Battle of the bugs

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Rose Buitenhuis, research scientist, biological control specialist at Vineland Research and Innovation Centre, holds a poinsettia that is infested with white flies.

It’s the classic story of good versus evil.

In this case, it’s good bugs versus bad bugs, and Vineland researcher Rose Buitenhuis is doing her best to make sure good triumphs over evil.

Buitenhuis, a biological control specialist at Vineland Research and Innovation Centre, is helping flower, vegetable and berry growers combat pests through the use of plant-friendly bugs and parasites that munch on the bad guys.
“We want to help growers have the best pest-control possible,” Buitenhuis said.

“It’s natural enemies, anything that will kill a bad bug, which is natural. It could be a predator, a parasite, it could also be a disease, like a fungus. It’s not just bugs.”

The entomologist, who has been at the Vineland research centre four years, said the use of bio-controls for pest management has become more important in recent years because of the banning of certain pesticides.

Growers “used to have access to a lot of chemicals, which is kind of easy — you see a bug, you spray it,” Buitenhuis said. “A lot of the chemicals are getting off the market. One big problem is that insects develop resistance to pesticides. So you can spray all you want of that specific chemical, only it doesn’t kill the bugs.”

While she is a proponent of natural methods of pest control, she sees a place for the use of chemicals.

“Pesticides are not necessarily bad,” she said. “It’s not like, ‘Oh my God, we should get rid of all pesticides.’ It’s an integrated approach.”

Vineland Research and Innovation Centre scientists, such as Buitenhuis, work closely with universities, the Ontario Ministry of Agriculture and Food, the Ontario Ministry of Rural Affairs and Agriculture and Agri-Food Canada.

Buitenhuis said growers should strive to grow the healthiest plants possible so that their natural defences, supplemented by bio-controls, will protect them against pests.

“But there is always a place for selective chemicals.”

Bugs used in bio-control must be indigenous to the area. Part of Buitenhuis’s research is expanding the palate of our indigenous bugs so they get a taste for invasive species.

“We work more on new ways to use the bugs, finding new beneficial bugs to make (bio-control) more efficient.”

She said bio-control measures are becoming more popular with growers to tackle the likes of thrips, white flies, aphids and spider mites.

“It’s way more fun to put bugs out in the greenhouse — good bugs — than it is to suit up and spray,” she said.

One such grower is Colonial Florists Ltd. in Port Weller, which has eight acres of greenhouses at its Broadway St. greenhouses

Rob Roberts, a partner in the company and also its head grower, said 70% of pest control at Colonial Florists is via bio-controls.

“We work with four or five insects for control of different pests,” Roberts said.
“We’ve had a lot of failures and successes with biologicals, but I like to think now we have more successes than failures, through the help of researchers, but also from our own trial and error.”

Roberts said his company turned to bio-controls for a number of reasons.

“The (chemical) pest-control options were becoming less effective,” he said. “But we also wanted a healthier environment for our staff.”

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