

Vegetable Crop Update - #12
August 7, 2008

The vegetable crop update is archived on the Wisconsin Crop Manager website at: <http://ipcm.wisc.edu/wcm/>. We welcome your input and suggestions.

Important Dates: Bean Variety and Sweet Corn Hybrid Demo, Central WI - August 12-13, all day
Haltvick Meeting, Hancock ARS – July 13

Potato and Vegetable Crop Update 8-7-2008– Alvin J. Bussan, UW-Madison, Department of Horticulture, 608-262-3519, cell 608-225-6842 or e-mail ajbussan@wisc.edu

It has been an interesting summer to say the least and that trend continues with the heat giving way to some cooler weather especially at night. Now that we are in the ‘heat’ of harvest season for nearly all crops please take care and use appropriate safety precautions.

Potato: Potatoes continue to bulk and this should improve with the cool nights. Canopy health appears fair to good, but I do have concerns about the development and spread of early dying. Petiole numbers have dropped, but you would expect that to occur as the crop matures. Standard Norkotah in our plots have definitely senesced, but CO 8 lines still look fairly good. We will continue to complete bulking samples to quantify the benefits of the extended canopy health in terms of what ends up in the bag. Most other varieties and lines we have been studying continue to have healthy vines. We are evaluating Premier Russet for the first time this summer and it appears to have a smaller canopy than other varieties in the Processing trial.

Based on time of year and the cool conditions on the horizon for the weekend, it may be prime time for applications of MH-30. We have evaluated a fair number of varieties to quantify response to MH30 and would be glad to share data on Gold Rush, Silverton, White Pearl, Freedom Russet, and others.

Dry conditions persist in Langlade County, so growers are still hustling to keep up with irrigation demand. Potatoes are bulking and growers will likely begin vine-killing within a couple of weeks.

Reserve November 5, 2008 for a potato research summit

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Please mark November 5 on the calendar for a Wisconsin potato industry research summit in Stevens Point. This all-day summit will prioritize industry needs and research investments from seed production through end-use quality. More details on the agenda and location will follow in the near future. Your involvement and attendance in this endeavor are absolutely critical and would be greatly appreciated!

Vegetable Insect Update 8-7-2008 – Russell L. Groves, Vegetable Entomologist, Applied Insect Ecologist, UW-Madison, Department of Entomology, 608-262-3229 (office), (608) 698-2434 (cell), or e-mail: groves@entomology.wisc.edu.

Continued captures of adult **European corn borer**, resulting from the emergence and flight of the second generation, remains under way in locations of southern Wisconsin. European corn borer moths are being captured in relatively low numbers and the peak of the summer moth activity is projected later this week along a line from Eau Claire to Madison. In portions of northern and central Wisconsin, the adult moths, presumably from the first generation, are still being captured. Sweet corn in tassel and beyond, peppers and snap beans with flowers and developing fruit should be protected. European corn borer larvae can be

effectively controlled by several insecticides identified in the Wisconsin Guide to Commercial Vegetable Production (A3422).

Last week, a significant increase in the number of alate **soybean aphids** (winged) was underway across much of southern and central portions of the state as well as first flights in northern reporting stations located in Langlade and Outagamie Counties. This flight occurred as soybean aphid infestations were reaching and exceeding action threshold(s) in many other areas of the state averaging greater than 250 apterous (wingless) aphids / plant. For cucurbit, snap bean, pepper, and potato growers, these flights continue to suggest an elevated risk for transmission of plant viruses including alfalfa mosaic virus (AMV) and cucumber mosaic virus (CMV). The soybean aphid has a complicated life cycle that is completed on two very different plant hosts. Aphids overwinter in the egg stage on the leaves of buckthorn. Two or three generations of wingless females are produced on the buckthorn in the spring, followed by a winged generation that leaves the buckthorn in search of soybean. In the summer, many generations of mostly wingless females are produced on soybean until decreasing day length triggers production of winged adults and a return to buckthorn in the fall. It is at this time that thousands of acres of susceptible vegetable crops have been affected with viruses such as CMV and AMV.

Aphids transmit both viruses in a non-persistent, stylet-borne manner, which means that viruses are acquired from infected plants and spread to other plants within only a matter of seconds. Aphids spread AMV and CMV into snap bean probably after they acquire it from forage crops like alfalfa and clover plus non-crop weeds. Applications of insecticides to kill aphids before they spread these viruses to other snap bean plants do not work effectively. In some high-value vegetable crops, management of viruses can be achieved using reflective mulches to repel the aphid vector and mineral oils to interfere with aphid probing. The performance of oil applications is directly related to the extent of the spray coverage. In the case of virus control, spray application to all leaf surfaces is essential. This is because winged aphids land on the upper leaf surface then immediately probe to determine if the plant is a host or non-host. If the plant is a host the aphid walks to the under leaf surface where it begins to feed; if the plant is a non-host it flies off in search of a host. Thorough coverage of all leaf surfaces is necessary for optimum performance and can be achieved by maintaining a constant sprayer speed, checking nozzles for wear, avoiding excess drift at higher wind speeds (e.g. > 12 mph), and using appropriate pressures and application increased gallonage.

