

Conservation *Showcase*

Leading by example: Washington orchardist embraces “soft” pest management

It's not just about the money he's saving – though he's happy not to have to write those big checks. And it's not just about reducing potential chemical exposure to his farm workers – though he's delighted his employees are working in a clean environment.

For Sergio Marquez, implementing his Integrated Pest Management (IPM) plan is really about being more responsible – and of course – growing beautiful fruit.

Since Marquez bought his 100-plus acre farm near Wapato six years ago, he's been a leader and innovator, hosting monthly meetings in his shop where experts from Washington State University teach Hispanic growers about the latest farming and pest management technologies. It was at one of those meetings where Marquez learned about a “softer way” to control pests through IPM.

It was also at those meetings where he learned that USDA's Natural Resources Conservation Service (NRCS) offered both technical and financial assistance to growers who want to implement IPM plans – which often include providing pest controls that reduce or eliminate the need for organophosphate pesticides or “OPs.”

According to the U.S. Environmental Protection Agency these broad spectrum pesticides may pose risks to the environment and to workers, especially during post application tasks such as thinning. In response to those concerns, some of the OPs will be discontinued as early as 2012.

Marquez and a number of other producers applied for an Environmental Quality Incentives Program (EQIP) contract to help them transition away from OPs, but didn't get into the competitive program their first try. The agency, recognizing the need for providing assistance in the IPM arena, began setting aside specific funds for the following years. Subsequently, Marquez and other producers received contracts to develop and implement IPMs.

“Mr. Marquez is a leader in the farming community who appreciates and understands the value of applying good techniques to his land,” says Oscar Tobias, NRCS civil engineering technician. NRCS' Tobias has worked with Marquez on both this IPM plan and on his Irrigation Water Management (IWM) plan. “Mr. Marquez is dedicated and involves his family in most of his farming ventures,” Tobias says, “and that has given him a clear vision for what his goals are.”

Having previously managed two orchards, including the 106-acre orchard he now owns, Marquez has nearly three decades of farm management experience. At his previous job, he witnessed the effectiveness of using pheromone strips to protect crops from destructive pests like the codling moth.



Orchard owner Sergio Marquez (left) and his wife Lilia successfully implemented both an Integrated Pest Management System and an Irrigation Water Management system with the help of the NRCS.

Conservation Showcase (continued)

“When the pheromone strips came out years ago, my boss told me to try them in a pear orchard,” Marquez says. “I just laughed and thought ‘those things don’t work.’ But I learned. They worked. When we picked the pears, they were clean and beautiful,” he says.

The pheromones in the strips mimic those produced by insects to attract the opposite sex. Distributing the strips throughout the orchard – in the right amount – masks the insects’ own attractants and prevents the sexes from getting together, thereby disrupting mating. Through the use of insect traps and careful monitoring, he’s able to isolate and treat only those areas where pests appear to be propagating.

Including the cost of the pheromone strips, Marquez estimates that he has reduced his pest management expenses by more than 70 percent. Next year, he says, he will save even more.

Marquez says that some of his colleagues initially insisted that pheromones don’t work in controlling pests. “And I said, ‘Yes they do.’ And then I would ask them how many they used per acre, because you have to set out the proper number or they won’t work,” he says.

In the end, his colleagues, too, have become believers in the “soft power” of pheromones.

“After setting out the proper number of strips in his orchard, I had a friend come back to me and say, ‘Compadre, I am so happy. Those things work,’” Marquez says smiling.

NRCS’ Tobias says Marquez is always working to help his colleagues. “He is an active member in his community – always motivating his peers to implement conservation measures,” Tobias says. “He’s a real inspiration.”

“Now the whole orchard is clean. And I want to keep it like that.”

—Sergio Marquez

The EQIP program helped pay for costs of the pheromone strips for the first two years. Now, Marquez says, he’s sold on their effectiveness and plans on continuing this “softer” approach with or without any additional financial assistance.

By installing soil moisture probes throughout his orchard, Marquez has also become water savvy – irrigating only when the soil needs it, not when the calendar tells him to. Between the chemical savings realized through his IPM plan, and the electricity savings realized through his IWM plan, Marquez is conserving both natural resources and his financial resources.

By looking for cost savings through innovation and conservation, Marquez has created a business that has a bright, sustainable future – one where he can continue to reap the rewards of his entrepreneurship.

“I like knowing that if one day I don’t want to go to work – I don’t have to go to work,” he says. “That hasn’t happened – but in theory, one day it could.”

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Orchard owner Sergio Marquez (left) and Oscar Tobias, NRCS civil engineering technician review the Marquez conservation plan.



Sergio Marquez is very pleased with the quality of his fruit after implementing the use of pheromone strips on his farm.