### Vegetable Crop Update

A newsletter for commercial potato and vegetable growers prepared by the University of Wisconsin-Madison vegetable research and extension specialists

No. 23  September 18, 2011

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#### Calendar of Events
- September 20 - Wisconsin Local Food Expo, Alliant Energy Center, Madison, 9AM-3PM
- September 21 – HighTunnel Field Day, West Madison Ag Research Station, 10AM-4PM
- October 4 – Southern WI Food Hub-Fresh Market Packinghouse Meeting, Dane Co. Extension Office, 8:30AM-4PM

Vegetable Crop Update  A.J. Bussan, Department of Horticulture, UW-Madison, Tel. No. 608-225-6842, email: ajbussan@wisc.edu

**Potato.** Harvest for storage has begun and fortunately cool night-time temperatures provide for good cooling air to allow for pile temperature management. Cool night-time temperatures are critical for removing field heat from harvested potatoes within 24 to 48 hours of harvest. During sunny days, watch pulp temperatures closely as they can warm quickly. Soil temperatures and thus pulp temperatures are typically 10 to 20° F higher than air temperatures on sunny days.

Several quality issues are starting to appear on the potatoes. We have seen indications that stem end defect may be an issue this fall in chipping potatoes. Fry chip potatoes shortly after harvest to determine if stem end defect is an issue. If so, you will have to monitor sugar levels and fry color on the stem end of the chip. Last fall we also had some stem end chip defect. We were able to precondition the stem end defect out of Snowden, Nicolet, and numerous other cold chipping potatoes. This process took us 8 to 10 weeks at 55°F. I will have more information in the near future regarding stem end.

Gravities are low in many Wisconsin potatoes. The heat during July stressed the potato crop resulting in lower specific gravities. Some potatoes continued to increase in solid content over the last several weeks prior to vine kill, but they are still relatively low compared to other years. I have also seen some hollow heart in varieties. This is relatively new development. In bulking plots I did not see much hollow heart, but it did begin to increase over the last 2 weeks of August. This seemed to be much more predominant in late bulking potato varieties.

Final issue I have heard about is poor skin set in potatoes 14 or more days after vine-kill. Skin set is indicative of a delay in tuber maturation. Why maturity is delay is unclear. Some potato fields were still green at the time of vine kill thus tubers will take longer to mature. The crop emerged late and bulking was delayed. Even though vines may have begun to senesce at the time of vine-kill, tuber maturity may be delayed in some fields leading to increase skinning.
Evaluate fields for skin set prior to harvest. Harvest may have to be delayed in order to prevent skinning. If potatoes loaded into storage have excess skinning, outside air will be critical to promote suberization and formation of the closing layer. Fresh air can avoid anaerobic conditions to delay bacterial infections as well.

**Processing vegetables.** Snap bean harvest should have wrapped up the end of this week. Sweet corn harvest is still ongoing and will take 15 to 20 days to complete this fall. The shorter days and cool temperatures will delay sweet corn maturity as well. It may take 3 times as long for sweet corn to finish maturing at this time of year. The frost last week may have caused foliar damage in some sweet corn fields, but the ears will continue to mature.

**Fresh Market and Commercial Vegetable.** Freezing in Central and Northern Wisconsin likely damaged many summer crops. Cole crops, spinach, and other cool season crops likely survived the frost. Greens and spinach leaves damaged by frost should be harvested so that they can regrow if conditions become warmer.

Summer crops should have been harvested prior to frost. In Southern Wisconsin, summer crops can continue to grow until frost. That said, shorter days and cooler temperatures will delay maturation of summer crops and lead to little growth over the remainder of September and into October.

Tomatoes and peppers can be harvested green once maturity is reached (seed matures). Placing green fruit with ripened fruit can accumulate ethylene and promote final maturity even if harvested to avoid damage by frost.

Pumpkins and winter squash should be harvested to avoid frost. Frost on the pumpkins is a popular phrase, but can lead to damage of pumpkin and squash tissues leading to shorter shelf life. Most pumpkins only need to last until the end of October, but winter squash can be marketed well into winter if handled properly at harvest in storage.

