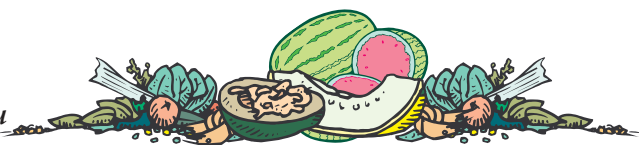


VEGETABLE CROPS HOTLINE

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

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No. 405
May 23, 2002

<http://www.entm.purdue.edu/entomology/ext/targets/newslett.htm>

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CORRECTION - (Frankie Lam) - In the *Midwest Vegetable Production Guide for Commercial Growers 2002* (ID-56), by Purdue Extension on the chapter of Cucumber, Muskmelon, and Watermelon (p. 67) Provado was listed as an insecticide for the control of cucumber beetles which is incorrect. Cucurbits are not in the crops recommended for application on the label. The ID-56 editorial staff regrets the error.

YELLOWING OF TISSUE AT LEAF MARGINS OF WATERMELON TRANSPLANTS - (Frankie Lam, Dan Egel, and Chris Gunter) - This is an extreme wet early season. Although the rain stopped last weekend, we still have to wait until the soil dries before transplanting can begin. Some growers are concerned about yellowing of tissue (chlorosis) at the margins of leaves on their watermelon transplants in the greenhouse or on the wagon. Yellowing of leaf tissues at margins may be caused by several factors including nutritional deficiency, nutrient toxicity, environmental damage, bacterial damage, and phytotoxicity (plant injury). This article will focus on phytotoxicity.

Phytotoxicity is derived from two Greek words: *phytom* meaning plant, and *toxicum* a poison. Anything that poisons or damages a plant causes phytotoxicity. Any chemicals that are employed to protect plants from pests, fertilize plants or regulate plant growth may also cause plant injury. Identifying plants that are damaged due to phytotoxicity can be difficult, but there are several clues we can use to help us; no signs of plant pathogenic organisms, the damage is uniform, injury to the leaf has sharply defined edges with little or no color gradation, injury does not spread out from a central plant to other plants.

The most important factors that influence phytotoxicity of crops are the chemical applied, the concentration and methods of application, and growing conditions and growth stage of plants at the time of application. The best way to minimize phytotoxicity damage is to be sure the crop to be treated is listed on the chemical label. Applying the chemical at a rate higher than label recommendation is likely to cause plant injury and is illegal. In fact, excessive amounts of pesticides do not control a greater percentage of pests than the amount recommended by the label. Also be sure to use the method recommended by the label. Usually extreme high and low temperatures and prolonged wetness of foliage after chemical treatments may result in plant injury. Furthermore, seedlings are more sensitive to chemical treatments than mature plants.

(The following was sent as a Vegetable Crops Hotline - BULLETIN, No. 3, May 9, 2002.)

STRIPED CUCUMBER BEETLES ON EARLY-PLANTED MUSKMELONS - (Frankie Lam) - Striped cucumber beetle have been found on the early-planted muskmelons near Vincennes, Knox County. On April 30, 16 beetles were found on 8 muskmelons out of 600 plants scouted. However, on May 8, 851 beetles were found on 360 muskmelon plants randomly scouted in a field. These indicated that the adults were emerged from the overwintering sites and scouting your field for striped cucumber beetles should begin.

The striped cucumber beetle is a vector of the bacterium that causes bacterial wilt of muskmelons and cucumbers. The management tactic for the disease is to avoid the beetle feeding on the plants. For muskmelons and cucumbers, the economic threshold is 1 beetle/plant, whereas for watermelons, squash, and pumpkin, the economic threshold is 5 beetles/plant.

The beetles tend to congregate on plants along the borders during the early season. Sample the field

borders 2-3 times a week. Once beetles are found on several scattered plants along the field edges, the entire field should be scouted in a "Z" pattern. For each 20-acre field, at least 10 plants in 10 locations should be checked. If the population number reaches the economic threshold, the whole field should be treated. The foliar insecticides recommended for control of cucumber beetles are Adios, Pounce, Ambush, Capture, Asana, Provado, and Sevin. The influx of beetles into the field would last for 2-4 weeks. After the period of beetle influx, sample the field weekly and treat the field only when the beetle population exceeds the threshold.

(The following was sent as a Vegetable Crops Hotline - BULLETIN, No. 4, May 14, 2002.)

BACTERIAL FRUIT BLOTCH - (Dan Egel) - Bacterial fruit blotch was diagnosed from seedlings in a greenhouse in southwest Indiana. Although several watermelon and muskmelon varieties were present, the causal bacterium (*Acidovorax avenae* subsp. *citrulli*) was isolated only from the variety Tri-X-313. According to Syngenta Seeds, the Tri-X-313 seedlot involved (UWT 01007A01H) has not been involved in any other bacterial fruit blotch outbreaks and the bacterium has not been detected on the seed from this seedlot.

