

Vegetable Crop Update - #16
August 28, 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: Haltvick Meeting, West Madison ARS – September 9, 12-3:00

Potato and Vegetable Crop Update 9-4-2008– Alvin J. Bussan, UW-Madison, Department of Horticulture, 608-262-3519, cell 608-225-6842 or e-mail ajbussan@wisc.edu

Late last week frost warnings were issued for Northern WI, but I have not received any reports of frost damage. This past weekend may have been the warmest of the season in the Southern part of the state.

Potatoes. Many growers have begun vine killing storage potatoes in preparation for harvest. Vine-killing should be wrapped up by the end of next week. Storage managers should be preparing facilities for storage as well, making sure all aspects of ventilation systems are working properly before filling the bins. Remember to turn on humidification systems 3 to 4 days prior to filling storages to make sure the floors have time to absorb moisture. Cement floors in particular will require humidification as failure to do so will result in absorption of moisture from the bottom potatoes. Floors can also be wetted down with a hose to wet the concrete prior to filling the bins. All debris should be removed and storage washed and disinfected to prevent carryover of any diseases in the previously stored crop.

Processing vegetables. Last planted beans should be harvested over the next week to 10 days. Beans planted in mid-July at the Hancock Ag Research Station will be harvested at the end of this week. Sweet corn is finishing as well. Sweet corn planted the last week of June at the Arlington Agricultural Research Station will be harvested next week. The cool weather patterns expected over the weekend could slow ripening of late planted processing vegetables.

Fresh Market Vegetables. I have received a number of questions about maturation of multiple late season vegetable crops. Pumpkins and squash should be reaching maturity as indicated by full color of ripened fruit. Pumpkins and squash that have not matured at this point may have too long a growing season requirement for Wisconsin, been planted too late this spring, or received too much nitrogen fertilizer. Once pumpkins and winter squash reach full color they should be gently harvested and placed into dry storage area off of the floor and out of full sun to promote curing. Contact with cement or dirt floors can lead to wet spots under the pumpkin or squash which can promote rotting. Curing helps heal any wounds and allows for longer term storage. Frost on pumpkins and winter squash will lead to cellular damage on the surface of the fruit and decreases storability and promotes rotting.

A number of fresh market growers have also asked about proper handling of onion to promote long term storage. Onions intended for storage can be treated with maleic hydrazide to prevent sprouting. MH should be applied when approximately 50% of onions tops have lain over. MH cannot be applied to organic onions. Onions must be cured to help seal the necks of the onions and prevent movement of bacteria and other diseases into the bulb. Onions should be cured at 75 F and 70% relative humidity for 2 weeks. Once cured, onions can be cooled to 34 F and 70% relative humidity for long term storage.

Vegetable Disease Update 9-4-2008 - W. R. Stevenson, Department of Plant Pathology, UW-Madison, Tel. No. 608-262-6291, Email: wrs@plantpath.wisc.edu

Potatoes – Early maturing fields have mostly been harvested and with vine desiccants being applied to remaining fields, the end of the blight season is rapidly approaching. There have been no observation of late blight in Wisconsin and conditions over the past few weeks have been increasingly unfavorable for the late blight pathogen. Still, it's important to achieve thorough vinekill and to maintain protection of vines until they are completely dead. It's also important to begin thinking about seed purchases for next year to insure that you are purchasing late blight "free" seed.

A few years ago, I made a rough calculation of how much late blight was costing the Wisconsin potato industry in terms of added fungicide costs, lost yield and post harvest losses - \$12 million per year. We haven't seen late blight in Wisconsin since the 2002 growing season. It's now been over 6 years since the last sample of late blight was collected in our state and, if my calculations are on target, that's a savings of over \$72 million to our industry during these years. Congratulations to the entire industry for keeping this string of late blight "free" years going strong into next season.

Early blight pressure continues to increase in most areas of Wisconsin as vines begin to senesce. Nighttime dews and long periods of leaf wetness favor spore production and leaf infection by the early blight pathogen. There are still several fungicide programs that are providing excellent levels of control in our fungicide trials at Hancock. As data on field performance and yield are analyzed, we'll provide this useful information to the industry. In the meantime, you might want to take a look at our website where we've posted efficacy data current up through last week's reading. We plan to apply vine desiccant on September 3 so this week's reading will be the last of the growing season. We'll be harvesting the plots in mid-September and have yield data analyzed and on the web soon thereafter.
(<http://www.plantpath.wisc.edu/wivegdis/> - See field trial progress report section)

The cost of disease management is likely to increase substantially next season due to expected shortages of EBDC fungicides such as mancozeb and maneb and increased demand for other protectants such as chlorothalonil. As we've put together disease management programs that are highly effective for both early and late blight, we've tried to keep the season-long costs at less than \$100 per acre. Some of the more effective programs in recent years have cost roughly \$90 per acre. At least one program showed a return of \$6 for every \$1 invested in fungicide due to substantial increases in yield, tuber sizing and dry matter content of tubers attributed to fungicide use. With large increases in fungicide costs predicted for next year, we'll be doing our economic analysis of fungicide programs this year using fungicide costs growers paid in 2008 versus projected costs for the same materials likely for next year. My sense is that this will provide information useful to growers considering how to best manage their inputs for 2009.

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	667	57	Sept 1
	Mid - May 15	June 11	606	41	Sept 1
	Late - May 23	June 18	558	31	Sept 1
Grand Marsh area	Early - Apr 20	May 23	774	99	Sept 1
	Mid - Apr 29	May 28	745	99	Sept 1
	Late - May 5	June 2	713	99	Sept 1
Hancock area	Early - Apr 16	May 10	835	59	Sept 1
	Mid - Apr 23	May 16	808	59	Sept 1
	Late - May 2	May 23	772	59	Sept 1
Plover area	Early - Apr 14	May 15	818	82	Sept 1
	Mid - Apr 22	May 23	777	82	Sept 1
	Late - May 3	June 1	726	80	Sept 1
Spooner	Apr 30	June 2	652	21	August 25
	May 5	June 9	602	20	August 25

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:

The continued dry weather with warm days and cool nights has been largely unfavorable for disease development on vegetable crops. We continue to see increases in powdery mildew on cucurbits, but our early concerns related to downy mildew and Phytophthora blight on cucurbits have not materialized. The quality of vegetable crops at local farmers markets is exceptional and yields seem to be good. As the season comes to a close, remember that rotation and variety selection can have large impacts on future losses to plant diseases. Plant breeders continue to make significant improvement in the level of disease resistance on a wide range of vegetable crops. Growers using these new and improved varieties can reap the benefits in terms of reduced risk from plant diseases and reduced fungicide inputs.