Winter squash should be harvested gently and set on cardboard covered wagons or in boxes during harvest to avoid damage to the squash surface. Squash should be stored on wood surfaces or floors. If slotted, air movement around the squash can be improved and allow better curing conditions. Do not place winter squash or pumpkins on cement or dirt floors as they can lead to accumulation of moisture on the fruit leading to spoilage.

_Potato Crop Update from the Wisconsin Seed Potato Certification Program_  
Amy Charkowski, Administrative Director of Certification Program, Department of Plant Pathology, UW-Madison, Tel. No. 608-262-9711, email: amyc@plantpath.wisc.edu

**Submitted by Rick Hafner,** Senior Inspector with the Wisconsin Seed Potato Certification Program—The State Farm harvest began on Sept. 13 with Red Norlands and Yukon Golds. Both varieties were in very good condition, with no bruising and minimal skinning. However, the general size was larger than we would like.

Harvest began in Antigo in earnest on Sept. 13, though some began about one week earlier. Tubers seemed to be of smaller size profiles, with lower yields than normal. Tubers were mature and uniform at most grower sites. One field in particular was yielding 50% of expected normal
yield. One grower had Norland yields at 320 cwt./A, which is down considerably from their normal, expected yield. Digging conditions here are very dry. Growers who are able to irrigate prior to digging are doing so.

Observed disease levels are minimal. Common scab, Rhizoctonia, etc. are all minimal or nonexistent. Virus levels are at an all time low (at least in my 32 inspection seasons).

On the morning of Sept 16, there was no damage to tubers from light frost received the night previous. The temperature at sunrise on Sept 16 was 37°F. A light patchy frost was evident in some fields. The forecast for the next week looks like good harvest temperatures, cool nights and no frost.

**Vegetable Disease Update**  Amanda J. Gevens, Vegetable Plant Pathologist, UW-Madison, Dept. of Plant Pathology, 608-890-3072 (office), Email: gevens@wisc.edu.

**Vegetable Pathology Webpage:**  [http://www.plantpath.wisc.edu/wivegdis/](http://www.plantpath.wisc.edu/wivegdis/)

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

<table>
<thead>
<tr>
<th>Location</th>
<th>Planted</th>
<th>50% Emergence</th>
<th>P-Day Cumulative</th>
<th>DSV Cumulative</th>
<th>Calculation Date</th>
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<td>Plover Area</td>
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**Potato: DSVs and Late Blight:** There were no further reports of late blight in WI this past week. In some fields, frost has aided in progressing vine kill. We did receive a small amount of rainfall Monday night in Central Sands which helped digging conditions, but did not cause DSVs to significantly accumulate. Our weather stations will begin to go offline over the next two weeks. We have had challenges with the old stations in 2011 and will be replacing them all in the 2012 production season for improved reliability of data and forecasts.

In North America, there were no new states reporting late blight this past week. Additional finds were reported in CT, NY, and PA. So far this production season, late blight detections have been made in NY, FL, VA, DE, WI, PA, WA, CA, ME, MN, CT, VT, ND, NH, OR, and Canada. The website: [http://www.usablighthouse.org/](http://www.usablighthouse.org/) indicates location of positive reports of late blight in the U.S. and provides further information on disease characteristics and management.
Cucurbit downy mildew: In 2011, cucurbit downy mildew was confirmed on cucurbits in Waupaca, Waushara, Columbia, and Dane Counties, WI. No new reports of downy mildew in other WI counties this past week. Fungicide recommendations can be found in a previous newsletter linked below.

Based on the disease forecast generated by the Cucurbit Downy Mildew PIPE forecasters at North Carolina State University, there was low to no risk for further spread to cucurbits in Wisconsin on Fri and Sat of this past week. On Sunday September 18, there is moderate risk to cucurbits near the Wisconsin sources, in western lower Michigan, and northern IN. The website: http://cdm.ipmpipe.org offers up to date reports of cucurbit downy mildew and disease forecasting information.

For further information on any fungicides that may be mentioned in this newsletter, please see the 2011 Commercial Vegetable Production in Wisconsin Guide A3422. An online pdf can be found at the link below or a hard copy can be ordered through the UWEX Learning Store.

http://learningstore.uwex.edu/assets/pdfs/A3422.PDF