Vegetable Crop Update - #11
July 31, 2008

The vegetable crop update is archived on the Wisconsin Crop Manager website at: http://ipcm.wisc.edu/wcm/. We welcome your input and suggestions.

Important Dates: Bean Variety and Sweet Corn Hybrid Demo, Central WI - August 12-13, all day
Haltvick Meeting, Hancock ARS – July 13

Potato and Vegetable Crop Update 7-31-2008– Alvin J. Bussan, UW-Madison, Department of Horticulture, 608-262-3519, cell 608-225-6842 or e-mail ajbussan@wisc.edu
I enjoyed my trip to Antigo this past Thursday as we had a terrific day for the Langlade Co Potato Field Day and it was good to see a number of you throughout the day. Summer is starting to shine with warmer weather and equally important warmer nights. Rains have been more hit and miss with Northern areas starting to get a bit dry.

Potato: Potatoes are well into late bulking throughout Central Wisconsin. We have now reach the drop dead date for supplemental nitrogen applications for all potatoes in Central Wisconsin as we are within 45 d of vine kill even the latest harvested portion of the crop. Any supplemental nitrogen applied after 45 days pre vine kill has not shown an impact on yield in research from Maine to Washington. We have seen early dying in plots as discussed in last weeks newsletter, but the progression has been slowed with good irrigation scheduling. We also had a positive effect on the nitrogen status of the crop with a supplemental nitrogen application the week of July 14. Petiole nitrate numbers from samples collected 7/21 have neared or reached the sufficient range for potatoes 65 days after emergence. Red Norland was 1.28% and Atlantic was 0.85% on dry weight basis, which were double the petiole nitrate levels from the week before. Russet Burbank petiole nitrate numbers were 1.00% on 7/21.

In Langlade County, a number of growers reported that the crop was behind due to cool weather during spring and much of summer. We planted potatoes the last week of June that took 3+ weeks to emerge and many varieties are still in full flower. . May planted potatoes in plots at Antigo were approximately 2" in diameter with highly variable set from plant to plant. Many growers in Northern Wisconsin have been busy irrigating as many of the early July rains those growing areas.

I have not seen or heard of any pink eye developing yet, but I have not had the opportunity to look in many fields at this point. I want to remind growers of storage potatoes to scout fields for wet spots and start monitoring the relative health of the tubers in those areas. Planning for immediate processing or packaging of potatoes from those spots or segregation into short term storage could help prevent management issues in storage.

Processing vegetables: Snap beans have grown well with the crop advancing quickly over the past few days. We will be harvesting beans next week that were planted the first week of June at Hancock. We have pin beans in snaps that were planted around June 20 at Arlington. Root rot continues to persist in snap bean plants in trials at Hancock. Hopefully this will provide us the opportunity to screen for effects of different annual cover crops on managing root rot as we are evaluating field pea, mustard, oat, and clover. Short day sweet corn has begun to mature and is showing up on road sides, but not much is being harvested yet in Wisconsin. Corn ear worm pressure has been heavy so we continue to spray.

Fresh market and organic vegetables: We have been aggressively monitoring potato leaf hopper in snap beans, potato and other sensitive crops (see Russ' notes below). Pyganic has provided effective management of leaf hopper where thresholds have been observed in organically managed plots. In addition, we have been treating corn ear worm in silking sweet corn aggressively as we have been at threshold since early in July. In organic sweet corn, we intend to use Entrust. We are also targeting Entrust on second generation potato beetle larvae in organic potatoes.

Vegetable Insect Update 7-31-2008 – Russell L. Groves, Vegetable Entomologist, Applied Insect Ecologist, UW-Madison, Department of Entomology, 608-262-3229 (office), (608) 698-2434 (cell), or e-mail: groves@entomology.wisc.edu.

