

## Controlling Orchid Pests

- I. Principles of Pest Control
  - Start clean
  - Monitor the plants and keep a log
  - Know the plant and its pests
  - Identify primary Pests
  - Determine how much damage is being done
2. Explore options and take action fast
  - Cultural methods - adjust the plant growing practices
  - Mechanical Methods - doing something against the pest
  - Physical Methods - changing the general environment
  - Biological Controls - beneficial insects
  - Chemical Controls - including home-made remedies
3. Take least toxic, effective action
4. Evaluate results

### **Valuable Resources** from the University of Hawaii College of Tropical Agriculture and Human

Resources (CTAHR) website: . . . . .	<a href="http://www.ctahr.hawaii.edu">http://www.ctahr.hawaii.edu</a>
Free Publications: . . . . .	<a href="http://www.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs.asp">http://www.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs.asp</a>
Blossom Midge: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-11.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-11.pdf</a>
Insect Control Chart: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-19L.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-19L.pdf</a>
Insect Identify and Control: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-13.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-13.pdf</a>
Scouting for Thrips in Orchid Flowers: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-8.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-8.pdf</a>
Turf and Ornamental Pest Control: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/PRRE-3.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/PRRE-3.pdf</a>
Anthurium Thrips: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-9.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-9.pdf</a>

### **For commercial pest applicators, but full of great information:**

Foliar Nematodes on Orchids in Hawaii: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/PD-13.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/PD-13.pdf</a>
Mite Control Chart for Ornamentals: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-4L.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-4L.pdf</a>
Mites on Ornamentals: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-2.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-2.pdf</a>
The Orchid Snail as a Pest of Orchids in Hawaii: . . . . .	<a href="http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-1.pdf">http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-1.pdf</a>

### **Other Resources:**

First Ray Orchids: . . . . .	<a href="http://www.firstrays.com/">http://www.firstrays.com/</a>
To learn more about predators and parasites: . . . . .	<a href="http://creatures.ifas.ufl.edu/veg/melon_thrips.htm">http://creatures.ifas.ufl.edu/veg/melon_thrips.htm</a>
Pesticide Mode of Action Chart: . . . . .	<a href="http://ohp.com/Labels_MSDS/PDF/CCC_VIII.pdf">http://ohp.com/Labels_MSDS/PDF/CCC_VIII.pdf</a>
Know ledge Master Pest Search: . . . . .	<a href="http://www.extento.hawaii.edu/kbase/crop/crop.htm">http://www.extento.hawaii.edu/kbase/crop/crop.htm</a>

## Using Chemicals for Controlling Pests

### A. When Using pesticides DOs

1. READ THE LABEL carefully and FOLLOW DIRECTIONS
2. Before mixing know how much and when to use it.
3. Mix pesticides in a well-ventilated area.
4. Be especially careful when handling the concentrated chemical.
5. Spray early in the morning or late in the afternoon to minimize drift.
6. Wear rubber gloves, and other protective equipment (masks) and clothing.
7. Keep pesticides in original containers that are tightly closed and clearly labeled.
8. Store pesticides in a locked, well-ventilated area, away from heat and direct sunlight.
9. Wrap empty containers in thick layers of newspaper before discarding them.
10. Exhaust all gas from pressurized cans before disposing of them.
11. Remove food, utensils, pets, and their dishes before spraying indoors.
12. After applying pesticides, shower and put on fresh clothing. Wash contaminated clothing separately from family laundry.

### B. When using pesticides DON'T's

1. Don't use pesticides near children or pets.
2. Don't smoke eat, drink or chew gum.
3. Don't inhale sprays, dusts, or vapors.
4. Don't store pesticides near food.
5. Don't dump pesticides.
6. Don't enter a sprayed area until after the Reentry Interval.

### C. First Aid Procedures

1. If you get pesticide on skin: Remove it as quickly as possible. remove contaminated clothing. Wash promptly -- don't forget hair and nails. Washrooms should have detergents rather than just plain soap.
1. If you inhale pesticide -- get fresh air immediately
2. If you splash it into eyes or mouth -- flush with plenty of clean water.
3. Know symptoms of pesticide poisoning: fatigue, headache, dizziness, blurred vision, too much sweating and salivation, nausea, vomiting, stomach cramps and diarrhea: all usually within 12 hours of pesticide exposure