Lesions on seedling leaves infected with bacterial fruit blotch include watersoaked, brown necrotic areas, often with a yellow halo. Older lesions will have a necrotic area in the center of the lesion. The primary symptom is a dark green irregular blotch that occurs on the top of the watermelon fruit. Sometimes the rind will crack and white ooze will come out of the fruit. Although bacterial fruit blotch will seldom invade the fruit farther than the rind, the fruit may start to rot from other organisms. Watermelon is the only host with economically important damage.

Bacterial fruit blotch spreads by water splashed from seedling to seedling. Greenhouses, especially those that are watered overhead, provide perfect conditions for the spread of the disease. Unfortunately, the symptoms of the disease are not always obvious until fruit are present.



Copper applications may be appropriate for managing bacterial fruit blotch once the plants are in the field, but copper products are not registered for use in the greenhouse on watermelon.

IMPACTS OF THE 2002 FARM BILL ON PLANTING FLEXIBILITY AND SPECIALTY CROPS - (Allan W. Gray, Department of Agricultural Economics, Purdue University) -

Planting flexibility is maintained in the 2002 Farm bill depending on who you are and where you are. If you grow corn and soybeans and want to continue growing corn and soybeans or add some other program crop to your rotation then you may do so without losing government payments. If, on the other hand, you grow tomatoes, melons, potatoes, or some other specialty crop you will find that this farm bill may not be as flexible.

Fruits and vegetables are considered restricted crops under this farm bill, as they have been in past farm bills. The difference now is that producers in the Midwest now have a base for soybeans. In the past, producers in Indiana, for example, would have an option of growing specialty crops on soybean ground without losing their direct government payments. Now that a farmer has both a corn and soybean base, if they choose to grow specialty crops on a portion of that ground they will lose their direct and counter-cyclical payments for that base. In the past, producers have also been subject to fines for planting restricted specialty crops on base acres. While USDA has not developed specific rules at this time, it is anticipated that the fines for planting restricted crops on base acres will continue in the 2002 Farm Bill.

A farmer that has been growing specialty crops in the same fields over the last four years will not have program crop base on that land. Thus, continuing to grow specialty crops on that non-base land should be allowed without penalties. Of course, this producer's past decisions to grow specialty crops precludes him from capturing farm program payments on that land that he could have received if he had planted a program crop instead of a specialty crop over the last 4 years.

If a producer has been rotating ground and has only planted specialty crops on a field once or twice over the last four years and has been planting program crops the remaining years he can still receive a base on 50 to 75 percent of the acres. For example, if the farmer planted 10 acres of tomatoes in 1998 and again in 2001 and planted that same 10 acres in soybeans in 1999 and 2000, the farmer could receive 5 acres of soybean base that could then be eligible for program crop payments. The problem is that when the producer gets ready to use the land for tomatoes again, five of the 10 acres will be losing government payments and will likely be subject to a fine. The producer or landowner could elect not to claim base acres at all on the 10 acres. Of course, in this case the producer would be forgoing any government payments on that land in all years.

The reduction in flexibility is especially true for a specialty crop producer that rents corn and soybean ground for rotation purposes or is considering expanding current specialty crop production. The landowner will likely lose program payments on any land planted to specialty crops, if it is program ground that has not recently been used for specialty crops. There may also be additional penalties. The loss of government payments may be enough to deter production of specialty crops. Thus, while the crafters of this farm bill tout its flexibility, it is clear that this bill does more to promote the production of program crops than it does to promote production of a diverse set of products valued by the marketplace.

What can be done to change the impacts for specialty crops In terms of losing government payments when planting specialty crops on base acres, there is very little that can be done at this point. The loss of government payments is explicitly written in the Farm Bill. Thus, without an amendment that would have to be proposed in the House and Senate, passed by both houses, and then signed by the President, nothing can be done to change this part of the law.

USDA is currently working on the development of rules for implementing the 2002 Farm Bill. For specialty crops, one of the crucial rules will be the implementation of penalties for planting specialty crops on base acres. Normally, when USDA develops implementation rules they provide a period (usually 60 days) for public comment on the rules. USDA is currently developing a website that contains information regarding implementation rules as they develop. The website contains a section for posting questions, comments, and concerns about implementation of the Farm Bill. The website can be found at: <<http://www.usda.gov/farmbill/>>. In addition, you may want to contact your local U.S. representative and your Senator to inform them of your concern and get guidance on the best way to influence the rule making process.

NOTE FROM IVGA ABOUT FARM BILL - (Liz Maynard) - The 2002 Farm Bill has the potential to cause major changes in vegetable production in Indiana. Rotation of vegetables with corn and soybeans may become less financially viable because of the way program payments will be calculated. I encourage you to read Allan Gray's article on the subject in this issue. The Indiana Vegetable Growers' Association will stay up-to-date on the issue and will support the writing of rules that minimize penalties associated with vegetable production. IVGA encourages all members to express their opinion about this issue to elected representatives. Please contact the Association at 219-785-5673 if you need more information.

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