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Ohio State University Extension Vegetable Crops

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Vegetable and Fruit Safety Course Offered April 20, 2009 at OARDC

Call to see if space is still available

When: April 20th, 2009, 9 a.m. - 4 p.m.
Location: Fisher Auditorium, OARDC Campus, Wooster, OH (http://www.oardc.ohio-state.edu/centernet/oardcmap.htm)

Who: Growers raising fresh fruits and/or vegetables for direct sale

Fee: \$50 per participant

RSVP: registration and payment. To see if space is available and for Registration questions, call: Tim Koch, koch.1@osu.edu, 330-466-4895. Registration will be limited to 50.

Voluntary Cancellation of Furadan Uses by C.Welty, Extension Entomology

EPA's Office of Pesticide Programs reports that the EPA has granted the request from FMC Corporation to cancel certain uses of carbofuran, effective March 18, 2009. All federally registered uses for flowable carbofuran are being canceled except for foliar use on field corn and foliar and soil use on sunflowers. Additional uses of carbofuran that had been requested by specific states under a "special local needs" provision of Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) are also being canceled; this includes our Ohio 24c label for Furadan 4F for soil application to cucumbers, pumpkins, and other cucurbits for cucumber beetle control at planting time. Existing stocks of the canceled products may be used until they are depleted, or until the effective date for revocation of the associated tolerances.

Phase-out of Monitor and Di-Syston Insecticides by Dan DiGiacomandrea, Bayer CropScience, edited by C. Welty Monitor: Bayer CropScience final production of Monitor will occur in 2009. Distributors will be provided with an allocation based on previous purchase

Di-Syston 8 and Di-Syston 15G: Bayer CropScience final production of Di-Syston 8 and Di-Syston 15g will occur in 2009. At this time, material will not be allocated and is available for purchase while supplies last.

Once purchased from Bayer CropScience, there is no time limitation by which distributors are required to sell Di-Syston or Monitor to retailers or growers (EPA 1991 Existing Stock Policy.) Once purchased from distributors or retailers, there is no time limitation by which growers are required to use Di-Syston or Monitor (EPA 1991 Existing Stock Policy.)

Both Di-Syston and Monitor have been valuable pest management tools. Bayer CropScience has the following options as replacement alternatives.

Alternatives to Di-Syston 8: Admire Pro, Baythroid XL, Belt, Larvin, Leverage, Movento, Oberon, Provado, Synapse and Trimax Pro may provide comparable solutions.

Alternatives to Monitor: Admire Pro, Baythroid XL, Leverage, Movento, Provado and Trimax Pro may provide comparable solutions.

Insecticide Update for Vegetable Crops



If you missed this important information this winter, you can listen to Dr. Welty spodcast by going to my homepage at: http://vegnet.osu.edu This QuickTime movie podcast is not in the flash player at the top, so scroll down the page and you will find it in the right hand column. The podcast last about 9 minutes.

Biology and Control of Cucumber Beetles in Cucurbits by Dan Pavuk, Integrated Vegetable Extension Educator NW Ohio and SE Michigan

The striped cucumber beetle, Acalymma vittata, and the spotted cucumber beetle (also known as the southern corn rootworm), Diabrotica undecimpunctata howardi, are important insect pests of cucurbits in the North Central Region and generally in the United States and southern Canada east of the Rocky Mountains. Poth species overwinter as adult beetles under plant material near gardens and fields. In the spring, the adults become active and feed on leaves and pollen of a several different tree and shrub species. • The adult beetles feed on the foliage, flowers, and fruit of cucurbits, including cucumber, melon, squash, and other members of the cucurbit family, once these become available. Feeding by adults on emerging cucurbit seedlings may kill the plants at this stage. Female beetles lay their eggs in the soil near their host plants. Larvae, the immature stages of the beetles, hatch from these eggs and feed on roots of cucurbit plants, but do not cause significant damage to the root systems. • These larvae may also feed on the rinds of ripening fruits that are in contact with the soil.



The damage caused to cucurbits by these two beetles goes beyond the feeding injury they inflict. Both of these beetles also transmit the pathogenic bacterium, *Erwinia tracheiphila*, that causes *bacterial wilt* of cucurbits. When a beetle feeds on a plant already infected by this pathogen, the bacteria are picked up on the beetle so mouthparts, and when the infective beetle feeds on a healthy cucurbit plant, the bacteria are introduced into the plant. The bacteria multiply in the xylem of the plant, eventually plugging up the xylem tissue, which prevents water and nutrients from being moved from the roots. The plant wilts, and hence the name of the disease, bacterial wilt. Eventually, infected plants die from this disease. Cucumber and cantaloupe are most severely affected by bacterial wilt. Both the striped and spotted cucumber beetle also transmit *squash mosaic virus*, which causes *squash mosaicc*, an important disease of melons and squash. This cucurbit disease causes reduction in plant growth and yield, and is a major factor in distortion and mottling of fruit, which make the product unmarketable.

Melon plants displaying bacterial wilt infection symptoms



Controlling cucumber beetles in cucurbit plantings will significantly reduce the occurrence of bacterial wilt and squash mosaic. Extreme caution should be used in choosing insecticides for beetle control because cucurbits are very sensitive to most of these chemicals and significant damage to the plants will occur. Malathion can cause foliar burning and should not be used. Sevin formulations that are labelled specifically for cucumber beetle control can be used on cucurbits. Sevin is very toxic to honeybees and should not be applied when bees are actively foraging. Always read the label and apply insecticides at the recommended rates. Rotenone 1% dust applied to the plants will control cucumber beetles. The use of floating row covers is very effective in keeping the beetles off of the plants. Once flowering occurs, the row covers should be removed to allow bees to pollinate. In small plantings, the covers can be kept over the plants and plants can be hand pollinated. Rotenone can be used after the row covers have been removed to control beetles if necessary.