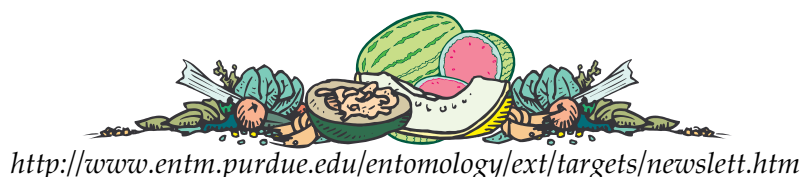


# VEGETABLE CROPS HOTLINE

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

Dan Egel, Editor  
(812) 886-0198  
egel@purdue.edu

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**STRIPED CUCUMBER BEETLES** - (Rick Foster and Frankie Lam) - The following article was written as a Vegetable Crops Hotline - BULLETIN, May 9, 2001. Striped cucumber beetles have become active in the Vincennes area. Sampling the muskmelon fields at Southwest Purdue Agricultural Center, the highest number of cucumber beetles observed on May 8<sup>th</sup> was 12 beetles per plant. It is not uncommon for cucurbit crops such as muskmelon, watermelon, cucumber, and squash to be attacked by large numbers of beetles in a short period of time. These large invasions can be particularly serious when plants are small. Growers who have these crops in the field should be checking them every couple of days for the presence of striped cucumber beetles. Usually the beetles will be observed first on one of the field edges, most likely adjacent to where they overwintered. This means that scouting the field edges is usually adequate. Growers with cucumber and muskmelon should be particularly mindful of scouting, because of the potential for bacterial wilt of cucurbits in these two crops. The pyrethroid insecticides, Pounce, Ambush, Capture and Asana, have all provided excellent control of striped cucumber beetles, with residual activity of up to a week. However, when plants are growing rapidly, remember that all new growth since the last spray is untreated.



**REFLEX SECTION 18 FOR SNAPBEANS** - (Steve Weller) - The herbicide Reflex has been granted a section 18 for use on snapbeans. The emergency exemption is valid from May 10, 2001 to September 1, 2001.

Application: Reflex will be applied at 0.5 – 1.0 pint per acre (0.125 – 0.25 lb ai/ acre), with a maximum of 1 pint per acre per year. Apply in 10-20 gallons spray mix per acre. Include 1 pint of crop oil concentrate (COC) per acre. There can be 2 applications made per year, with a maximum of 1 pint Reflex (0.25 lb ai fomesafen) per acre. The Pre-harvest Interval from the last application is 30 days. The following restrictions and requirements concerning the use of Reflex are:

1. Do not apply before full extension of the first trifoliolate leaf.
2. Do not apply once buds or flowers have appeared.
3. Do not apply to snapbeans under stress.
4. Do not apply when weather conditions favor drift from the treated area.
5. Do not contaminate surface water during application or cleaning of equipment.

**Qualifications needed of the applicators using the pesticide:** A valid private or commercial Indiana applicator license.

Reflex gives excellent control of redroot pigweed, giant ragweed, morning glory, cocklebur and velvetleaf. Snapbean fields infested with these weeds have reduced plant vigor and fruit quality and the availability of Reflex should alleviate these problems.



**DUAL MAGNUM SECTION 18** - (Steve Weller) - The herbicide Dual Magnum has been granted a section 18 for use on snapbeans. The emergency exemption is valid from: April 20, 2001 to July 1, 2001.

Rate(s) of Dual Magnum: 0.95 to 1.27 lbs a.i./A on coarse soils with organic matter less than 3.0%, or 1.27 lbs a.i./A if organic matter is 3.0% or greater. 1.27 to 1.59 lbs a.i./A on medium textured soils. 1.27 to 1.59 lbs a.i./A on fine-textured soils if organic matter is less than 3.0% or 1.59 to 1.9 lbs a.i./A if organic

matter is 3.0% or greater. Apply with ground sprayers only. Pre-harvest Interval: 90 days. Number of applications per year: 1 preemergence or 1 preplant incorporated application.

All applicable restrictions and requirements concerning the proposed use:

1. The user applying Dual Magnum to transplanted tomatoes is required to read and follow all applicable precautions, directions, and restrictions printed on the EPA registered product label. (See label.)
2. Syngenta Crop Protection, Inc. does not recommend the use of Dual Magnum for weed control in transplanted tomatoes. The decision to use or not use this herbicide must be made by each individual grower on the basis of probable crop injury from Dual Magnum, the severity of weed infestations, cost and availability of alternative herbicides or weed control methods, and other factors.

**Qualifications needed of the applicators using the pesticide:**

Valid private or commercial Indiana applicator license.



**QUADRIS USE** - (Dan Egel) - Regular readers will remember reading about the correct use of the fungicide Quadris several times in these pages. The incorrect use of Quadris can lead to the production of strains of fungi that are insensitive to azoxystrobin, the active ingredient in Quadris (and Flint). That is, strains of fungi whose growth is no longer affected by Quadris.

