

# VEGETABLE CROPS HOTLINE

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

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

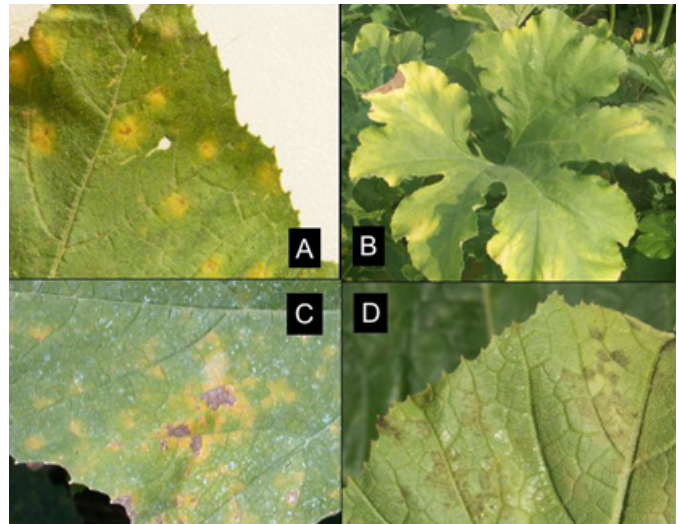
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**DOWNY MILDEW OF CUCURBITS** - (Dan Egel) - *The following article was written as a Vegetable Crops Hotline - BULLETIN, August 23, 2007.* This disease was observed in LaPorte County Indiana on August 22 on mixed cucurbits. Downy mildew can affect all cucurbits including cucumbers, muskmelon, watermelon, squash, pumpkins and zucchinis. Management options for downy mildew will depend in part on when growers expect to make their last harvest. Crops that will have their final harvest in the next 2-3 weeks probably do not need to be protected. Growers in close proximity to this outbreak or in an area forecasted to be affected are at greater risk [www.ces.ncsu.edu/depts/pp/cucurbit/](http://www.ces.ncsu.edu/depts/pp/cucurbit/). Cucurbit growers should scout fields carefully for symptoms of this disease. Growers with at risk crops should seriously consider applying specialized fungicides such as Previcur Flex, Ranman, Tanos, or Curzate (See *Vegetable Crops Hotline* issue #480). Remember that these specialized fungicides have no or little activity against most other cucurbit diseases such as black rot or powdery mildew. Growers who do not want to apply specialized fungicides should consider applying contact fungicides (which includes, chlorothalonil and mancozeb) on at least a 7-day interval. It is recommended that any grower who applies fungicides in FRAC group 11 (including Amistar, Quadris, Flint, Cabrio and Pristine) tank mix these fungicides with a contact fungicide since the downy mildew fungus may have resistance to these fungicides.



**DOWNY MILDEW LOOK-A-LIKES** - (Dan Egel) - In the figure, on the right, symptoms such as seen in the top two photos (A and B), are often confused with downy mildew of pumpkin (C and D). Although many people are familiar with the talcum-powder like appearance of powdery mildew on pumpkin, under some conditions, powdery mildew may also cause yellow (chlorotic)



Four photographs of symptoms on pumpkin leaves. Powdery mildew of pumpkin (A). Drought and heat stress (B). Angular lesions of downy mildew on the top of the leaf (C). The dark 'fuzz' of the downy mildew fungus on the bottom of the leaf (D). (Photos by Dan Egel)

lesions such as seen in A above. Note the difference between these lesions and the angular lesions of downy mildew seen in C. On wet mornings or after a rain, lesions such as those seen in C will have a dark 'fuzz' (the downy mildew fungus) growing on the underside of the leaf (D). The photograph in B is of a leaf that is beginning to mature early due to drought and heat stress. Note that the yellow (chlorotic) and brown (necrotic) areas of the leaf in B are on the edges (margin) of the leaf. This type of symptom is not typical of downy mildew of pumpkin.



## FALL WEED MANAGEMENT ACTIVITIES - (Liz Maynard)

- As the growing season winds down it may seem like the time for weed control is long past. Take a moment to read the list presented here and consider whether these activities might lead to improved weed control on your farm.

1. Suppress perennial weeds. In the Fall perennial weeds are moving food reserves belowground where they will be stored overwinter until it is time to sprout again in the Spring. Glyphosate applied at this time will move in the plant to the overwintering parts and prevent or reduce regrowth next spring. In order for the herbicide to work, weeds should be

actively growing with plenty of intact leaves when the herbicide is applied. If weeds have been damaged by harvest operations, allow them to recover before applying the herbicide. After application, wait at least a week before tilling the field. Be sure to read the herbicide label for specific instructions relating to particular weeds. Other practices that disrupt this transport of food reserves will also reduce the weed problem next spring. Tillage can be effective against perennials with a taproot that do not propagate from roots or underground stems.

2. Make a weed map for each field. On an aerial image or outline of each field, outline patches of heavy weed growth and note what weeds were in those patches. Note also what weeds were more evenly spread across the field. Weeds that were a big problem this year are likely to be so next year, often in the same area of the field. Make special note of any weed you haven't seen before. If you aren't sure what a weed is called, contact someone who can help identify it. Your County Extension Office is a good place to start. Make maps for all fields where you plan to grow vegetables next year. The maps will help you choose herbicides and other weed management practices best suited for those weeds.
3. Hold back new weed species. Check fields and field edges for new weed species and remove before seed is dispersed. It is a lot easier to prevent infestation by a new species than to eradicate one that has already established.
4. Plant a winter cover crop and experiment with a dead mulch next Spring. No-till planting pumpkins into an herbicide or mechanically killed cover crop of winter rye has been discussed in recent years at a number of Indiana vegetable meetings and in trade

magazines. A killed mulch of winter rye helps to suppress weeds in the first part of the season, and provides other benefits like keeping the pumpkins clean for harvest. Some Indiana growers have used this system; others may want to try it on a portion of their acreage. If you've been planning to experiment with this, Fall is the time to seed the winter rye. The recommended seeding rate is 60 to 120 lb./A (1 to 2 bu./A) drilled, or broadcast at 90 to 160 lb./A (1.5 to 3 bu./A). More information on winter rye and other cover crops is available in the newly revised *Managing Cover Crops Profitably*, 3<sup>rd</sup> Edition, 2007, available for \$19 from USDA/Sustainable Ag Research and Education Program by calling (301) 374-9696, or online at [www.sare.org/publications/covercrops.htm](http://www.sare.org/publications/covercrops.htm).



**MARK YOUR CALENDAR FOR THESE UPCOMING EVENTS** - (*Announcements*) - Point your web browser to [www.hort.purdue.edu/fruitveg/events/events.shtml](http://www.hort.purdue.edu/fruitveg/events/events.shtml) for details as the event nears.

- September 11, 2007 - **Sweet Corn and Pumpkin Twilight Meeting**, Wanatah, IN. 5:00 – 8:30 p.m. CDT. (219) 785-5673.
- November 27, 2007 - **Fulton County Vegetable Program**, Rochester, IN. (574) 223-3397
- November 29, 2007 - **Vegetable Variety Showcase**, Southwest Purdue Agriculture Center, Vincennes, IN and other locations via IP video. (812) 886-0198 or (219) 785-5673
- January 3, 2008 - **Illiana Vegetable Growers School**, Schererville, IN. (219) 785-5673
- January 28-30, 2008 - **Indiana Horticultural Congress and Trade Show**, Indianapolis, IN. (765) 494-1306.

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