



# Vegetable Crop Update

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

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**Division of Extension**  
University of Wisconsin-Madison

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Potato research 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, Kalahari, Wisconsin Dells, WI (possible remote options)

**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)

**Yi Wang, Assistant Professor & Extension Potato and Vegetable Production Specialist, UW-Madison, Dept. of Horticulture, 608-265-4781, Email: wang52@wisc.edu.**

On August 10<sup>th</sup> (82 days after emergence), we conducted our first harvest of an early season fresh market red/yellow variety trial that had two N rates at 150 and 300 lb N/acre. The seed were planted on May 1<sup>st</sup>, emergence around May 20<sup>th</sup>, canopy closure around June 20<sup>th</sup>.

We are only reporting the size A% and size B% here because some varieties had poor seed emergence issues. Based on our statistical analysis, there is not any significant difference between the two N rates with regard to their effects on size A% and size B%. However, we did see some significant difference of those traits for different varieties. Tables below show the traits of each variety across the two N rates. Values followed by different letters are significant different at p<0.05.

<i>Variety</i>	<i>% of A size tubers</i>	<i>% of B size tubers</i>
<i>Colomba</i>	68% A	23% E
<i>Dark Red Norland</i>	67% A	28% E
<i>Soraya</i>	66% A	30% DE
<i>Red Prairie</i>	53% B	40% CD
<i>W13103-2Y</i>	48% B	42% BC
<i>Malou</i>	42% B	49% BC
<i>Agata</i>	42% B	52% AB
<i>W15270-12R/Y</i>	21% C	61% A

Our results indicate that the top three varieties that produced high % A size tubers are Colomba, Dark Red Norland and Soraya, and therefore they produced low percentage of B size tubers. The unnamed variety W15270-12R/Y performed poorly for % A size. I will report our second harvest of the same varieties on August 25<sup>th</sup> (97 dates after emergence) in my next week’s newsletter.

For groundwater nitrate testing of the Hancock Ag Research Station well, it stayed around 22 ppm for the two dates of testing in August. Within each irrigation event, there is no variation of nitrate-N level.

Time from start of irrigation (hr)	DATE	Nitrate-N (ppm)
0	8/3/20	21.9
0.5	8/3/20	22.0
1	8/3/20	22.1
2	8/3/20	22.1
0	8/13/20	22.2
0.5	8/13/20	22.2
1	8/13/20	22.0
2	8/13/20	22.2

**Amanda Gevens, Dept. Chair, Professor & Extension Specialist, UW-Madison Plant Pathology, [gevens@wisc.edu](mailto:gevens@wisc.edu), Cell: 608-575-3029. <https://vegpath.plantpath.wisc.edu/>**

**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  $\geq 300$  indicates the threshold for early blight risk and triggers preventative fungicide application. A DSV of  $\geq 18$  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/>

Location	Planting Date	50% Emergence Date	Disease Severity Values 8/26/20	Potato Physiological Days 8/26/20
<i>Grand Marsh</i>	Early Apr 17	May 18	150	780
	Mid Apr 25	May 26	147	724
	Late May 6	June 1	144	684
<i>Hancock</i>	Early Apr 8	May 18	72	762
	Mid Apr 20	May 25	70	711
	Late May 4	May 30	67	674
<i>Plover</i>	Early Apr 10	May 23	126	721
	Mid Apr 20	May 30	120	667
	Late May 5	June 1	120	655
<i>Antigo</i>	Early May 14	June 5	73	642
	Mid May 24	June 10	73	605
	Late Jun 1	June 17	71	557

**Late Blight Management:** Our DSVs are reported here from emergence to August 26. Over the past week, we saw moderate to high accumulations. **Plantings of potatoes in the Grand Marsh, Hancock, Plover, and Antigo areas have exceeded threshold and should receive routine (~weekly) preventative fungicide application for late blight management. For locations near Adams and Pierce Counties, continued 5 to 7-day fungicide schedules are advisable.**

**Early Blight Management: PDays are exceeding the threshold of 300 for early planted potatoes in Grand Marsh, Hancock, Plover, and Antigo areas.** For more information about fungicide selections, please see the Potato section of the A3422 Commercial Vegetable Production Guide for Wisconsin, 2020. <https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3422-2020.pdf>

**National late blight update: No new reports of late blight in Wisconsin, or elsewhere in the US, this past week.** So far this season, there have been just two confirmations of late blight from tomato (Pierce Co.) and potato (Adams Co. US-23) this season. No widespread movement from these sites as far as I'm aware. Earlier this season, late blight had been reported in the state of Washington, and it was found in British Columbia, western Canada (Delta and Surrey) over a month ago now. The site: <https://usablight.org/map/> includes reports as they are submitted in the US. Previous reports documented the disease in NC, FL and AL. 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. Reports to date, have come from: AL, CT, DE, GA, IL, IN, KS, KY, 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/>