack. They should be applied as soon as possible. Open the packing box and remove the bottles, laying them on their side. They need to be warmed up to room temperature - but don't get them hot or place the vials in the sun.

Once at room temperature, mites are visible, running through the container and ready for release. They need to be mixed back into the vermiculite by slowly and gently rolling the bottles on their sides. Don't shake them! I have seen many people shake the bottle vigorously, like it is a martini shaker, and the mites don't enjoy this.

Apply the mites to plants like salt - just sprinkle them on. They will immediately begin feeding.



*Entomological Science Correspondent Suzanne Wainwright-Evans is an Ornamental Entomologist specializing in pest management programs. She has been involved in the green industry for more than 10 years. Her primary focus is biological control.*



**Above** The two-spotted spider mite, left, and *Phytoseiulus persimilis* on the right.

**Right** A vial of mites mixed with vermiculite.