Vegetable Crop Update - #11
August 9, 2006

Potato and Vegetable Crop Update – Alvin J. Bussan, Potato and Vegetable Production Systems Specialist, UW-Madison, Horticulture Department, 608-262-3519, cell 608-225-6842 or e-mail ajbussan@wisc.edu

Potato:
The passing of the heat wave and return of favorable weather hopefully contributes to better bulking weather. Equally important is the need for good harvest conditions for the early crop considering the good market and the good quality and high yielding crop.

I took my first readings of vine senescence this week. Early maturing crops like Red Norland still have 20 to 30% vine cover on the sand soils. Red Norland on the muck still has several weeks of good growth before preparation for harvest. Russet Norkotah vines at HARS still have 50% of the vines. Most Russet Burbank plots still have ground cover of 90% or more, but I do have a research project that was spring fumigated and the vines have begun to senesce. Traveling around Central WI, early dying is beginning to appear in field areas of long season crops and is beginning to be visible in several of our plots. We should have several weeks of good bulking with good weather which should help round out a good crop.

I also viewed the latest petiole N03 tests from plots at HARS. Red Norland, Russet Norkotah, Atlantic, and Russet Burbank from 2 to 3 different field locations all had adequate levels as of July 28. We have had few to no leaching events and the petiole samples indicate no supplemental N was necessary for most trials at Hancock this year.

Irrigation management should be adjusted based on the current status of the crop and weather conditions. The intermittent rains and heat last week resulted in necessary modifications to irrigation. Now that we are well into late bulking and vines are beginning to senesce, it will be necessary to irrigate less frequently and more deeply. You need to minimize free water in the tuber zone to decrease potential for tuber infection and insure good storability.

Vegetable Crop Update –
Last week I discussed the effects of the recent heat wave potentially impacting pollination and pod or fruit set on multiple vegetable crops. Indeed, it appears cucumbers, snap beans, and other crops were negatively affected by the warm weather.

Snap bean and sweet corn yield and quality has been good to excellent across much of the state irregardless of the heat. Unfortunately, extremely dry conditions in NW WI did impact crop productivity a substantial amount. Recent precipitation may allow for harvestable crops in some of those regions.
Snap bean, sweet corn, red beet, and cucumber harvest has progressed rapidly across much of the state of WI. Bunching of sweet corn fields in particular is a real concern as the warm conditions have led to rapid growth and maturation of later planted fields. Onion harvest has just begun in some areas as warm conditions have led to maturation of some onion fields.

**Vegetable Disease Update - W. R. Stevenson, Department of Plant Pathology, UW-Madison, Tel. No. 608-262-6291, Email: wrs@plantpath.wisc.edu**

**Potatoes** – We are rapidly approaching the end of the season with only 3-4 weeks left for much of the crop to complete the bulking cycle. Although late blight has appeared in many production areas across the US and Canada, there have still been no observations or samples of late blight in Wisconsin. The severity values continue to increase, indicating conditions favorable for late blight development in most regions of Wisconsin. Until vines are completely desiccated in preparation for harvest, growers need to keep a close eye on their crops and maintain protective coverage with fungicides using 7-10 day fungicide spray intervals. The fungicides are mostly to keep early blight under control, although this year even early blight has been a minor problem compared with some years. The fields I’ve walked recently are seeing a low incidence of early blight and at this point in the season, early blight development will have only a minimal if any impact on yield.

During the last 14 days, we are seeing a significant increase in the severity of early dying. True, the last two weeks weather has contributed significant stress to the crop, but with the cool and consistent growing conditions up to that point, I’m surprised to see the level of early dying apparent in many fields. Infection of plant roots likely occurred weeks ago and recent temperature extremes represented the “straw that broke the camel’s back”. The appearance of symptoms and the severity of symptom development represent a good opportunity to spend some time looking at patterns of symptomatic plants in production fields and examining fields for irregularities in irrigation, fertilizer, pesticide and fumigant application that may be contributing factors to a lack of early dying control.

**Processing Vegetable Crops:**

**Snap Beans** – White mold continues to appear sporadically in central WI, but so far, there have been no reports of this disease in the northern drier areas of the state. We are seeing a few plants with virus-like symptoms, but nothing unusual or even close to virus outbreaks that were commonplace just a few years ago. The soybean aphid seems to be behaving itself and thus reducing the potential for widespread distribution of viruses such as cucumber mosaic virus, alfalfa mosaic virus and other aphid transmitted viruses.

**Carrots** – The carrot crop has reached this stage of the growing season in reasonably healthy shape. I’m not aware of problems controlling foliar diseases and fungicide sprays coupled with disease tolerance are helping to keep the number of fungicide sprays and input costs down to a reasonable level.

**Curcubits** – Powdery mildew is beginning to appear on squash and pumpkins. Conditions of low humidity and warm weather have been ideal for mildew development so expect to see signs and symptoms of powdery mildew increasing rapidly in the weeks ahead. In fields where fungicide sprays are planned for powdery mildew control, now
would be a good time to initiate those sprays rather than waiting for the disease to become established.

