



Vegetable Crop Update

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

No. 16 – August 4, 2017

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Calendar of Events

January 21-23, 2018 – Wisconsin Fresh Fruit & Vegetable Conference, Wisconsin Dells, WI
February 6-8, 2018 – UWEX & WPVGA Grower Education Conference, Stevens Point, WI

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Current P-Day (Early Blight) and Severity Value (Late Blight) Accumulations (R.V. James, UW-Plant Pathology/R.V. James Designs): 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 below indicates threshold has been met/surpassed. “-” indicates that information is not available. Blitecast and P-Day values for actual potato field weather from Grand Marsh, Hancock, Plover, and Antigo are now posted at the UW Veg Path website at the tab “P-Days and Severity Values.”

http://www.plantpath.wisc.edu/wivegdis/contents_pages/weather_%20list_2017.html

Location	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from 7/28
<i>Antigo</i>	Early 5/3	5/25	>104*	67*	8/3	5
	Mid 5/15	6/1	>104*	63*	8/3	5
	Late 6/1	6/15	>101*	53*	8/3	5
<i>Grand Marsh</i>	Early 4/10	5/15	572	90	8/4	15
	Mid 5/1	5/22	565	88	8/4	15
	Late 5/17	6/1	502	80	8/4	15
<i>Hancock</i>	Early 4/15	5/18	564	77	8/4	15
	Mid 5/5	5/30	501	67	8/4	15
	Late 5/20	6/5	463	67	8/4	15
<i>Plover</i>	Early 4/20	5/20	567	79	8/4	15
	Mid 5/8	5/25	542	68	8/4	15
	Late 5/25	6/8	446	67	8/4	15

Summary: Disease Severity Values (DSVs) and Late Blight Blitecast: All potatoes are at 50% emergence or greater. **All locations have reached threshold and should be considered for preventive fungicide application to manage the risk of late blight.** *We are again having problems with weather station components – batteries and modems are causing data drops. We are making replacements and working through these concerns. In the meantime, I am using DSV data generated through our UW Vegetable Disease and Insect Forecasting web tool (<http://agweather.cals.wisc.edu/vdifn/maps>) to

provide information for the Antigo location. The weather data which generates these values are from NOAA rather than in-potato-field stations; the values have been comparable this season prior to the station failure. Note that the site also now has insect phenological data available for several pests. Recall the maximum number of DSVs that one day can accumulate is 4. Once thresholds of 18 DSVs have been met, routine, protection of susceptible tomato and potato crops is recommended. Wisconsin commercial conventional fungicides for potato late blight control can be found at:

www.plantpath.wisc.edu/wivegdis/pdf/2017/Potato%20Late%20Blight%20Fungicides%202017.pdf

P-Days indicating early blight risk have exceeded threshold for several locations. Recall the threshold is 300 P-Days. Most commercial fields in central and southern WI are now showing symptoms of early blight and/or brown spot in the lower plant canopies. A number of fungicides are highly effective in limiting early blight and brown spot. For fungicide information:

<http://www.plantpath.wisc.edu/wivegdis/pdf/2017/July%208,%202017.doc.pdf>

National Late Blight Updates: <http://usablight.org> is a useful resource for the detection and characterization of late blight on tomato and potato crops from the U.S. **We had a new confirmation of late blight on tomato in Pierce County, WI on August 2 from commercial tomato. In our region, confirmations have also come from potato in ND (northeastern part of state in Walsh Co.) and MN (west central part of state in Ottertail Co.).** Further, late blight was confirmed this past week in MA, NY, and PA (US-23) on tomato (from usablight.org). Previous reports have come from Waukesha Co. WI on tomato (US-23, Jul 26), ND, NY, FL, MI, NC, ON, VA, and WA. In all reported cases, with the exception of the WA case, the pathogen genotype was US-23. This has been the predominant genotype in Wisconsin, and across the U.S., in recent years. US-23 can still generally be managed well with use of phenylamide fungicides.

With reports on the rise on either side of our western state border, I recommend that growers of potato and tomato apply effective and preventive fungicides for late blight control. Additionally, all potato fields should be thoroughly scouted for late blight especially in areas that receive shading or may be compromised in some way from receiving thorough fungicide treatment (tree line, under/around irrigation pivots). A listing of current fungicides for late blight control is on following page.

