Vegetable Crop Update

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

No. 13 – June 15, 2016

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Calendar of Events

July 14, 2016 – UW-Rhinelander Agricultural Research Station Field Day
July 21, 2016 – UWEX Langlade County –Antigo Research Station Field Day
July 28, 2016 – UW-Hancock Agricultural Research Station Field Day
February 7-9, 2017 – UWEX/WPVGA Grower Ed. Conf., Stevens Point, WI

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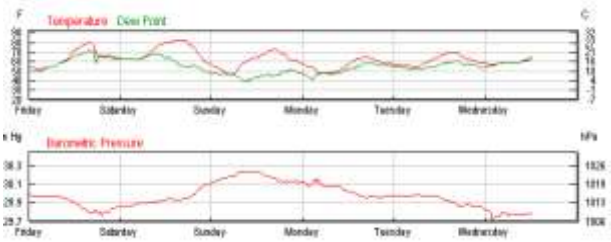
Late blight – ounce of prevention worth a pound of cure!

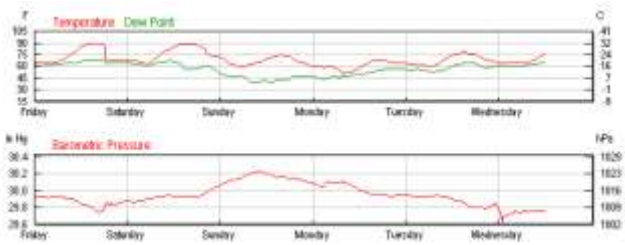
This time of year is an exciting, yet anxious time for potato growers. Generally, the crop is growing rapidly with lush green canopies closing in and flowering already in some parts of the state. However, it's also a time when deciding when to start preventive fungicide applications for late blight can cause anxiety. While *early blight management* has tended to be quite successful with use of crop development cues and even lesion cues to establish the start of fungicide programs, *late blight management* is more complicated because we may not know where inoculum is being harbored/introduced, or what exact micro-environmental conditions the crop may have experienced. **Further, we can't simply rely upon a first sighting of lesions in the lower canopy to manage late blight; if you see a lesion or lesions, you've already gotten behind on management of this potentially destructive disease.**

A very observant grower from Langlade County called me this morning to make the point that while our Blitecast Disease Severity Values (DSVs) didn't yet indicate threshold to prompt preventive fungicide sprays for late blight in Antigo, the weather *felt* like late blight weather with some fog, intermittent drizzling, and cool-moderate temperatures. The actual weather data confirmed his *feeling* – with actual and dew point temperature equating and barometric pressure dropping in the Antigo area; similar trends are occurring in the Hancock area as well (see below graphs of Jun 10-Jun 15, 2016 data from wunderground.com).

Antigo Jun 10-Jun 15, 2016



Hancock Jun 10-Jun 15, 2016



Blitecast Disease Severity Values (DSVs) used in determining timing of preventive fungicide applications for late blight control aid in management decision making because there is a biological relationship between temperature, relative humidity, and late blight. And, we presume that somewhere out there, the late blight pathogen has been harbored/reintroduced into 2016 (volunteers, cull piles, seed potatoes, compost piles, tomato transplants). The Blitecast tools that my program offers provide a benchmark for late blight risk for a general production area by planting/emergence date.

As DSVs get near the threshold of 18 for cuing the initial fungicide, and you're considering the timing of your impending spray, take a look at the trending weather conditions and at the next few days of your forecasted weather to be sure that rain and wet fields won't keep you out of the field and set you behind on your sprays once conditions allow you to enter the field(s), if you're applying by ground. You know, by farm, how long it takes your soil types to dry from specific quantities of precipitation. **My message here is to make your initial fungicide spray timing decision conservatively. Spray before the rain event even if DSVs haven't yet reached 18 for your area.** Preventive late blight management through early applications of broad spectrum fungicides, such as chlorothalonil, can make a significant difference in getting ahead of this disease which is infamous for progressing, sporulating, and spread very quickly. As Benjamin Franklin was quoted, "an ounce of prevention is worth a pound of cure."

Wisconsin commercial conventional fungicides for late blight control can be find at:
http://www.plantpath.wisc.edu/wivegdis/pdf/2016/Potato%20Late%20Blight%20Fungicides%202016.pdf

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For further information on common diseases, insect and weed pest information, please consider the 2016 A3422 Commercial Vegetable Production in Wisconsin guide is available for purchase ($10) through the University of Wisconsin Extension Learning Store website:
http://learningstore.uwex.edu/Commercial-Vegetable-Production-in-Wisconsin2016-P540.aspx

A pdf of the document can be downloaded for free at the following direct link:
http://learningstore.uwex.edu/Assets/pdfs/A3422.pdf

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/pday_sevval_2016.html

Location	Planting Date	50% Emergence	P-Day Cumulative	Disease Severity Value	Date of DSV Generation	Increase in DSV from 6/10
Antigo	Early 5/1	6/2	**88**	**15**	6/14	5
	Mid 5/18	6/7	**53**	**5**	6/14	5
	Late 6/3	-	**-**	**-**	-	-
Grand Marsh	Early 4/15	5/22	**189***	**28***	6/14*	5
	Mid 5/1	5/27	**152***	**22***	6/14*	5
	Late 5/15	6/3	**93***	**11***	6/14*	5
Hancock	Early 4/18	5/24	**174**	**28**	6/14	5
	Mid 5/3	5/29	**133**	**15**	6/14	5
	Late 5/20	6/5	**76**	**6**	6/14	5
Plover	Early 4/20	5/25	**165**	**28**	6/14	3
	Mid 5/5	5/30	**122**	**13**	6/14	3
	Late 5/20	6/6	**66**	**4**	6/14	3

*We continue to work on our Grand Marsh station and despite installation of a new modem and battery, we are still unable to regularly generate hourly data. As such, we have used some of the Hancock data to provide estimates for Grand Marsh based on the Grand Marsh emergence dates.