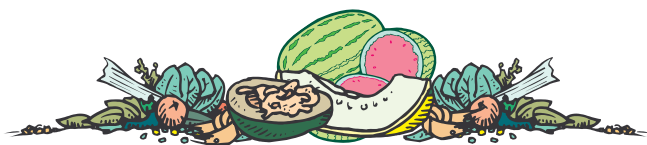


VEGETABLE CROPS HOTLINE

A newsletter for commercial vegetable growers prepared by the
Purdue University Cooperative Extension Service

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IN THIS ISSUE

- ALTERNARIA LEAF BLIGHT ON MELONS
- NEW PUBLICATION AVAILABLE IN JUNE
- SURVEYS
- CORRECTION
- MAGNESIUM & MANGANESE PROBLEMS IN MELONS
- FLEA BEETLES, CUTWORMS, CORN EARWORM TRAPS
- SPECIAL EVENT

ALTERNARIA LEAF BLIGHT ON MELONS - (Dan Egel and Rick Latin) - Alternaria has been observed in Southwest Indiana and will soon be active in most muskmelon fields. This disease is recognized by the round brown spots (1/8-1/2 inch in diameter) it produces on leaves. Spots normally appear on older leaves first. Close inspection reveals a target-like pattern of rings within the older and larger brown spots. Alternaria leaf blight is not usually a problem on watermelon.

Crop rotation is important in reducing the amount of inoculum from Alternaria leaf blight from year to year. Most growers feel it necessary to apply protectant fungicides to manage Alternaria leaf blight in muskmelon. Mancozeb (Dithane, Penncozeb, etc.) and chlorothalonil, (Bravo, Echo, Terranil) fungicides should be applied at vine touch and at 7 to 10 day intervals throughout the season. Quadris fungicide is now labeled for use on muskmelon for the treatment of Alternaria leaf blight. Be sure to check the label of all fungicides for rate and other application instructions. Growers in Southwest Indiana may be able to use the MELCAST program to decide when to apply protectant fungicides (call Rick Latin or Dan Egel for more information).

NEW PUBLICATION AVAILABLE IN JUNE - (Fred Whitford & Cheri Janssen) - "Pest Control in Tomatoes for Processing" PPP-101. This publication looks at the production of tomatoes for processing in Indiana. It focuses on current methods of pest control used by Indiana tomato growers. Authors: Rick Foster, Entomology; Richard Latin, Botany & Plant Pathology; Steve Weller, Horticulture; Steve

Smith, Red Gold, Inc.; Cheri Jassen and Fred Whitford, Purdue Pesticide Programs. PPP-101 can be ordered from Media Distribution, at no charge by calling 765/494-6794. Or can be viewed on-line at <http://www.btny.purdue.edu/PPP/SIPIAP/>

SURVEYS - (Fred Whitford & Cheri Janssen) - Melon Survey Results - The results of the 1998 Cantaloupe and Watermelon survey will be available July 22. The survey results can be obtained by selecting publications and using the calendar on the National Agricultural Statistic web site <http://www.usda.gov/nass/> or by calling the Indiana Agricultural Statistic Service at 800/363-0469.

- The 1997 Chlorothalonil Survey use on cantaloupes conducted by Dan Egel can be viewed on-line at <http://www.btny.purdue.edu/PPP/SIPIAP/>

- Grape Survey - Grape growers are encouraged to participate in a survey of grape production in Indiana. During June and July the Ag Statistics Service will be contacting growers by telephone. The survey results will present information on grape production in Indiana and highlight current pests and pest control methods.

- Potato Survey - Potato growers are encouraged to participate in a survey of potato production in Indiana. In August the Ag Statistics Service will be contacting growers by telephone. Information provided by growers will give a current picture of potato production practices in Indiana.

- Winter Wheat Survey - Winter wheat growers are encouraged to participate in a survey of wheat production in Indiana. In August the Ag Statistics Service will be contacting growers by telephone.

The survey results will present information on the production of winter wheat in Indiana and focus on current pest control methods.

CORRECTION - (Dan Egel) - In the last issue of the Vegetable Crops Hotline it was stated that Quadris fungicide is systemic. While Quadris does have systemic properties, Zeneca considers Quadris "a broad spectrum, preventative fungicide with systemic properties recommended for the control of many important plant diseases. Quadris may be applied as a foliar spray in alternating spray programs or in tank mixtures with other registered crop protection products. Read and follow all application directions, restrictions and precautions on the EPA-registered Quadris product label." Zeneca is concerned that growers not use Quadris post infection and expect that this new fungicide will cure all their foliar disease problems. Quadris, like most fungicides, will give better control when applied before infection takes place.

