

Predators eat pests in IPM program

HERSHEY — Almost every discussion at the 122nd Annual Meeting of the State Horticultural Association of Pennsylvania, Inc. mentioned, if not focused on, integrated pest management — known as IPM in orchard jargon.

What is IPM? According to Cliff Rice, an IPM consultant, it is a method of ridding an orchard of harmful organisms by using the beneficial insects that move in to devour or rid the orchard of nuisances without the use of chemicals.

"Integrated pest management to me is when you have beneficial insects, like the Stethorus punctum or the little black beetle, and the harmful mites, such as the European red mite or two-spotted mite, together in your orchard. These are two different groups or types of organisms integrated in the same trees.

"When you have this situation in an orchard, a miticide normally put on to control the red or two-spotted mites would be ruled out or at least toned down to be sure not all the mites were killed," he explained.

"To make this type of program work, it takes more time and closer checking of orchards. Many times there are big decisions to make, such as will the predators be able to handle the mites, should we use some miticide now, or should we wait until next week and see what the situation is then."

Rice advised orchard managers to start checking their plots early in the season — watching the balance between mites, which appear first, and the Stethorus punctum.

"Make estimated counts of predators, both larvae and adults since larvae do consume as many

mites as do adults," suggested Rice. "Also take an estimate of the mites per leaf. Do this at least weekly to determine the progress of both the predators and mites."

Rice pointed out as the season progresses the numbers of mites and predators will increase. A decision will have to be made on whether to apply a miticide to kill off 60 to 70 percent of the mites or to allow the situation to continue, hoping the predators can hold their own.

The IPM consultant stressed not all mites are destroyed since predators will need food.

"If you kill most all of the mites, there is a good chance the predators will leave your orchard. If this happens, you could be in a lot of trouble with the mites before the predators reappear again," he exclaimed.

Rice advises using a suppressant-type of material in the early part of the season and continuing with it. By managing the orchard balance this way, he stated the decision-making battle will be held off until the middle to the latter part of the season.

"By trying to make it work this way, and if it does, the population crisis will occur just one time and the predators will keep your orchard clean of mites for the remainder of the year. The predators will also feed on mite eggs in the fall. This will keep your trees free of overwintering mite eggs."

Rice recommended the following management tips to help the IPM program work:

- have the trees pruned so materials will be able to get to all parts;
- have a calibrated spraying machine that is suitable for the

operation;

- use the alternate-middle spraying method (spray intervals determined by weather conditions and pressure from insects, mites and fungus diseases);
- try to use the combination of two materials at half-rate each, whenever possible, rather than one material at full rate;
- rotate or use different material in a spray program;
- use a miticide, if needed, on a particular block or part of an orchard rather than spraying the

whole thing;

- do not drive too fast; and finally,
- always put the right amount of materials in the tank otherwise the IPM program could be destroyed and money will be wasted.

One orchard operation currently using the IPM program is Sierer Fruit Farms, Inc. of Mt. Pleasant Mills, Snyder County.

"We've been involved in IPM since 1974," said Richard Sierer. "In the past four years we have not

exceeded 3 percent damage to fruit due to insect and disease."

Sierer explained their orchard hires a commercial pest consultant who keeps them "current on developments of new materials, up-to-date on new control measures and new research, and informed of label changes on spray materials" along with monitoring insect and disease activity.

Said Sierer, "The purpose of the IPM program is not to get rid of pesticides but to learn to use them more effectively."

Computer program gives 'instant' profit info to tomato growers

HERSHEY — With increasing costs and complexity of producing, harvesting, packing and marketing fresh market tomatoes, there is a need for a program that provides growers with information to evaluate the profitability from planting to selling.

Such a program was developed over the last three years with the cooperation of growers in Lackawanna County. The program provides pertinent information for profit evaluation within two days of packing.

"Too often in the past, with the intense activity of harvesting and marketing compressed into six weeks of 24 hour days everything became a blur of tomatoes out of the field, then in and out of the packing house," said Thomas Jurchak, Lackawanna Co. Extension Agent. "There was little time for meaningful examination of separate parts of the process

during the harvesting and marketing season when it was needed most.

"It was only after the crop was gone that growers had time for evaluation. But by then, they lacked some of the information needed for accurate decision making. Conclusions were drawn from incomplete or misleading recollections.

"In addition, other farmers considering entry into fresh market tomato production and marketing enterprises needed budgets to guide them in management decisions, including capital and labor requirements.

In the new program, as soon as a field is picked the first time, the grower completes a "Producer Reporting Form." This form includes information on the amount of tomatoes harvested and the resulting pack out in terms of grades, sizes and prices.

This information is telephoned to Penn State's Farm Management Extension section where a computer program accepts the data and prints out the "Tomato Marketing Analysis Report".

This report is mailed to the grower and includes production, harvesting, packing and marketing costs in total and on a "per acre" rate.

Costs have been developed from grower surveys and averaged for use in the program. Gross income is determined from the actual yields, pack out and prices reported by the producer on the "Reporting Sheet" and reported in numbers, value and per cent of boxes packed by grades and sizes.

This gives the grower immediate information on yields from the field; pack out of 30 pound boxes; cull rate; distribution of grades

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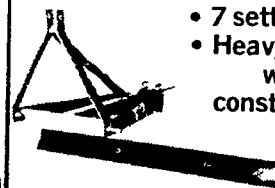
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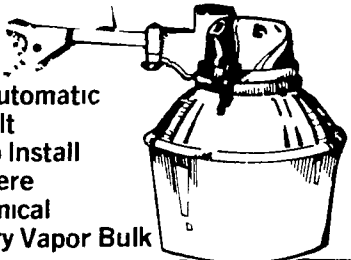
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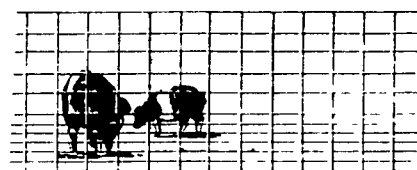
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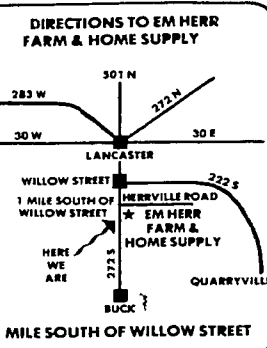
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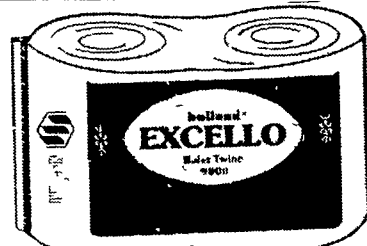
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