GROWERTALKS

Features

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# Seven Steps for Spider Mite IPM

*Jen Bergh Browning*

**Step 1 | Anticipate spider mites in susceptible crops and recognize changing conditions that precede a bump in pest pressure.**
The first step in spider mite IPM is knowing when you have a vulnerable crop and growing system. Spider mites are generalists, but they have favorites among both greenhouse and nursery-grown crops, including color bedding and other herbaceous plants, herbs, foliage plants, woody ornamentals and conifers. Certain growing conditions increase spider mite populations, such as container-tight spacing, high temperatures and drought stress. Mite numbers will be at their peak in hot summer months.

**Step 2 | Scout for the presence of spider mites and note damage and other signs of growing populations.**
The second step is regular scouting. First, note what pests are present and, if mites are seen, determine the type. Spider mites are the most common, but you may encounter a number of other families and genera of mites, including predaceous species. It's important to know which mite is present so you can determine if and how you need to treat your crop. Local extension can help if you encounter a mite that isn't readily identified.

At this point, noting the life stage of observed mites and other pests is also useful. Consider counting the adults, juveniles and eggs on a sample of leaves and using this number to compare scouting events and changes in the population throughout the season.

**Step 3 | Look for direct damage and other signs of arthropod pest presence.**
In addition to scouting for spider mites and other pests, take note of any direct damage on plants. Spider mite damage from feeding includes stippling, bleaching, bronzing and dropped leaves. There may be other signs of spider mites; when pressure is very high, webbing may be observed on outer branches (pictured). Frass, the waste material of mites, is mostly inconspicuous.

**Step 4 | Decide if and when to take action.**
Did your scouting numbers reveal an increasing number of insect or mite pests? What's your threshold for damage on this crop? Do you need to suppress spider mites or control them? The fourth step is to decide on either continued scouting or immediate action. Take into account not only your production schedule and planned ship dates, but also weather forecasts, since higher temperatures will shorten generation times and increase pest populations.

**Step 5 | Choose the best tool or tools to treat spider mites in your growing situation.**
When it's time to treat a spider mite population, you'll need to consider your growing system again. Are you using biologicals and will you want to make additional applications or releases for spider mite suppression? Will you want to control any additional pests at the same time? How heavy is the spider mite pressure? What life stages are represented in your scouting observations? This IPM decision-making step may change throughout the year and growing season in response to changing conditions. Read on for tips on remembering what works best for you in
different scenarios.

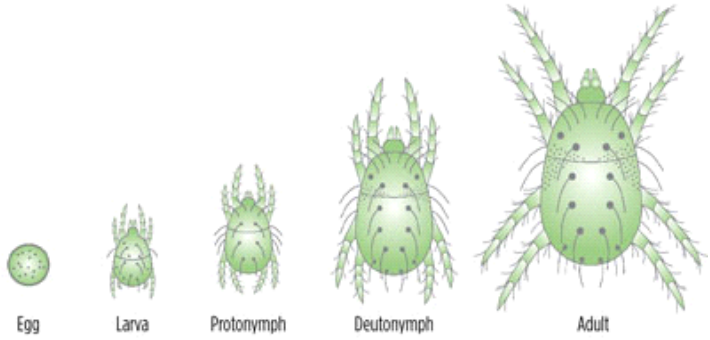
**Suggested Rotations for Spider Mites**
For heavy infestation of mixed life stages:
Pylon – Sultan – Avid – Floramite

For moderate infestation with mixed life stages:
Sultan – Ovation – Sanmite – Pylon

For light infestation with mostly adult mites:
Avid – Sultan – Floramite – Shuttle

Mite management with releases of beneficials:
Sultan – Floramite – Tetrasan – Judo/Forbid

*Miticide program developed by BASF and Dr. JC Chong of Clemson University.*




**Step 6 | Apply treatments according to the label and instructions.**
Make spider mite treatments, applications and releases following the label and producer's instructions. This will give you the best result each product has to offer to control spider mites and other pests. For biologicals, ensure that environmental conditions are favorable for release. For chemical controls, ensure good spray coverage for contact miticides and insecticides. Choose and calibrate application equipment that ensures uniformity of coverage and targets the physical location of the pests on the crop. Don't miss the undersides of leaves or between layers of canopy.

**Step 7 | Keep records about how well your treatments suppressed or controlled spider mites.**
The final step in this spider mite IPM cycle is to do follow-up scouting and capture the result of the treatments you've made. Compare "after" counts to "before" counts and note again the presence of different life stages. These data will serve as a reference for your future IPM decisions. Note rates, application method where applicable and results. Remember to continue any cultural or mechanical pest management practices that are also part of your IPM program. **GT**

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