GENERAL SANITATION PRACTICES

- Do not enter greenhouses after visiting citrus groves.
- Keep head house area and greenhouse walkways swept and free of debris.
- Don’t use surface water as an irrigation water source.
- It is recommended to have a disinfesting copper footbath at each house entry.

TOOLS

- Shovels should be disinfested before and after each use and should NEVER touch the floor during storage.
- Hose nozzles should never contact the ground.
- Hose nozzles should remain on bench tops or hooks when stored.
- If the hose nozzle contacts the ground, decontaminate immediately (see other side).

BUCKETS, POTS, AND TUBS

- Should only be filled with clean potting media.
- If pots have sat on the floor, do not stack pots on top of one another.
- Do not store pots directly on the ground or within a splash zone.

POTTING MEDIA

- Where possible, source potting media from Phytophthora-free supplier.
- Store potting media on a concrete pad and periodically disinfest the pad.
- Storage areas should be protected from wind and rain.
- Pile should be kept covered.

- Restrict access to media storage area.
- Station a copper footbath at entrance of storage area.
- Footwear should be disinfested at each entry.
- Tractor tires, scoops, and shovels used to move media should be disinfested as needed.

GENERAL SANITATION MANAGEMENT

- Sanitizing should be at the start of each workday for personnel and tools, when moving among plants within or between benches, or when moving from one house to another within the nursery.
- All equipment should be re-sanitized if dropped or if used in a non-clean area.
- When hand watering, keep water splash to a minimum.
- Nursery workers should not stand on or use tables or pots as a step.

Photo Credits: Jamie Burrow, UF/IFAS and USDA APHIS PPQ
### COMMON DISINFECTANTS AND FACTORS TO CONSIDER IN THEIR SELECTION FOR NURSERY USE

<table>
<thead>
<tr>
<th>Disinfestant</th>
<th>Factors affecting efficacy</th>
<th>Corrosive to metals</th>
<th>Residual activity</th>
</tr>
</thead>
</table>
| Bleach (10%)       | • efficacy reduced by organic matter  
                      • degrades in sunlight, solutions need to be made fresh daily  
                      • water pH (optimal pH range for maximum efficacy is 6.5–7.5) | Yes                 | Low               |
| Alcohol (70%)      | • ineffective in the presence of organic matter  
                      • alcohol will evaporate if not kept in a closed container, which will reduce efficacy | No                  | Low               |
| Hydrogen Peroxide  | • efficacy reduced by organic matter  
                      • degrades in sunlight                                                                 | Moderate            | Low               |
| Quaternary Ammonium| • hard water (>400 ppm Ca) reduces efficacy                                               | No                  | Good              |

### CHEMICALS APPROVED FOR USE IN CITRUS NURSERIES FOR PHYTOPHTHORA*

<table>
<thead>
<tr>
<th>Fungicide1</th>
<th>Mode of Action (MOA)</th>
<th>Restricted Entry Interval (REI)</th>
<th>Postharvest Interval (PHI)</th>
<th>Rate Application Method</th>
<th>Resistance Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adorn</td>
<td>Group 43</td>
<td>6 days for thinning, pruning, and pinching</td>
<td>365 days</td>
<td>1-4 fl oz/100 gal</td>
<td>Foliar; drench</td>
</tr>
<tr>
<td>Oxiphos (O), Prophyt (P), Reveille (R)</td>
<td>Group 33</td>
<td>0 hours for non-spraying application in enclosed structures (O) 4 hours (P,R)</td>
<td>0 days</td>
<td>0.5-1.0 gal/100 gal (O); 2 gal/100 gal (P, R)</td>
<td>Drench (O,P,R); drip irrigation (P,R)</td>
</tr>
<tr>
<td>Revus**</td>
<td>Group 40</td>
<td>4 hours</td>
<td>365 days</td>
<td>8-16 fl oz/100 gal</td>
<td>Drench</td>
</tr>
</tbody>
</table>

* Mefenoxam and metalaxyl do not have a label for nursery use and should never be used in nurseries.  
**For use in container production in nurseries and prior to transplanting.

### PERSONAL PROTECTIVE EQUIPMENT (PPE) REFERENCE GUIDE FOR CITRUS NURSERY FUNGICIDES (APPLICATORS AND OTHER HANDLERS)

<table>
<thead>
<tr>
<th>Fungicide1</th>
<th>Long-sleeved shirt and long pants</th>
<th>Chemical-resistant gloves</th>
<th>Shoes and socks</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adorn</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Chemical-resistant gloves made of any waterproof material such as natural rubber &gt; 14 mils.</td>
</tr>
<tr>
<td>Revus</td>
<td>Yes</td>
<td>N/R</td>
<td>Yes</td>
<td>For early entry, PPE requirements are coveralls, chemical-resistant gloves made of any waterproof material, and shoes plus socks.</td>
</tr>
<tr>
<td>Oxiphos, Prophyt, Reveille</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>For early entry, PPE requirements are coveralls, chemical-resistant gloves made of any waterproof material, and shoes plus socks.</td>
</tr>
</tbody>
</table>

1All listed pesticides are registered and trademarked products.

Refer to label for additional information. This guide does not supersede the label. **The label is the law!**