



In This Issue

Potato production updates
Disease forecasting and updates for early and late blight in potato, cucurbit downy mildew updates

Calendar of Events

December 1-3, 2020 – Midwest Food Producers Association Annual Convention/Processing Crops Conference – *Virtual – details to follow*
January 24-26, 2021 – WI Fresh Vegetable Growers Association Educational Conference, Kalahari, Wisconsin Dells, WI (possible remote options)
February 2-4, 2021 – UW-Madison Div. of Extension & WPVGA Grower Education Conference, Holiday Inn, Stevens Point, WI (possible remote options)

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As growers are harvesting the crops, the 2020 growing season is close to the end. Overall, this season has relatively normal weather conditions, and yield and quality is about to be the average depending on the varieties. Some varieties behave very well but others such as Russet Burbank is lower than expected. Late June and early July had several large rain events that caused leaching issues, petiole numbers from several varieties were lower than the sufficiency range, and therefore supplemental nitrogen application became to be one of the key approaches that growers use to maintain the sufficient nutrient status of plant canopy and bulking potential of tubers.

The long dry spell and heat in late July and August caused some second growth problems on certain varieties. Dr. Andy Robinson from NDSU recently published an article on this topic: <https://www.ag.ndsu.edu/potatoextension/potato-tuber-second-growth>

In this past week, soil temperatures rose above 70°F at about lunch time, causing harvesting operations to shut down due to high pulp temperatures that are related to severe storage rotting diseases. Weather forecasting looks very promising for the upcoming 10 days so many farms will start to run at full speed without stopping.

Seed potato harvest in the Antigo Flats area with heavier soils was forced to stop by the weeklong rainfall in the Labor Day week. Yield and quality looks good so far, but it will be delayed by about one week to 10 days for the seed growers to wrap up harvesting.

Recently UW College of Agricultural & Life Sciences published an article introducing my program's new project on using hyperspectral remote sensing in potato nitrogen management. <https://news.cals.wisc.edu/2020/09/21/high-tech-tuber-tools-hyperspectral-imaging-project-seeks-to-improve-potato-growers-fertilizer-use/> It could be a good read if you are interested in how researchers are advancing use of cutting-edge technologies to assist sustainable potato production.

Good luck with the digging season!

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Current P-Day (Early Blight) and Disease Severity Value (Late Blight) Accumulations (Many thanks to Ben Bradford, UW-Madison Entomology; Stephen Jordan, UW-Madison Plant Pathology). A P-Day value of ≥ 300 indicates the threshold for early blight risk and triggers preventative fungicide application. A DSV of ≥ 18 indicates the threshold for late blight risk and triggers preventative fungicide application. Red text in table indicates threshold has been met/surpassed. Weather data used in these calculations comes from weather stations that are placed in potato fields in each of the four locations. Data are available in multiple formats for each station at: <https://vegpath.plantpath.wisc.edu/dsv/>

| <i>Location</i> | <i>Planting Date</i> | | 50% Emergence Date | Disease Severity Values 9/26/2020 | Potato Physiological Days 9/26/2020 |
|--------------------|----------------------|--------|---------------------------|--|--|
| <i>Grand Marsh</i> | Early | Apr 17 | May 18 | 171 | 993 |
| | Mid | Apr 25 | May 26 | 168 | 937 |
| | Late | May 6 | June 1 | 165 | 897 |
| <i>Hancock</i> | Early | Apr 8 | May 18 | 86 | 977 |
| | Mid | Apr 20 | May 25 | 84 | 926 |
| | Late | May 4 | May 30 | 81 | 888 |
| <i>Plover</i> | Early | Apr 10 | May 23 | 143 | 918 |
| | Mid | Apr 20 | May 30 | 137 | 864 |
| | Late | May 5 | June 1 | 137 | 852 |
| <i>Antigo</i> | Early | May 14 | June 5 | 86 | 833 |
| | Mid | May 24 | June 10 | 86 | 795 |
| | Late | Jun 1 | June 17 | 85 | 748 |

Late Blight Management: Our DSVs are reported here from emergence to September 26. Over the past week, we saw extremely low accumulations (just 2-3 DSVs over the course of a week; reminder, max potential DSV per day is 4 under optimum disease conditions). During senescence to harvest, tubers remain susceptible to late blight. In particular, for crops fated for long term storage, continued application of mancozeb-containing fungicide can provide management of the tuber phase of late blight which can happen during spore movement and ‘washout’ events. This late season fungicide treatment is especially important if fields are/were proximal to any known infections, and if the maturity of crops varies greatly within your area (due to risk of foliar late blight and spore availability).

National late blight update: No new reports of late blight in WI or in the US, as far as I know. So far this season, there have been just three WI confirmations of late blight: tomato (Pierce and St. Croix Co.), and potato (Adams Co. US-23) this season. No widespread movement from these sites as far as I’m aware. The site: <https://usablight.org/map/> includes reports as they are submitted in the US. Previous reports documented the disease in AL, GA, NC, NY, FL, TN, WA, and WI. Where the late blight pathogen has been tested in the US so far this year, the clonal lineage has been US-23.

National cucurbit downy mildew update: No downy mildew reported from WI at this time through my Vegetable Pathology Lab or the UW Plant Disease Diagnostic Clinic. However, a report was indicated from zucchini in Dane County roughly one month ago. Reports to date, have come from: AL, CT, DE, GA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MS, NC, NH, NJ, NY, OH, Ontario & Quebec Canada, PA, SC, TN, VA, and WV. No forecasted movement of the pathogen in our direction, with prevailing air moving eastward. <https://cdm.ipmpipe.org/forecasting/>