Syngenta, maker of Quadris fungicide, has announced that strains of *Didymella bryoniae*, causal agent of gummy stem blight, have been found that are insensitive to Quadris. Such strains have been found in Delaware, Maryland and Georgia.

Growers of cucurbits in Indiana who have had to fight the disease gummy stem blight will not want to lose any weapons available for use against this important disease. How do we avoid this problem in Indiana? Read the label of the fungicide



you are using and carefully follow the directions. Precautions are also listed in the Midwest Vegetable Production Guide for Commercial Growers 2001 <<http://entm.purdue.edu/entomology/ext/targets/ID/index.htm>>.

Here are some general guidelines for the use of Quadris and Flint:

- 1) Reduce inoculum for disease by cultural techniques such as crop rotation and fall tillage.
- 2) Alternate the use of Quadris and Flint with broad-spectrum fungicides such as Mancozeb or chlorothalonil.
- 3) Always use the labeled rate of all fungicides.



**DRY TRANSPLANTS - (Chris Gunter)** - The past few weeks it seems that we can't even buy a good soaking rain in southwestern Indiana. Even though the soil is dry, plastic mulch and transplanting are still taking place. We have heard from at least one grower that they were going to transplant while using their trickle irrigation, something that they haven't ever had to do before.

All this dry weather has led to a few farm visits to look at recently transplanted vegetables that appear to be drying out, although the trickle irrigation is on. We have come up with a couple of explanations about what we may be seeing in these situations.

First, transplants are grown in trays in the greenhouse in a soilless mix specifically designed to maximize water availability and minimize drying out of the seedling. Placing the moist transplant root-ball into dry soil will tend to wick water away from the root-ball. Thorough watering while transplanting is a must, but be aware that in unusually dry years, more water may be required than in past years.

A second area of concern in water supply for young plants is the placement of the trickle irrigation tape. In loose sandy soils there is little movement of water laterally away from the drip tape emitters. Water availability decreases dramatically as you move away from the drip tape. Depending upon where the drip tape is placed under the plastic mulch at the time it was laid down, it could be 6-12 inches away from the site of the new transplant. This may mean that, while drip tape irrigation would be fine for a mature plant with a large established root system, the transplant roots are receiving very little water even though the trickle irrigation is on.

Close monitoring of the water status of the soil around the transplant will help to eliminate drying out of the new plants. Supplemental irrigation may be necessary if the plants are experiencing water stress.



**COMMAND 3ME LABELED ON SELECTED VEGETABLES - (Liz Maynard)** - The herbicide Command 3ME from FMC has received a label for use as a pre-emergence herbicide on succulent beans, cabbage, cucumbers, muskmelons, watermelons, succulent peas, peppers (except banana peppers), winter and summer squash (including processing pumpkins), and sweet potatoes. The herbicide is to be applied before seeding or transplanting and does not need to be incorporated. Rates vary from 0.4 to 4 pints per acre, depending on soil type and crop. Rates below 1 pint per acre will suppress, but not control, many grass weeds and a few broadleaves. Rates above 1.3 pints per acre will control most grasses and a number of broadleaves including velvetleaf, galinsoga, lambsquarters, and purslane. There is danger of crop injury from use of Command 3ME on vegetables. FMC recommends that growers test the product prior to widespread use.

The emulsifiable concentrate formulation of this product, Command 4EC, has been labeled in Indiana for a number of years as a pre-plant incorporated herbicide on pumpkins, peas, and peppers, and in neighboring states on squash. The new label for the 3ME formulation expands the number of crops, and does not require soil incorporation. Note that the new label does not include jack-o-lantern pumpkins. Command 4EC, as long as it is available, is the only formulation of clomazone labeled for jack-o-lantern pumpkins.

Carryover and spray drift or off-site movement of vapors can be a concern when using Command 3ME. Be sure to read and follow all label directions.



**GUMMY STEM BLIGHT - (Dan Egel)** - Watermelon seedlings with gummy stem blight have been observed in southwest Indiana. Seedlings with gummy stem blight may have large black spots on the younger leaves. The stems of infected seedlings are often dark brown and look watersoaked at the point where the seed leaves (cotyledons) are attached to the stem. Stems of such seedlings may remain green at the soil line. (In contrast, seedlings affected with damping-off fungi look brown and watersoaked at the soil line.) Small dark round structures about the size of a period on a printed page may be seen on older stem lesions. It may help to look at such lesions with a 10X-hand lens.

Growers who have gummy stem blight in their greenhouse should remove all trays with infected seedlings and all the surrounding trays. The remaining seedlings should be carefully inspected. If the seedlings are removed from the greenhouse (for example, to wagons), they may be sprayed with various fungicides such as Bravo, Terranil, Echo, Dithane or Quadris.

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Vegetable Crops Hotline  
c/o Daniel S. Egel  
Southwest Purdue Agricultural Program  
4369 N Purdue Rd  
Vincennes, IN 47591