Vegetable Disease Update 8-7-2008 - W. R. Stevenson, Department of Plant Pathology, UW-Madison, Tel. No. 608-262-6291, Email: wrs@plantpath.wisc.edu

Potatoes –

The weeks are winding down until vine kill for long season potatoes and still no late blight in Wisconsin. That should be great news for every grower in the state as this saves on input costs, losses in yield and storage decay. Severity values increased only slightly in the past week indicating that statewide conditions for late blight were not as favorable as earlier in the summer. It's important that growers do not let their guard down at this critical part of the growing season. August is traditionally the period with warm days and cooler nights leading to fog and extended periods of leaf wetness, conditions highly favorable for late blight. It's also important to note that while late blight is apparently absent thus far in the Midwest, other parts of the country are not as fortunate. There continue to be reports of late blight in the NE United States and Canada where they are experiencing frequent showers and generally wet conditions.

Early blight pressure increased substantially during the past week with most of the foliage in untreated check plots exhibiting symptoms of this disease. The majority of fungicide treatments and programs continue to provide excellent control of early blight. A high levels of control is critical to tuber bulking, high yields and high specific gravities at harvest.

Some growers will be applying MH-30 in the days ahead. Remember that mixing MH-30 and related materials with triphenyltin hydroxide fungicides (Super Tin, Agri-Tin) can be a **lethal combination** leading to necrotic spotting and marginal burning of potato foliage. There should be warnings on the labels so be sure to read the labels carefully before application.

Remember to put August 27 on your calendar for viewing the fungicide trials at Hancock. I'll be at the Hancock Ag Research Station from 10 to noon for those who want a quick walk through the plots to see which products and programs provided the most effective control of early blight.

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

	Planted:	50% EMERGENCE	P-Days	Severity Values	Calculation Date
Antigo area	Early - May 7	June 4	470	53	August 4
	Mid - May 15	June 11	409	37	August 4
	Late - May 23	June 18	361	27	August 4
Grand Marsh area	Early - Apr 20	May 23	564	74	August 4
	Mid - Apr 29	May 28	535	74	August 4
	Late - May 5	June 2	504	74	August 4
Hancock area	Early - Apr 16	May 10	625	50	August 4
	Mid - Apr 23	May 16	597	50	August 4
	Late - May 2	May 23	562	50	August 4
Plover area	Early - Apr 14	May 15	614	70	August 4
	Mid - Apr 22	May 23	573	70	August 4
	Late - May 3	June 1	522	68	August 4
Spoooner	Apr 30	June 2	494	13	August 4
	May 5	June 9	444	12	August 4

Visit our web site at (<http://www.plantpath.wisc.edu/wivegdis/index.htm>) where you can find updated P-Day and Severity Value information throughout the growing season.

Other Vegetable Crops:

Cucurbits: We are beginning to see samples with signs and symptoms of powdery mildew – white tufts of fungal mycelium on the upper leaf surfaces and accompanying yellow discoloration of infected foliage. If you plan to use a fungicide for control of powdery mildew, now is the time to begin those applications. Alternating products and tank mixing products is helpful in managing populations of the pathogen with resistance to some groups of fungicide. See the list of powdery mildew materials in A3422 “Commercial Vegetable Production in Wisconsin”.

Downy mildew continues to progress in Michigan. Growers in Wisconsin should be very aware of the high potential for the development of downy mildew here in our state. While we have not seen the first sample as yet here in Wisconsin, I'll be very surprised if we don't begin seeing samples in the next 2-3 weeks. Remember to be checking for yellow leaf lesions with a purplish tuft of fungal mycelium on the undersides of leaves.

Snap Beans: Historically the next 2 weeks are critical in the spread of aphid transmitted viruses. Over the past few years, cucumber mosaic virus has been an economic threat to snap beans and other fruiting

vegetable crops such as pepper. Beware of aphid populations on soybeans and weedy areas over the next few weeks since winged aphids can often vector these stylet borne viruses into vegetable crops.

Onions: Conditions are ideal for the development of several foliar diseases on the Wisconsin onion crop. Be alert for symptoms of Botrytis leaf blight, purple blotch and downy mildew. Growers should be treating their crops at least weekly with an effective combination of fungicides. I have extra copies of a color bulletin from the Cornell IPM Program entitled “Integrated Pest Management For Onions”. I find the publication an excellent source of color photographs of key diseases and other pests. If any onion grower would like one or more copies of this informative publication, send me a note and I’ll get them sent out.