Fungicide	a.i.	FRAC	PHI potato	Activity
Bravo, Equus, Echo	chlorothalonil	M5	7 days	protectant <i>16 lb a.i./acre limit/yr</i>
Dithane, Penncozeb, Mancozeb	mancozeb	M3	3 days	protectant <i>11.2 lb a.i./acre limit/yr; excellent tuber LB control; aids yield</i>
Kocide, Champ	copper	M1	0 days	protectant
Agri-tin, Supertin	triphenyltin hydroxide (TPTH)	30	7 days	protectant <i>best in late sprays (final 2-3)/restricted use fung</i>
Polyram 80DF	metiram	M3	3 days	protectant <i>EBDC like mancozeb and counts in total a.i./yr/acre</i>
Forum	dimethomorph	40	4 days	Systemic <i>adjuvant enhances management/can be applied post vine kill; antisporent; rainfast</i>
Curzate	cymoxanil	27	14 days	Locally Systemic <i>rainfast 2 hrs/mix with protectant; curative for infections that are less than 2 days old</i>
Fosphite, Phostrol, Crop-Phite, Prophyt, Rampart	phosphorous acid formulations	NC	0 days	Systemic <i>phytotox possible applied at low carrier volumes; tuber late blight control at multiple apps + hi rates; post-harvest applic; not great antisporent</i>
Gavel	mancozeb + zoxamide	M3+22	3 days	Protectant <i>do not apply >6 apps/crop/yr; reduce tuber blight; rainfast</i>
Omega	fluazinam	29	14 days	Protectant <i>excellent tuber blight control; rainfast</i>
Orondis Opti/Ultra	oxathiapiprolin (+chlorothalonil/or mandipropamid)	U15	5 days	Systemic and contact <i>Excellent control of all phases of late blight pathogen including antisporent; rainfast in 30 min; detailed resistance management guidelines</i>
Previcur Flex	propamocarb hydrochloride	28	14 days	Systemic and Contact <i>antisporent; rainfast; curative; good protectant on leaf, new growth, stem</i>
Ranman	cyazofamid	21	7 days	Protectant, Limited Systemic <i>Good on leaf and tuber blight; rainfast</i>
Revus Top	difenoconazole + mandipropamid	3 + 40	14 days	Preventative, Systemic, Curative <i>rainfast; excellent protectant on leaf blight</i>
Ridomil Gold MZ, Ridomil Gold Copper	mefenoxam + mancozeb	4 + M3	14 days	Systemic <i>works on US-23 not US-8</i>
Tanos	cymoxanil + famoxadone	27+11	14 days	Locally Systemic, Curative <i>tank mix with protectant; excellent curative; good leaf protectant; rainfast</i>
Zampro	ametoctradin + dimethomorph	45 + 40	4 days	Systemic and Protectant <i>New registration includes two a.i.s with excellent activity on late blight, Forum plus new a.i.</i>

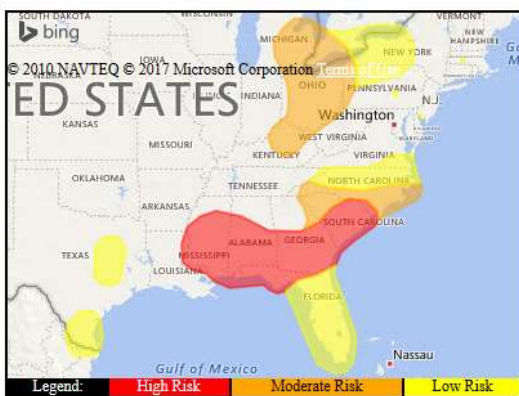
National Cucurbit Downy Mildew Updates: <http://cdm.ipmpipe.org/> offers information on the detection and characterization of the cucurbit downy mildew pathogen from the U.S. (and often Canada). In this past week, confirmations of downy mildew have come from AL, KY, MA, MD, MI, NC, NY, OH, PA, and SC. Prior confirmations of this year were from: AL, DE, FL, GA, KY, MD, MI, MS, NC, NJ, NY, OH, ON, PA, SC, TX, and VA on a variety of cucurbits. The counties highlighted in red on map (below) have had disease reports within this past week; green counties indicate locations of confirmed disease this season, but greater than 7 days ago. No risk of movement of the disease to WI based on the current forecast (see risk map below).



Further details on use of fungicides in managing cucurbit downy mildew can be found at my previous newsletter #7 from June 3, 2017. Link below.

<http://www.plantpath.wisc.edu/wiv egdis/pdf/2017/June%203,%202021 7.doc.pdf>

Risk prediction map for Day 3: Sunday, August 6



HIGH Risk for cucurbits in MS, central and southern AL, southern GA, the FL panhandle, central and eastern SC. Moderate Risk in western SC, southern NC, northern KY, OH, eastern MI, southern ON, and western PA. Low Risk for cucurbits in deep south and east-central TX, the FL peninsula, northern NC, southeast VA, northern PA, and western and west-central NY. Minimal Risk to cucurbits elsewhere.

Forecaster: TK at NCSU for the Cucurbit ipmPIPE - 2017

The 2017 A3422 Commercial Vegetable Production in Wisconsin guide is available for purchase through the UW Extension Learning Store website: <https://learningstore.uwex.edu/Commercial-Vegetable-Production-in-Wisconsin2017-P540.aspx>

A pdf of the document can be downloaded or is available at the following direct link:

<https://learningstore.uwex.edu/Assets/pdfs/A3422.pdf>