Potato – Over the past week, 2nd generation Colorado potato beetle (CPB) adults continue to mate, lay eggs, and early larvae are now appearing. At our experimental sites located at the Hancock Agricultural Research Station, early larvae are present in most field sites and heavy defoliation can be expected if fields are left unprotected. Foliar applications of the neonicotinoid insecticides are a useful option at this time if no at-plant systemics have previously been applied to the crop. Applications of the new DuPont product, Coragen 1.67 SC, have been applied in some field locations at this time and appear to be performing nominally. Dual applications of this product, spaced 10-14 days apart depending upon the severity of pest pressure, are recommended at rates of 5.0 and 3.5 fl oz / acre, respectively. Reduced-risk foliar compounds including spinetoram (Radiant SC), novaluron (Rimon 0.83EC), and abamectin (Agri-Mek 0.15EC) are additional options for use against the 2nd generation of CPB, but it should be noted that these compounds have limited effect upon adult CPB which are now voracious feeders. The foliar options of oxamyl (Vydate L), endosulfan (Thiodan EC), and phosmet (Imidan WP), which were all evaluated in our foliar product trials again this year at the HARS, are additional tools available for foliar control, but growers need to be cautious about exisiting,localized insensitivity to these compounds.

Potato leafhopper (PLH) continues to remain 'low' in many portions of the state. Some commercial snap beans in central portions of Wisconsin, however, have reported sweep net captures exceeding the established threshold of 1 adult per sweep with nymphs also present. The forecast for continued warm weather conditions are conducive to increased population growth and nymphal development. In turn, scouts should continue to monitor for populations of PLH in susceptible crops as we enter into early August.

European corn borer (ECB) - With forecast warm temperatures through the remainder of the week and into the weekend, adult moths resulting from the second generation should become prevalent across much of south-central and west central areas of the state where we are approaching 1,450 accumulated degree days (DD). The established thresholds for initiation of the 2nd generation flight occurs annually around 1,400 accumulated DD which has been surpassed in some locations of the state and will soon be passed in central Wisconsin. Current degree day accumulations indicate that the peak period of flights of summer moths may occur south of a line extending from Eau Claire to Milwaukee, WI. In turn, we will be expecting to observe peak oviposition to follow shortly thereafter. Silking sweet corn, flowering to pin-pod snap beans, and peppers with early developing fruit should be closely monitored at this time. As well, black light trap results for these particular regions or localities should also be closely watched to note when peak moth flights have begun (http://pestbulletin.wi.gov/pests).

Soybean aphids - Statewide surveys which monitor developing populations of soybean aphid suggest that populations may have been increasing over the past week and spreading throughout infested soybean fields. Few fields have exceeded established economic densities at this time, but populations of this insect can increase rapidly. In past years, the annual dispersal flight of soybean aphids has typically occurred in the interval between late July and mid-August. A period we are entering into at this time. Last year, a significant flight occurred despite soybean aphid infestations that were considered below action threshold(s) in many areas of the state averaging fewer than 100 apterous (wingless) aphids / plant. For snap bean, vine crop, pepper, and seed potato growers, these flights appear to coincide with an elevated risk for significant transmission of non-persistently transmitted plant viruses including alfalfa mosaic virus (AMV) and cucumber mosaic virus (CMV) and Potato virus Y (PVY). At this time, close attention should be paid to the North Central Region's, Aphid Suction Trap Network web-page (http://www.ncipmc.org/traps) in an effort to anticipate when dispersing populations might be expected.

Vegetable Disease Update 7-31-2008 - W. R. Stevenson, Department of Plant Pathology, UW-Madison, Tel. No. 608-262-6291, Email: wrs@plantpath.wisc.edu

Potatoes –

With the arrival of August, I am beginning to see the light at the end of the tunnel. For most growers, this means about 4-5 more weeks of careful monitoring their potato crop and spraying with an appropriate fungicide to control early blight and other foliar diseases, if they occur. There have been no reports of late blight in Wisconsin or in our region as of today. Late blight is being reported is some areas of the eastern U.S. and Canada. Here in Wisconsin we continue to accumulate severity values at a rapid pace, especially in central Wisconsin, indicating that conditions continue to be ideal for the development of late blight if inoculum is present. The low accumulation of severity values in NW Wisconsin is indicative of the dry weather in that region of the state.

