

Vegetable Crop Update - #7

July 11, 2007

The vegetable crop update is archived on the Wisconsin Crop Manager website at: <http://ipcm.wisc.edu/wcm/>.

Announcements:

UW Lelah Starks Elite Foundation Seed Potato Farm Tour, Friday, July 13, 10:30 a.m., Cty Road K, Rhinelander, WI.

Central Wisconsin Potato Field Day, Hancock Agricultural Research Station, Wednesday, July 18, 9:00 a.m., Hancock, WI.

Langlade County Potato Field Day, Langlade County Research Farm, Thursday, July 19, 1:00 p.m., Antigo, WI.

Potato and Vegetable Crop Update 7-11-07 – Alvin J. Bussan, UW-Madison, Department of Horticulture, 608-262-3519, cell 608-225-6842 or e-mail ajbussan@wisc.edu

Crops continue to develop rapidly across the state. Precipitation over much of the state has improved the status of many non-irrigated vegetable crops. Planting will be wrapping up over the next 10 or so days for short season summer crops such as cucumber and snap bean. Pea harvest is wrapping up while early season potato harvest has begun in earnest.

Potato. Potato crop continues to develop and bulk ahead of pace. We are well beyond 1” diameter potatoes in many of the growing regions with some early developing potato varieties have tubers in excess of 2” in diameter. Crop continues to look healthy for the most part as Walt attests to in his update. Early dying is beginning to cause vine decline in non-fumigated plots at Hancock.

We began taking tuber bulking samples in fresh market potatoes last week at the Hancock Ag Research Station. We sample 24 plants for each variety and counted and weighed tubers > 0.5” in diameter when estimating bulking. Standard Russet Norkotah averaged 11 tubers per plant with an average tuber size of 2.7 oz. Line 8 Russet Norkotah average 14 tubers per plant with an average tuber size of 2.0 oz. Estimated yields if planted at 12” in-row spacing are currently 280 and 258 cwt per acre for Standard and Line 8 Russet Norkotah, respectively based on preliminary data.

Bulking estimates are being collected today for chip and processing potatoes at Hancock. Russet Burbank have had tubers greater than 2” in size upon visual inspection while Bannock Russet tubers are 1.5” in diameter. Red Norland potatoes planted in early May on the muck have tubers well over 2” in diameter. Potato planting on muck appears to have been finished over the last part of June.

You may well beginning to think about timing of MH 30 applications, with tubers well over 1” in diameter and some crops beginning to approach tubers sizes of 2” in diameter. Monitor tuber size and consider climatic conditions when determining timing for MH 30 applications and follow label instructions.

Potato crops are using approximately 0.5” of water every other day. Inspecting hills just in front of the irrigation system shows the crop is certainly using moisture in the tuber zone.

Fresh Market Vegetables. Some of the heavy rains last week caused some physical damage on some canopies especially on vine crops. Most of the vine crops are well into fruit set. If you don’t seed developing fruit on melons or cucumber you may want to make sure plenty of pollinators are available to improve fruit set. A key aspect is to evaluate your insect management program to make sure any applied pesticides are not interfering with pollinator activity.

A number of crops are ripening fast. During early harvests remove fruit with visible defects such as sun scald, blossom end rot, cat-facing, or physical damage and dispose of them outside of the field. These fruit can continue to draw on energy from the plant at the expense of other fruit with better quality.

**Worried about herbicide carryover? Jed Colquhoun, Extension Weed Specialist;
University of Wisconsin – Madison, Department of Horticulture; Colquhoun@wisc.edu**

We have had a few recent crop injury situations where herbicide carryover into potato and vegetable crops has been questioned. One simple method of initial investigation is an herbicide bioassay. With an herbicide bioassay, crop seeds are grown in pots using soil from the field. This simple and economical test allows growers to screen for potential herbicide carryover. (A laboratory analysis, by contrast, is often very costly and the results are difficult to interpret in terms of rotational crop safety.) Bioassays are not fail-proof: climatic conditions in the field, such as available moisture, often differ from plants grown indoors in pots. Also, keep in mind that a “safe” herbicide bioassay is not a substitute for the rotational restrictions listed on the crop label – always follow the label restrictions regardless of bioassay results. Consider the following “recipe” when conducting herbicide bioassays:

1. Collect soil from the top 3 to 5 inches in several areas of the field and thoroughly mix samples. Sample from areas that may have high residual herbicide, such as in head-row turnarounds and field corners, and analyze these soils separately as a worst-case scenario. Representative, thorough sampling is critical to an accurate bioassay.
2. Fill several flower pots or similar containers with sample soil.
3. Plant the crop species that is planned for the field, or a crop that has a long rotational restriction listed on the herbicide label. Thin plants to one per container after emergence.
4. Place pots indoors and provide uniform light and water. Uniform natural light is better than artificial light, if possible.
5. About 2 to 3 weeks after emergence, evaluate the bioassay plants for symptoms of damage from the suspected herbicide. For descriptions of herbicide symptomology, consider starting with the “Herbicide Mode of Action Key for Injury Symptoms” publication that can be

downloaded from the Wisconsin Integrated Pest and Crop Management publications web site at: <http://ipcm.wisc.edu/Publications/tabid/54/Default.aspx>.