MAGNESIUM AND MANGANESE PROBLEMS ON MELONS - (Rick Latin & Dan Egel) - We have observed several samples of cantaloupe and watermelon vines showing symptoms of magnesium deficiency or manganese toxicity. Both disorders are related to acid soils and often occur in clusters or streaks in a field. Magnesium deficiency appears on sandy ridges and can be recognized by interveinal yellowing and death of tissues on older leaves. Manganese toxicity also first occurs on older leaves but appears in heavier or darker sands, often in swales. The diagnostic feature of manganese toxicity are the tiny pin hole type lesions with yellow halos clustered between the veins. Leaves are best viewed when held up to the sun.



These disorders can easily be confused with an infectious disease. Symptoms may seem to “spread” from areas of the lowest pH to areas of somewhat higher pH. Individual rows seem to be worse than adjacent rows. Such rows may have received less lime. The remedy for these disorders is to raise the pH of the soils involved. However, once crops are within a week or so of harvest, there is no remedial treatment.

Although growers may have soil tested and spread lime before the season, there may still be pH problems in some areas of the field. Learn the symptoms of these disorders so you won't be wasting fungicides on a nonexistent disease.



FLEA BEETLES – (*Jerry Brust*) – Corn flea beetles are numerous this year. Any grower who has planted Stewart's wilt susceptible sweet corn varieties should be watching their fields closely and treating when flea beetles are observed. If, however, you have planted varieties resistant to Stewart's wilt, the direct feeding will usually not be much of a problem. With warm weather and good moisture, the corn should be able to grow fast enough to outgrow the flea beetle injury. Seldom should you have to treat resistant sweet corn varieties for flea beetle.

Tomato and eggplant will not get Stewart's wilt from flea beetle feeding (for one thing they are different flea beetles). The damage is small, round holes that quickly grow into large holes so that the plant looks skeletonized after heavy feeding. Certain varieties of tomatoes are more susceptible to attack, or at least the flea beetles prefer to feed on some varieties more than others. Eggplants are highly preferred by flea beetles. In a matter of days, flea beetles can skeletonize a small eggplant, so be sure to check your plants frequently after they are out. Check several places in a field as some areas will have more concentrated flea beetle activity than others. Pyrethroid insecticides have worked particularly well in controlling flea beetles. Using two well-timed sprays will give very good results. A spray would be well timed when there is about 15-20% feeding damage and flea beetles are observed. Check the Midwest Vegetable Production Guide '99 For Commercial Growers (ID-56) for a list of other flea beetle controls.

In my organic vegetable area, I have been battling flea beetles for the last 3 years to little avail. None of the organic insecticides or mixtures of organics (i.e., garlic, hot pepper, oils, soaps, pyrethrin, fish emulsion,

ginger powder, diatomaceous earth, neem, rotenone) have worked very well. I had limited success with the rotenone. I am going to try drenching the soil with entomophagous nematodes (nematodes that kill insects) so that I might be able to reduce the larvae of the flea beetle. Adult flea beetles are laying their eggs now at the base of plants and when the eggs hatch, the larvae will feed on the roots of the eggplant. Larva will pupate and emerge as adults a few weeks after the eggs are laid and start the cycle over. I hope to break this cycle with the use of the nematodes against the larvae. However, I am not too optimistic for good results. One thing I have noticed this year and as mentioned to me by a person in a Master Gardener's class is that black plastic seems to be doing a pretty good job of reducing numbers of flea beetles and their damage. I am not exactly sure why, whether it is the extra heat or the plastic acting as a type of physical barrier. Another way to get around flea beetles is by planting when the adult generation is in low numbers. This will occur in 2-3 weeks in southern Indiana. There will be a lull in beetle activity as the next generation is busy feeding on the roots. If you plant at this time, you could avoid both the adults for a few weeks and the larvae until eggs are deposited from the next generation.

CUTWORMS – (*Jerry Brust & Rick Foster*) – There have been many reports of cutworm damage in field and sweetcorn, although other crops can also be fed upon by the pest. Earlier moth flights were very large and the potential for damage is there. Fields should be scouted for damage now. In sweet corn if more than 2% of plants are cut and cutworm larvae are smaller than an inch, then a treatment is necessary. Pyrethroids will provide good control of cutworms.

CORN EARWORM TRAPS – (*Rick Foster*) – Growers with early sweet corn should place their corn earworm traps in fields around June 1. First generation corn earworm is usually not much of a problem, however, I have seen some damage in sweet corn by the first generation and now recommend monitoring.



SPECIAL EVENT

June 5, 1999 - Indiana Gourd Society - Putman County Fairgrounds, Greencastle, IN - 8 AM - 3 PM. Demonstrations and seminars on growing and crafting gourds. Growers will be selling dried gourds. Free admission and open to public.

Disclaimer

Reference to products in this publication is not intended to be an endorsement to the exclusion of others which may have similar uses. Any person using products listed in this publication assumes full responsibility for their use in accordance with current directions of the manufacturer.



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