For early blight, the message remains virtually unchanged from previous weeks. We see symptoms on the lower to mid canopy in our untreated checks. The disease is progressing at a moderate level now that we are pushing into early August and plants are bulking at a rapid pace and plants are maturing. Most growers have finished or are close to finishing with their strobilurin, pyrimethanil and boscalid treatments. Use of the standard protectants such as mancozeb, mancozeb plus triphenyltin hydroxide, chlorothalonil Zn or in the case of organic growers, fixed copper materials, should provide needed management of early blight for the rest of the growing season. Commercial fields I have visited continue to exhibit excellent control of early blight. Our field trials at Hancock have many treatment combinations that continue to provide almost perfect control of early blight. Differences in treatment efficacy will begin to emerge over the next 3-4 weeks so if you are planning a visit to the Hancock plots, I'm suggesting the week of August 25. Please check in at the Hancock office to be sure that it is safe to be in the plots. I am planning to be in the plots on Wednesday August 27 from 10 to noon since this will be one week after our final spray on these plots. We anticipate vinekill in our plots on September 2 in preparation for harvest.

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

	Planted:	50% EMERGENCE	P-Days	Severity Values	Calculation Date
Antigo area	Early - May 7	June 4	**433**	**50**	July 30
	Mid - May 15	June 11	**372**	**34**	July 30
	Late – May 23	June 18	**324**	**24**	July 30
Grand Marsh area	Early - Apr 20	May 23	**525**	**69**	July 30
	Mid - Apr 29	May 28	**496**	**69**	July 30
	Late - May 5	June 2	**464**	**69**	July 30
Hancock area	Early - Apr 16	May 10	**586**	**47**	July 30
	Mid - Apr 23	May 16	**558**	**47**	July 30
	Late - May 2	May 23	**523**	**47**	July 30
Plover area	Early - Apr 14	May 15	**575**	**66**	July 30
	Mid - Apr 22	May 23	**534**	**66**	July 30
	Late - May 3	June 1	**483**	**64**	July 30
Spooner	Apr 30	June 2	**432**	13	July 27
	May 5	June 9	**382**	12	July 27

Visit our web site at **(http://www.plantpath.wisc.edu/wivegdis/index.htm)** where you can find updated P-Day and Severity Value information throughout the growing season.

Other Vegetable Crops:

Cucurbits: Now that cucurbit crops are vining nicely and fruit are setting, I anticipate seeing the first symptoms of powdery mildew in the days ahead. Warm days and cool nights with dew are ideal for powdery mildew. See the list of powdery mildew materials in A3422 "Commercial Vegetable Production in Wisconsin".

Growers should be stepping up their field scouting activity looking for symptoms of downy mildew. Conditions are ideal for this disease and although we normally don't see this disease in Wisconsin, activity in Michigan and other states to our east suggests that this could be one of those years when downy mildew creeps into Wisconsin. Yellow leaf lesions with a purplish tuft of fungal mycelium on the undersides of leaves helps in the field identification. If you see what you think is downy mildew, it is important that we see a sample for confirmation before you make some costly fungicide sprays.

Snap Beans: Hail and pounding rains can lead to outbreaks of bacterial brown spot. We've had reports of brown spot on snap beans and lima beans in the past week. Some varieties have high levels of resistance to this pathogen while other varieties are highly susceptible. For the susceptible varieties, timely sprays with fixed coppers immediately after a storm event can help to reduce loss of foliage and later pod lesions.

White mold could become an issue this summer with the amount of rainfall we've seen already and long periods of leaf wetness, especially during the bloom period. While the list of fungicides useful for white mold control on snap and lima beans is short, it is critical to remember that sprays must be used during the bloom period to be effective.