

# Courier Bees Help Reduce Costly Fungi, Impact On Environment

WOOSTER, Ohio - Forget the tractor, the sprayer and the labor. An Ohio State University researcher has found that bees are ready and able to deliver biocontrols to strawberry plants.

Not only do the courier bees help protect berries from the fungi Botrytis, fruit yields increased too, said Joe Kovach, director of the Integrated Pest Management program at Ohio State University.

Kovach will discuss the use of bees for Botrytis fruit rot control at the joint meeting of the North American Farmers' Direct Marketing Conference and the Ohio Fruit and Vegetable Growers Congress, Feb. 10-12, in Cincinnati.

Botrytis is a gray mold or fungus that causes strawberries to rot. Infection occurs in the flowers, but the mold doesn't multiply until the fruits mature.

In wet years, Botrytis can damage close to 100 percent of an untreated crop, while during dry years the damage is minimal, Kovach said. A fungal biocontrol, *Trichoderma*

*harzianum*, controls the fungi. A biocontrol uses a living organism, instead of a synthetic chemical, to control a pest. For example, a beneficial insect would feed on unwanted insects.

Current integrated pest management recommendations call for one to two biocontrol applications at bloom, depending on the strawberry variety, bloom length and weather conditions.

But Kovach wanted to minimize the impact from spraying one step further.

"We knew bees were able to

transport disease-causing microorganisms as well as dust and pollen to flowers," said Kovach. "We wanted to see if the bees could deliver a beneficial microorganism for us."

To accomplish this, Kovach put the *Trichoderma* powder at the entrance of the hive. "In essence, the bees go through the equivalent of a foot bath as they enter or exit the hive," he said.

Results from three years of field tests at the New York State Agricultural Experiment Station, where Kovach previously worked, showed that honey bees and bumble bees can successfully carry the *Trichoderma* to the strawberry flower.

In fact, bee-delivered *Trichoderma* provided the same amount of control as the traditionally applied fungicides. But - as a bonus from the bee pollination - fruit weight increased.

Strawberries are primarily pollinated by gravity or wind, Kovach explained. The more seeds developed per berry, the larger the fruit is. The increased pollination by the bees yielded fruit that was 15 percent to 25 percent larger than the control.

*Trichoderma* is registered with the Environmental Protection Agency; however, the bee delivery method is not yet registered.

"We still have to complete impact studies on the bees, their honey and the surrounding flora," Kovach said. "But, I expect this delivery method to be registered by the year 2001."

The potential benefits are tremendous, Kovach said. There is lower impact on the environ-

ment because of the delivery method, farmers handle less chemicals, there's little drift, and it's cheaper and easier to do. The bees do your spraying for you.

The North American Farmers' Direct Marketing Conference and the Ohio Fruit and Vegetable Growers Congress early registration deadline is Jan. 10. The fee is \$85 for members of the conference's sponsoring organizations and \$110 for non-members. Late registration fees jump to \$95 and \$115, respectively. For more information, contact the Ohio Fruit and Vegetable Growers Congress staff at (614) 249-2424.

# Pa. Cattlemen's Association To Offer Scholarship

MIDDLETOWN (Dauphin Co.) - The Pennsylvania Cattlemen's Association (PCA) has announced that it will make a \$1,000 scholarship available to a young person planning a career related to the cattle industry. Funding for this scholarship is provided through PCA's participation in the Ivomec: Generations Of Excellence™ program.

"Nothing is more important than providing a sound education for tomorrow's producers," according to Bill McCoy, president of PCA. "Those planning to work in the changing cattle industry into the next century will need to be proficient in animal and crop sciences, business economics and communications. That's why PCA is providing a \$1,000 Ivomec Scholarship to help a deserving young cattleman or cattlegirl prepare for the future."

The PCA Ivomec Scholarship will be awarded based on the applicant's interest in the industry, leadership, academic achievement and organizational involvement. Interested youth who are members of the Pennsylvania Junior Cattlemen's Association or whose par-

ents are PCA members should request application forms directly from the PCA office. Completed applications must be postmarked on or before March 12.

"We are pleased to team up with Ivomec to offer this very special scholarship opportunity to a young person in Pennsylvania," said McCoy. "There's no question that education, along with practical experience, is the key to the future competitiveness of the U.S. cattle industry. Offering this scholarship is just one of the ways in which PCA is helping prepare and develop tomorrow's leaders."

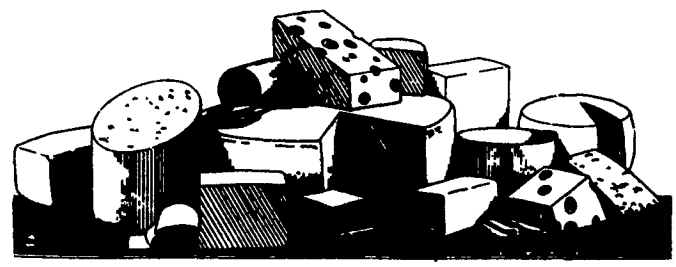
Introduced in 1996, the Ivomec: Generations Of Excellence program has provided more than \$1 million to help fund youth-focused scholarship and leadership initiatives at the same level through organizations that support the cattle industry. Funding levels are based on the state cattle producers' purchases of Ivomec® Brand products, which are manufactured by program sponsor Merial.

For more information about the PCA Ivomec Scholarship, contact the PCA office at (717) 986-0333.

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