Miticide Rotations

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Mite Management Strategy

Follow these steps for successful mite control:

- Include at least three different modes of action in rotation.
- Determine effectiveness of spray coverage. Are there problems getting control with every miticide used? If so, it is likely a coverage issue.
- Use surfactants with most miticides.
- If adequate coverage is difficult to achieve (thick or waxy foliage), use systemic or translaminar products with surfactant.
- Time applications based on pressure and time of year. Under heavy pressure, apply every 7-10 days. Apply each product 2-3 times back-to-back. Follow label recommendations for time between applications, reduce heavy infestations with horticultural oil and then begin miticide rotation (Bogran).
- Avoid overuse of one miticide.
Twospotted Spider Mite

Twospotted spider mite adults and eggs

Red phase twospotted spider mite

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### Longevity and Reproductive Capacity of Twospotted Spider Mite

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Longevity</th>
<th>Eggs/Day</th>
<th>Total # Eggs</th>
</tr>
</thead>
<tbody>
<tr>
<td>80°F</td>
<td>18 days</td>
<td>2.4</td>
<td>43.2</td>
</tr>
<tr>
<td>86°F</td>
<td>19 days</td>
<td>8</td>
<td>152</td>
</tr>
<tr>
<td>90°F</td>
<td>30 days</td>
<td>4-6</td>
<td>120-180</td>
</tr>
</tbody>
</table>

1991 Koppert Biological Systems
## Mite Management Tools

<table>
<thead>
<tr>
<th>For Adult/Immature Insects:</th>
<th>For Immatures/Eggs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) Avid®*</td>
<td>(10B) Tetrasan®*</td>
</tr>
<tr>
<td>(25) Floramite® SC</td>
<td>(10A) Hexygon® DF</td>
</tr>
<tr>
<td>(13) Pylon®*</td>
<td>(10A) Ovation™</td>
</tr>
<tr>
<td>(21) Sanmite®</td>
<td>(23) Judo™*</td>
</tr>
<tr>
<td>(20) Shuttle™</td>
<td>(21) Akari®</td>
</tr>
<tr>
<td>(23) Judo™*</td>
<td>(20) Shuttle™ O</td>
</tr>
<tr>
<td>(NA) Soaps/Oils</td>
<td>(25) Floramite® SC</td>
</tr>
<tr>
<td></td>
<td>(NA) Soaps/Oils</td>
</tr>
</tbody>
</table>

**Rotation Strategy**

1st Target/Spray: Mobile stages (adults/immatures) – Avid, Sanmite or Pylon
2nd Target/Spray: Immature stage and eggs (Tetrasan, Hexygon, Judo)

* Product has translaminar activity
Mite Rotation for Low – Moderate Populations

1. Avid or Avid + Insecticidal Soap: two applications
2. TetraSan: 14-day application restriction; two applications per crop; need to make two applications of another MOA group before rotating
3. Sanmite SC: one application if needed
4. TetraSan: if needed

Mite Rotation for Moderate – High Populations

1. Pylon (**GH use** only): one to two applications per crop; limited to three applications per crop; or Sanmite
2. Hexygon (one application per crop) or TetraSan or Judo (test for plant safety)
3. Avid: two applications
4. Pylon (**GH use** only): one to two applications per crop; limited to three applications per crop; or Sanmite

*Note: Check labels for plant use safety and use limits*
Broadmite damage
(Salvia)
Cyclamen Mite Damage
Broad and Cyclamen Mite Controls

- Not all miticides control broad mites
- Avid, Judo, Pylon, Sanmite/Akari will control broad mites
- Cyclamen mites and Eriophyid mites can be harder to control and identify since they are hidden in buds

<table>
<thead>
<tr>
<th>Cyclamen Mite</th>
<th>Broad Mite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abamectin (Avid)</td>
<td>Abamectin (Avid)</td>
</tr>
<tr>
<td>Chlorfenapyr (Pylon)</td>
<td>Chlorfenapyr (Pylon)</td>
</tr>
<tr>
<td>Fenpyroximate (Akari)</td>
<td>Fenpyroximate (Akari)</td>
</tr>
<tr>
<td>Spiromesifen (Judo)</td>
<td>Spiromesifen (Judo)</td>
</tr>
<tr>
<td>Pyridiben (Sanmite)</td>
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</tr>
</tbody>
</table>
● Active Ingredient: Abamectin
● MOA Group: Six (Glycoside)
● Target Pests: Mites (spidermites, broadmites, cyclamen, leafminer, whiteflies, aphids, thrips)
● Rate: 4-8 oz/100 gal (Min. 8 oz/A, Max. 16 oz/A, foliar spray 100-200 gal water/A)
● REI: 12 hrs – Warning Label
● Application: Seven-day interval; two to three applications, then rotate
● **A Standard in mite and leafminer control!**

● Translaminar activity; penetrates to leave a reservoir of active material inside the plant cuticle.

● Rainfast within hours of application.

● Leaves no unsightly residue and has very little odor.

● The only miticide labeled for control of aphids, whiteflies and thrips.
Control of Twospotted Spider Mite on Marigold

Number of Live Mites

Precount
4 DAT
11 DAT
18 DAT
25 DAT
31 DAT

Rates per 100 gal
One application

Control
Avid 4oz
Floramite 4oz
Hexygon 2oz

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