



The Cedarglen Floral Company Approach to Pest Management

At Cedarglen Floral Company we strive to grow our plants safely using sustainable growing practices. Protecting people, the community and the environment has been our priority for the past 25 years. Raising 2 children on our nursery and being a certified organic vegetable and herb producer, pesticide use has always been a sensitive subject for us and never more so than now. It seems that there are weekly, if not daily, news stories regarding this issue, especially regarding a class of pesticides called Neonicotinoid. I can tell you right now, without going any further that we do not use neonicotinoid in spray form, as a soil drench nor do we buy seeds treated with these chemicals. I would however, like to briefly explain what our approach to pest and disease management is.

Oregon Tilth has one of the most respected certification processes as well as some of the strictest guidelines in the United States and we are proud to have their certification as well as that of the USDA. We adhere to all policies and practices and these have influenced how we produce our non-organic perennial and annual bedding plants.

For our organic and non-organic crops we use IPM or Integrated Pest Management which is an environmentally sensitive approach to controlling pests consisting of 4 steps.

- Setting action thresholds – a point at which pest populations or environmental conditions indicate that pest control action must be taken.
- Monitor & identify pests. Know your bugs – the good and the bad.
- Prevention – use preventative measures to prevent pests from becoming a threat.
- Control - Once monitoring, identification, and action thresholds indicate that pest control is required, and preventive methods are no longer effective or available, IPM programs then evaluate the proper control method both for effectiveness and risk. Choice of options will vary depending on whether the crop is organic or non-organic.

Our experience has taught us that good growing practices and prevention are key and that first in line regarding prevention are biological controls – or simply put – good bugs and good bacteria. When making control decisions we will always select a biological product first. If one is not available or effective, we will then move to soaps or oils, then an insect growth regulator (IGR), which disrupts the insect's ability to molt or feed and its effect is specific to the target pest. If these attempts at control fail we will then select a low toxicity synthetic that is



non-systemic and has the shortest term residual effect possible and is most often an OMRI listed product.

We have five significant pests that threaten our crops: fungus gnats, shore flies (a nuisance only), western flower thrips, spider mites and aphids. The use of beneficial insects (insect predators and parasitoids) is hands down our biggest ally in combating them. In our production houses we release a variety of good bugs weekly at levels that keep pest populations below our action thresholds the majority of the time.

Here is a sample of the insect predators and parasitoids that we use:

- *Strateolaelaps schmitus* - they aid in the control of fungus gnats and western flower thrips by eating the pupating larvae in the plug media.
- *Atheta coriaria* aka Rove Beetle – fast and voracious eaters. They love to snack on shore fly larvae, pupating thrips and help control other soil born mites and pests.
- *Amblyseius fallacies* – a predatory mite which goes toe to toe with western flower thrips. Mites are applied by sprinkling or blowing them over crops.
- *Aphidius colemani* and *Aphidius matricariae* – both tiny parasitic wasps used to control aphids. They parasitize an aphid by laying their eggs inside of the aphid, and as the eggs hatch the larvae begin feeding on the aphid, eventually killing it. The larvae then pupate and emerge to seek out other prey to parasitize.

Controlling disease in greenhouse production is equally as challenging. Many of the common fungicides and bactericides can cause harm to our good bugs. When starting our IPM program, we made the decision to apply only biological fungicides when disease pressure was low, from late spring to early fall. We then selected a group of low toxicity synthetic fungicides to rotate in with the biologicals when disease pressure is increased from late fall to early spring.

As a nursery that is successfully using biological controls, we look forward to what future research will teach us. Our biggest reward is in knowing that our plants are grown in a way that will cause no harm to humans and wildlife.

Cherie & Eric Siegmund

Owners – Cedarglen Floral Company