

## SCH.CropWalk

OSU outreach focuses on insect biocontrols

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### PHOTO CAPTIONS:

(Frames 19 – 22) Horton Road Organics farm near Junction City, Ore., was one of the stops during a recent crop walk held by Oregon State University's Integrated Plant Protection Center.

(Frames 22 –E) Horton Road Organics farm near Junction City, Ore., was one of the stops during a recent crops walk presented by Oregon State University's Integrated Plant Protection Center. Farm owners/operators Bill and Debra are shown here with red and yellow storage onions that are curing.

SALEM, Ore. – If you want to learn how to make beneficial insects feel right at home on your farm, you need to connect with the Integrated Plant Protection Center at Oregon State University.

While IPPC has been in existence around 30 years it's only recently begun a partnership with Oregon Tilth that aims to provide outreach in the area of biological control.

The program is headed up today by Paul Jepson, a veteran entomologist who wants to spread the biocontrol word throughout Oregon, and not just to organic farmers.

His goal is to not only increase the numbers of friendly insects on farms but build habitat diversity as well.

"I'm trying to reinvigorate the state IPM program with outreach that is much more involved with growers," said Jepson, a native Englishman who has a doctorate in insect ecology from Cambridge University.

Jepson is well known internationally for his work with IPM.

Before he took over the IPPC reins at OSU, the program was pretty much research oriented. "Now we are both research and outreach focused," he said.

Jepson, who works within the recently created Department of Environmental and Molecular Toxicology in the OSU College of Agricultural Sciences, is assisted by graduate student Mario Ambrosino and organic grower Gwendolyn Ellen.

The IPPC program is also working closely with Oregon Tilth. "They have links with organic growers and were very supportive of us doing some

more work in the area of conservation biological control. They're very much our partners in the project."

To acquaint growers with the world of beneficial insects Jepson and his co-workers have already conducted crop walks on three organic farms in Oregon that have been managed for friendly predator and parasitic insects.

Jepson intends on expanding the IPPC outreach program to include conventional growers. "As the program evolves it's going to include any grower who's interested."

Jepson said that a number of conventionally grown Oregon commodities, such as row crops, tree fruits and nuts, berries and other high value crops can benefit from a beneficial insect conservation program. But there are potential risks involved, including the possibility of providing habitat for pests also. The program will only work, if it is carried out as a partnership between researchers and growers.

Providing habitat for good bugs that take out bad bugs, a practice referred to as "farmscaping," requires more than a cookie cutter approach, Jepson said.

Weather, soils, native vegetation and the cash crop to be protected all must be taken into account.

"What works well in one location may not work well in another," Jepson said. "A lot of this is going to come from experiments that growers try themselves. We're going to help them with the options."

Because the staff is small and funding is limited, this program in IPPC is not being run as a conventional one-on-one extension program, Jepson said.

Instead, he is organizing events such as the crop walks, which will be held again next year.

November 17 he, Ambrosino and Ellen will be presenting an introduction to biocontrols, called "Bug-scaping 2003," at the Benton County Fairgrounds in Corvallis.

Jepson would like nothing better than to show conventional growers how a biological control program can decrease their need for hard pesticides and improve crop health.

"Every conventional grower I've ever met appreciates the value and role of natural enemies, and the value of increasing the abundance of natural enemies on the farmland.

"There's excellent evidence in surveys that have been done that there are fewer pests on farms that have large numbers of natural enemies."

That said, Jepson added that biocontrol programs are not meant to totally replace chemicals but to work in harmony with them under IPM. “This isn’t an anti-pesticide project. It’s a pro-beneficial insect project.”

Jepson said that even in fields and orchards where pesticides are used, friendly predators and/or parasites are also keeping harmful insects in check. “By increasing their numbers we should reduce the number of times growers need to spray.”

One example of biocontrols at work is the hoverfly, whose larvae dine on aphids that feed on various crops, including the cole crop family. To subsist, adult hover flies feed on plant pollen. Dr. John Luna (Department of Horticulture), Jepson and others are now researching the various plants that produce the pollen liked by hoverflies. The greatest challenge seems to be that the flies arrive too late to benefit the crop, and much research on predator biology still needs to be done. The solutions to this problem are not going to be simple, and the goal is to increase the number of studies that being carried out through cooperation with growers.

Those interested in learning more about OSU’s IPPC program can contact Jepson at (541) 737-9082. There will be a website up and running by the end of the year.