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 Ohio State University Extension Vegetable Crops  
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**Section 18 for use of Coragen on sweet corn** by Celeste Welty,  
 Emergency insecticide registration for sweet corn: The EPA just granted a Section 18 exemption for use of Coragen on sweet corn in Ohio for control of corn earworm. The use is allowed from 22 July to 30 September 2008. Many vegetable crops, but not sweet corn, were included in the first federal label for Coragen which was issued on 1 May 2008. The Section 18 label for sweet corn was pursued because of the increasing lack of effectiveness of pyrethroids such as Warrior and Mustang due to resistance in corn earworm populations throughout the Midwest, and the lack of effective alternatives to pyrethroids. Coragen contains the active ingredient chlorantraniliprole, better known as Rynaxypyr. Coragen is in a new group of insecticides called ryanodine receptor modulators, which is group 28 in the IRAC mode-of-action classification. Coragen is allowed on sweet corn for foliar use at a rate of 3.5 to 7.5 oz per acre, with a limit of 15.4 fl oz per acre per crop; the pre-harvest interval is one day. In our Ohio trial on corn earworm control last year, we tested Coragen at both a 5.1 oz rate and a 6.7 oz rate. The 6.7 oz rate provided excellent control of corn earworm under heavy pest pressure, but the 5.1 oz rate provided only moderately good control. The Section 18 label is posted on the internet at:  
<http://pested.osu.edu/documents/Section%2018/CORAGEN%20R-1314-08OH04.pdf>

### **Downy Mildew: Here ♦ and Hitting Hard** by Sally Miller, Department of Plant Pathology

July 22, 2008. ♦ Downy mildew was found on **cucumbers** during the July 4<sup>th</sup> weekend in Lake county, the first report of this disease in Ohio. ♦ Since then, we have confirmed the disease on cucumbers in Geauga, Sandusky, Medina, Wayne and Knox counties (scouted by Eric Draper, Matt Hofelich and Ron Becker). ♦ Outbreaks in two more counties in southern Ontario, Canada were also confirmed during the last week (see the Cucurbit Downy Mildew Forecast web site: <http://www.ces.ncsu.edu/depts/pp/cucurbit/>) on Poinsett 76 cucumber (has some resistance to downy mildew) and Hale ♦'s Best Jumbo **cantaloupe**. ♦ Outbreaks on cucumbers in Michigan and New York were reported in early July (see VegNet Vol. 15, No. 10, July 9, 2008). ♦ These reports likely represent only a fraction of the downy mildew in Ohio and elsewhere, so it is best to assume, at least for central and northern Ohio, that the inoculum is present. ♦ Further, the fact that cantaloupes are showing symptoms in Ontario means that other vine crops, in addition to cucumbers, need to be protected. ♦ The fungicide recommendations provided in previous newsletters are repeated below. ♦ The risk of transport and deposition of downy mildew spores is strongly moderate to high this week for Ohio (see the Cucurbit Downy Mildew Forecast website <http://www.ces.ncsu.edu/depts/pp/cucurbit/forecasts/c080721.php>). ♦

### **Downy Mildew Fungicide Recommendations:**

Protection before disease appears: Apply one of the following fungicides on a 7-10 day schedule, tank mixed with Bravo, Manzate or Dithane: Gavel, Previcur Flex, Tanos, Ranman, Curzate or Presidio. ♦ Alternate products. ♦ The application interval can be lengthened under dry conditions. ♦ Use the shorter interval under cool, moist conditions.

**Management after disease appears:** Apply one of the following fungicides on a 5–7 day schedule, tank mixed with Bravo or Dithane: Previcur Flex, Tanos, Ranman or Presidio. ♦ Alternate products. ♦ The application interval can be lengthened under dry conditions. ♦ Use the shorter interval under cool, moist conditions. ♦ See product labels for fungicide rates.

Note that the fungicides recommended above have different preharvest intervals (PHI). ♦ Keep this in mind as fungicides are applied after harvesting begins.

Product	PHI (days)
Bravo Weather Stik	0
Ranman	0
Previcur Flex	2
Tanos	3
Dithane or Manzate*	5
Gavel*	5
Presidio	2
Curzate	3

\*labeled for cucumbers, melons, summer squash, watermelon (NOT pumpkin)

### **Powdery Mildew of Vine Crops** ♦ ♦ Sally Miller, Bob Precheur and Jim Jasinski

Powdery mildew started to appear on vine crops in Ohio about July 15. ♦ All vine crops should be scouted at this time for powdery mildew and should be protected against infection once the disease appears. ♦ Varieties that are resistant to powdery mildew usually need fewer, if any, fungicide applications. ♦ There are a number of fungicides that can be used for powdery mildew management, including sulfurs (e.g. Microthiol), chlorothalanil (e.g. Bravo), myclobutanil (Nova) and triflumizole (Procure). ♦ Quintec (quinoxifen) is a very effective powdery mildew fungicide but is not labeled for edible peel cucurbits due to phytotoxicity issues. Since Nova and Procure are the same type of fungicide, only one of them should be used and alternated with products with a different mode of action. ♦ Tank-mixing products such as Quintec, Nova or Procure with a sulfur fungicide will provide broad-spectrum protection, although it should be noted that sulfur can be phytotoxic when applied under hot (>90 F) conditions. ♦ Insensitivity of the powdery mildew fungus to strobilurin fungicides such as Quadris and Pristine have been reported, so if one of these fungicides is included in the program, particularly to manage other diseases, it must be alternated with a fungicide with a different mode of action and tank mixed with a contact fungicide such as sulfur or chlorothalanil.