Although downy mildew is now reported in several production areas in the Midwest and Eastern states, we haven’t see symptoms of this disease yet in Wisconsin. We also escaped damage from this disease last year while other states experienced economic losses. Weather factors play a critical role in the establishment of this disease with warm and wet conditions favoring infection and spread of the downy mildew pathogen.

### Current P-Day (Early Blight) and Severity Value (Late Blight) Accumulations

<table>
<thead>
<tr>
<th>Area</th>
<th>Planted:</th>
<th>50% EMERGENCE</th>
<th>P-Days</th>
<th>Severity Values</th>
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Visit our web site at [http://www.plantpath.wisc.edu/wivegdis/index.htm](http://www.plantpath.wisc.edu/wivegdis/index.htm) where you can find updated P-Day and Severity Value information throughout the growing season.

### Insect Issues: (Karen Delahaut, UW Department of Horticulture) (Prepared for Fresh Market – Urban Horticulture Distribution)

**European corn borer** – Peak summer moth emergence will occur at 1733 DD50. Right now we’ve got between 1550-2100 DD50 in southcentral WI, so I expect peak emergence should be occurring statewide. However, numbers caught in blacklight traps remain low. At this time of year, besides checking blacklight trap numbers, scout sweet corn leaves for egg masses to determine the extent of infestation.

In addition to sweet corn, snap beans should also be checked for damage. The young ECB larvae feed on leave, buds, or flowers before they become large enough to bore into the bean pod or stems. Problems with this pest on beans tends to occur in warmer than normal years.

In beans, if the nightly catch is below 10 moths per night keep a close eye on the trap as the population might increase drastically in the near future and the first generation may already be in corn and will migrate to beans. If the catch is greater than 10 moths per
night for 3 consecutive nights and the beans are in a susceptible stage (14 days before harvest) treatment is necessary. Trap catches of 100 moths or more per night indicate a reinfestation flight and the pressure is high and treatments should be made every 5-7 days until 14 days before harvest

The treatment window for summer larvae in sweet corn is 1550-2100 DD50 or when Queen Ann’s lace is in full bloom.

Suggested insecticides for both the ECB and the CEW include Warrior, Capture or Discipline, and Baythroid.

Corn Earworm – This insect is showing up in pheromone traps in southern WI and central WI this week but numbers remain low because the major migration into the state hasn’t occurred yet. All we need is a storm front from the south to blow them in. Only a few corn earworms over winter in Wisconsin.

Sweet corn, peppers, and snap beans must be protected from this insect or damage will occur. Susceptible crops should be sprayed on a regular basis to protect the crops before the larvae enter the plant. At this time, because of the warm/hot weather, spray schedules should be tightened up to 3-4 day intervals.

Corn earworm eggs are laid singly on corn silks and the larvae burrow into the ear through the silk channel. As a result, worms are typically found at the tip of the ear as opposed to the European corn borer that generally is found lower down the ear. Larvae may be olive-brown, tan, maroon, or pink with 3-4 dark stripes on their backs. They can measure up to 2 inches long when mature. Adults are robust, grayish-brown moths with a wingspan of 1 ½ inches. Moths are only attracted to freshly silking sweet corn fields.

Encourage sweet corn growers to purchase or construct their own pheromone traps – particularly the wire Hartstack traps and use the Hercon™ pheromone lures. Traps should be placed in silking sweet corn fields and moved as the silk becomes brown and new fields enter the silking phase. Monitor the traps daily for moth activity and insecticide treatment should be implemented as needed.

In beans, CEW are a problem from the bud stage up to 7 days before harvest so the treatment window is larger than that for ECBs. Larvae will feed on the leaves and pods. Pod feeding can produce misshapen pods as well as provide a point of entry for disease organisms. Snap beans harvested before July 10th will not be threatened by the CEW but those harvested after this date may need protection to prevent damage to the pods.

Recommended insecticides are pyrethroids (e.g., Warrior, Capture or Discipline, Baythroid). Warning – if you are not getting good control, let me know. They’ve been finding resistant populations of CEW to synthetic pyrethroid insecticides over the last few years. We’re monitoring these populations. To reduce the CEW numbers initially, it’s recommended you mix in a little Lannate LV (methomyl) at ½ the recommended rate on your first application (0.75 pints/A). This will also help stave off further synthetic pyrethroid resistance and will also kill any eggs that are out there.
For more information on the corn earworm, visit [http://cecommerce.uwex.edu/pdfs/A3655.PDF](http://cecommerce.uwex.edu/pdfs/A3655.PDF). For information on how to manage both European corn borers and corn earworms in sweet corn visit [http://www.hort.wisc.edu/FreshVeg/Managing%20Sweet%20Corn%20Worms.doc](http://www.hort.wisc.edu/FreshVeg/Managing%20Sweet%20Corn%20Worms.doc) and [http://www.vegedge.umn.edu/MN Fruit&Veg News/vol3/803zeamap.htm](http://www.vegedge.umn.edu/MN Fruit&Veg News/vol3/803zeamap.htm).