

Vegetable Crop Update - #8

July 18, 2007

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

Potato and Vegetable Crop Update 7-18-07 – Alvin J. Bussan, UW-Madison, Department of Horticulture, 608-262-3519, cell 608-225-6842 or e-mail ajbussan@wisc.edu

Cool conditions were prevalent for much of the last week with daily highs under 80 F for all but two days and daily lows less than 60 F. Little precipitation fell in Central Wisconsin but some areas did receive precipitation. Snap bean and cucumber planting is wrapping up, potatoes continue to be harvested and snap bean harvest has begun in some regions of the state.

Potato. Recent weather patterns should promote tuber bulking due to the cool conditions that persisted over the last seven days. Continue to monitor petiole nitrogen levels to ensure adequate soil fertility to maximize tuber growth during the late bulking stages of development. Recommended petiole nitrogen levels can be obtained in UW extension bulletins A3433 or A2809.

We continue to monitor tuber bulking as we sampled processing and round white potatoes over the last week. Russet Burbank plants averaged 15.5 tubers/plant with a range of 8 to 29 tubers/plant. Tuber numbers per plant varied by seed source, planting density, and other treatments. Tuber weight per plant ranged from 1.1 to 3.9 lb/plant for Russet Burbank. Several Russet Burbank tubers were sampled in excess of 10 oz while a number of tubers ranged from 6 to 8 oz.

Round white lines being monitored in bulking plots this summer include Snowden, W2310, and W2324. Plants of round white potatoes had between 6 and 37 tubers/plant. Tuber weight per plant ranged from 0.8 and 4.7 lb. Most tubers were from 1.0 to 3.0" in diameter. However, several tubers were found that already exceeded 4.0" in diameter. Tuber size of round white potatoes needs to be monitored closely to prevent tubers from growing too large.

Vegetable Disease Update – 7-18-07 - W. R. Stevenson, Department of Plant Pathology, UW-Madison, Tel. No. 608-262-6291, Email: wrs@plantpath.wisc.edu

Potato: We are now well on our way to another successful season with no late blight yet observed in Wisconsin and no late blight being reported in other production areas of the U.S. During the past week, conditions were less favorable for disease development than in the previous weeks. The accumulation of severity values slowed this past week throughout the state indicating a low risk for late blight development if inoculum is present.

Early blight is slowly increasing in our Hancock trials, but at this point, it's very difficult to see differences between fungicide programs. This will change quickly as we approach the first two to three weeks of August when plants are older and beginning to senesce. Each season we schedule a day late in the growing season when growers are invited to visit our Hancock fungicide trial to evaluate our trials. Field plot maps will be available and someone will be

present in the plots to orient visitors and to answer questions. This year, we've selected **Monday, August 20, 10am to 2 pm** as the date when Vaughan James will be present in our research plots to guide your visit. The final fungicide spray will be applied on August 21 and the last two plot evaluations will occur on August 27 and September 4, prior to vinekill on September 4. The plots are available for viewing during the entire season, but remember that our treatment sprays are applied on Tuesdays and some of the treatments have up to 48 hour reentry intervals. In addition, general plot sprays such as insecticides are applied at the station on Thursdays and Fridays. When visiting the fungicide plots, please stop first at the Hancock Ag Research Station main office to make sure that the plots are safe to enter. Take note of the August 20 date for the optimum viewing opportunity.

Common scab is showing up in some production fields and something to be aware of in your irrigation programming. Moisture stress at tuberization can lead to greater severity of common scab as does soil pH above 5.8 and planting potatoes within a few weeks of application of uncomposted cattle manure.

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

Weather Station Site	Planted:	50% EMERGENCE	P-Days	Severity Values	Calculation Date
Antigo area	Early - May 8	May 31	332	21	7/16/07
	Mid - May 21	June 10	258	14	7/16/07
	Late - June 1	June 18	199	14	7/16/07
Grand Marsh area	Early - Apr 16	May 12	464	28	7/16/07
	Mid - Apr 20	May 18	431	28	7/16/07
	Late - Apr 27	May 28	367	28	7/16/07
Hancock area	Early - Apr 16	May 8	471	21	7/16/07
	Mid - Apr 24	May 14	430	21	7/16/07
	Late - May 2	May 23	378	21	7/16/07
Plover area	Early - Apr 14	May 8	492	33	7/16/07
	Mid - Apr 20	May 15	444	33	7/16/07
	Late - May 2	May 22	400	33	7/16/07
Spooner	Mid - May 4	May 30	359	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 – Tomato fruit from field plantings are beginning to show up at farmer markets. While foliar diseases appear to be under control, it's definitely time to be concerned with the management of fruit anthracnose. While the circular slightly depressed lesions with dark centers are diagnostic for fruit anthracnose on ripening fruit, it's important to know that infection of fruit by the anthracnose fungus can occur anytime during the season. Infections on green immature fruit remain latent until the fruit begins to ripen and soften. Thereafter, the pathogen spreads through the tissues beneath the infection site and symptoms develop rapidly. Thus, control of

fruit anthracnose is a season-long challenge. Rotation, mulching and fungicide sprays are all helpful in managing this disease.

Red Beets – Symptoms of *Cercospora* leaf blight are now common on the beet foliage as small gray lesions surrounded by distinct bright red borders. Often there can be hundreds of lesions per leaf, especially when there is an abundance of inoculum in debris from previous crops. Rotation is very helpful in reducing losses and only rarely are table beets sprayed with fungicide for management of foliar diseases.

Beets have a special need for boron. Insufficient boron in roots leads to a condition known as “black spot” where individual vascular elements in the roots turn brown to black. Roots may be disfigured and cracked and then invaded by soilborne pathogens such as *Rhizoctonia solani* and *Phoma* which can lead to decay of roots. Foliage may appear red, a signal of plant stress. This year, black spot symptoms have shown up in some production fields where what would normally have been sufficient amounts of boron had been applied. It appears that very dry soil conditions and lack of irrigation contributed to low boron accumulation in the growing plants and subsequent symptom development.

Cucumbers – Right on schedule, we are seeing samples of bacterial wilt where one or more runners suddenly wilt and die, the result of infection by the wilt pathogen. The bacterial pathogen is vectored by the cucumber beetle. In some areas of the state, there was heavy beetle feeding within the past month. Control of the insect vectors of this pathogen before feeding occurs is essential for control of this disease.