Vegetable Disease Update 7-11-07 - W. R. Stevenson, Department of Plant Pathology, UW-Madison, Tel. No. 608-262-6291, Email: wrs@plantpath.wisc.edu

Potato: The past week has been interesting in terms of weather and favorability for disease. During the last few days, we've seen severity values rising rapidly, especially in the Plover and Grand Marsh areas. This indicates that weather conditions have been highly favorable for the development of late blight if inoculum is present. At this point in the growing season, there are no reports of late blight in Wisconsin and none that I'm aware of in the U.S. Given the distribution and damage related to late blight just a few years ago, it's pretty amazing to say that at the moment, late blight is a non issue, although I say this very quietly. It took a few years for the entire country to finally have all of the growers on the same page of control, but apparently a nationwide focus on late blight is paying off. It's nice to see the Wisconsin industry once again leading the pack! For the week ahead, Wisconsin growers should focus on thorough coverage of vines with protectant fungicide for the management of early blight. These sprays will also be effective on late blight if inoculum is present. We are seeing a slow but steady increase in early blight, but at this point, disease pressure is low. Focusing on those early blight sprays will be helpful since the next three weeks are critical to late season control of early blight.

We are still seeing pockets of hail injury, which in some cases is severe. Treating with a broad spectrum fungicide along with a fixed copper material will help to get the plants back on their feet without further loss due to secondary invasion by soft rotting pathogens.

P-Day and Severity Value Accumulations are listed in the table below. I've highlighted those P-Day and Severity Value totals that are above potato treatment thresholds.

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

	Planted:	50% EMERGENCE	P-Days	Severity Values	Calculation Date
Antigo area	Early - May 8	May 31	284	21	7/09/07
	Mid - May 21	June 10	209	14	7/09/07
	Late - June 1	June 18	150	14	7/09/07
Grand Marsh area	Early - Apr 16	May 12	412	25	7/09/07
	Mid - Apr 20	May 18	379	25	7/09/07
	Late - Apr 27	May 28	314	25	7/09/07
Hancock area	Early - Apr 16	May 8	422	19	7/09/07
	Mid - Apr 24	May 14	381	19	7/09/07
	Late - May 2	May 23	328	19	7/09/07
Plover area	Early - Apr 14	May 8	440	32	7/09/07
	Mid - Apr 20	May 15	392	32	7/09/07
	Late - May 2	May 22	347	32	7/09/07
Spooner	Mid - May 4	May 30	306	9	7/09/07

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:

Tomatoes – While Septoria leaf spot began to appear about two weeks ago in southern WI, I note that treatment with a mixture of protectant fungicide such as chlorothalonil or mancozeb tank mixed with one of the strobilurin fungicides is highly effective for control of this defoliating disease. Early blight is now beginning to appear on untreated foliage and this same fungicide program will also control this disease.

Symptoms of walnut wilt were reported during the past week on a market garden in central WI. Rapid wilting of individual plants coupled with vascular discoloration were key symptoms. The grower had planted a tomato variety resistant to Verticillium wilt and reported that there were several black walnut trees adjacent to his tomato planting. Since walnut roots produce a powerful toxin called juglone and tomatoes are highly susceptible to this toxin, the diagnosis was pretty simple. While it's too late for the affected plants, moving next year's planting a safe distance away from the walnut trees will hopefully avoid a repeat appearance of this problem.

Carrots – Symptoms of Cercospora and Alternaria leaf blights are beginning to appear on commercial carrot plantings. Treatment with chlorothalonil alone or mixed with one of the strobilurin fungicides will help to curtail spread and gain control. Left untreated, these diseases can lead to premature defoliation, loss in yield and quality and weakening of the petioles that are needed for harvest.

Peppers – I expect to see samples of pepper sunscald within the next few days where the upper exposed surfaces of the earliest set peppers are brownish white and watersoaked. Eventually these injured areas dry and are often colonized with secondary fungi giving the sunscald wounds a black color. Fruit with sunscald injury should be removed as they will not be marketable. Later as the plants produce more foliage, newly set fruit will be protected from direct exposure to the sun.