Orchid Pests and their Management

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No Lack of Challenges

- How much light?
- Temperatures?
- Water options... and how often to water
- Fertilizer... which one and how much?
- Pests
- Viral issues
- Bacterial issues

... the list goes on

The goal: Healthy plants that bloom
Pest Control Strategy

Observe

Diagnose

Treat
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The Goal
The Goal
The Goal

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Pest Control Strategy

Observe

Treat
Diagnose
Oops!

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More Oops...
Pest Control Strategy

Observe

Diagnose

Treat
The Usual Suspects

- Aphids (and their friends the ants)
- Mealybug
- Scale
- Mites
- Thrips
- Snails and slugs

needless to say, there are more...
Aphids

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Image by yongxin zhang
Their Friend the Ant
Mealybug

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Scale
Mites
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Pest Control Strategy

Observe

Treat

Diagnose
Treatment Options

- Isopropyl (rubbing) alcohol 70%
  - tooth brush, cotton swab, garden sprayer
  - wetting agent (eg liquid soap)
- Horticultural Oils contain petroleum distillates
  - smother the insect
- Neem oil
- Insecticidal soaps
  - contain pyrethrin and petroleum products
- Growth regulators

Organic?
Non-chemical?
Treatment Options (con’t)

• Insecticides
  – Safari
  – Avid
  – acephate eg Orthene
  – malathion
• Bayer Adv 3-in-1 (Insect, Disease & Mite Control)
  – Imidacloprid
  – kills many insect pests on contact
  – systemic 30 days
  – cures/prevents many fungal diseases
General Guidelines

• Remove visible pests
  – toothbrush, hose spray, etc

• Classic prescription is treat every 7-10 days for 3 treatments
  – to kill overlapping lifecycles

• Alternate insecticides to avoid resistant populations

• Use wetting agent
  – spreads insecticide out
  – helps penetrate pests’ outer protections

• Wear protective gear eg gloves, respirator, etc
Be Safe

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Powered Sprayer

Pesticide Respirator

Gloves
Thrips Challenge

- Very difficult to see this small insect
- Plant damage can be subtle
  - rasping mouth parts
- Difficult to control because
  - eggs are laid below plant surface, away from contact insecticides
  - part of life cycle can be in the ground or in ground litter
  - flying gives them great mobility
- They love buds and flowers
Thrips

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Typical Thrip Damage
My Campaign

- Increased good sanitation ie cleaned up the floor
- Used 3 industrial strength systemic insecticides
  - Safari
  - Avid
  - Acephate (Bonine ‘Systemic Insect Control’)
- Sprayed thoroughly at 5 day intervals
- Rotated among the insecticides
- Used wetting agent to increase effectiveness
- Achieved apparent success, at least temporarily
  - Also monitoring with sticky traps
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Thrip Sticky Trap Test
Snails and Slugs

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Snail and Slug Control

- **Bug-Geta Plus**
  - Metaldehyde – effective snail pesticide
  - Carbaryl – insecticide for ants
- **remember they team with aphids**
My Typical Weapons

- Ortho Bug-Geta Plus
- Physan 20
- Safari
- Bayer Adv 3-in-1
- Sticky Fly Traps
I Like Visual Reminders...
An Ounce of Prevention...

- Sticky traps
  - monitor plus help control
- Routine spray campaign
  - Spot treat with Bayer Adv 3 in 1
  - Safari 3x year
- Practice good sanitation
  - remove dead flowers and leaves
  - from ground as well as plants
Where to Turn for Help

- Orchid Hotlines listed in SDCOS Newsletter
- Talk with other growers
  - SDCOS community
- The Doctor is in
- Wealth of information online
  - start with AOS.org (American Orchid Society)
  - websites
  - videos
Closing Thoughts

- Healthy plants are better able to fend off attackers
- Observe and inspect plants often
  - automation is not a bad word, but....
  - if you think you see a problem, don’t ignore it
- These pests multiply fast, especially in warm weather
- As your collection gets larger so do the chances of pests finding it
- The keys to effective pest management
  - understand pest
  - understand pest management scheme
It’s Your Turn

- Questions?

- Comments?