



PENNSYLVANIA VEGETABLE MARKETING & RESEARCH PROGRAM

2301 N. Cameron St., Harrisburg, PA 17110 | 717-694-3596 | pvmp@embarqmail.com | PAVeggies.org

Pennsylvania Vegetable IPM Weekly Update

June 30, 2021

These are cooperative projects involving Penn State University researchers, Penn State Cooperative Extension educators, growers, the Pennsylvania Department of Agriculture, the Pennsylvania Vegetable Marketing and Research Program and the Pennsylvania Vegetable Growers Association.

Vegetable Disease Updates

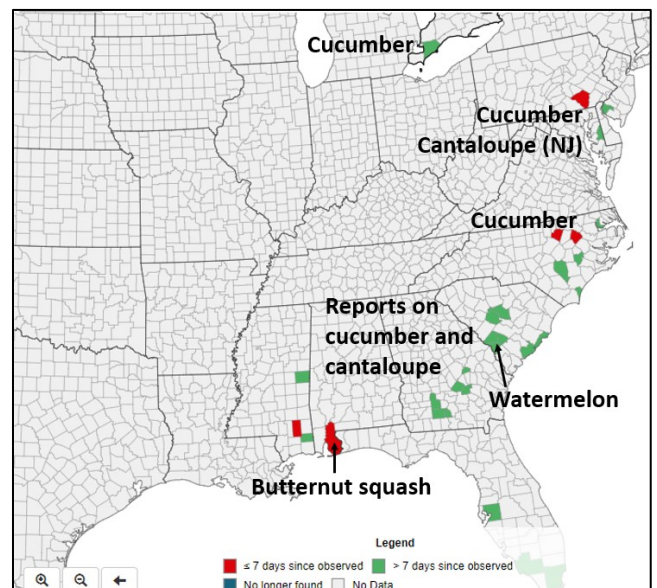
Beth Gugino, Extension Vegetable Pathologist, Penn State University

GENERAL UPDATES:

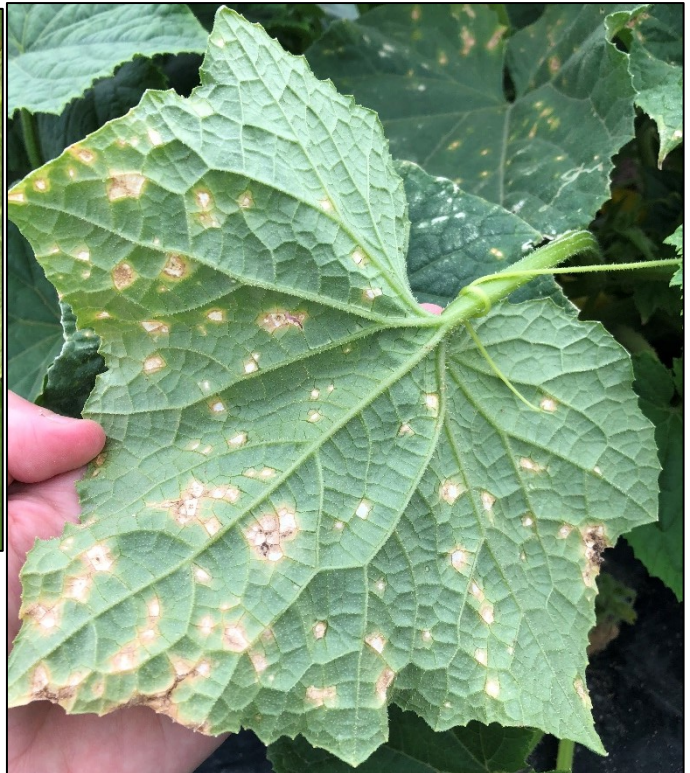
- There are currently **no reports of late blight** on tomato or potato in the region. If you suspect late blight on your farm, please let me know either by email at bkgugino@psu.edu or by phone at 814-865-7328 or contact your local Extension Office.
- Over the past few weeks there have been a couple reports of virus issues in garlic. It is common for garlic to test positive for potyviruses some of which include onion yellow dwarf virus, leek yellow stripe virus as well as the garlic common latent virus a member of the Carlavirus genus. Together these are often referred to as a **garlic mosaic virus complex**. The symptoms often include a yellowing or yellow streaking of the leaves and stunting of the plants which could also be indicative of a nutrient deficiency. Symptoms tend to be more severe when plants are infected with multiple viruses. The viruses are primarily transmitted through vegetative propagation, but they can also be transmitted non-persistently by aphids passing through garlic and other Allium crops. Most plant disease diagnostic clinics can conduct a general test for the Potyvirus group and foliar tissue testing could also be used to identify potential nutrient deficiencies.

DOWNY MILDEW CONFIRMED ON CUCUMBER IN LANCASTER CO., PA

Yesterday, June 29th, **downy mildew was confirmed on cucumber in a commercial field in Lancaster Co.** The field was likely infected around the same time as the reports last week in New Jersey and Maryland and these reports are about three weeks earlier than in the past six years. The field is actively being sprayed with fungicides that specifically target downy mildew. Last week there was also a confirmed report from Ontario, Canada along the Great Lakes. This means that there are sources of the pathogen that can infect cucumber and cantaloupe coming from the northwest and southeast depending on the forecasted weather conditions. It is highly recommended that all cucumber and cantaloupe crops be protected with fungicides even those being grown in high tunnels. The high relative humidity in a high tunnel can be enough for downy mildew to develop. In order to be used in a high tunnel the product must be labeled for greenhouse use.



Cucurbit downy mildew monitoring map as of 8:00 am 30 June 2021 (<https://cdm.ipmpipe.org>).



Pictured above are powdery mildew (white colonies) and one downy mildew lesion (darker, purple sporulation) on underside of a pumpkin leaf. Pictured on the right is angular leaf spot on the underside of a cucumber leaf. No sporulation will develop on the lower leaf surface (Photos: Beth K. Gugino).

See Table 4.4 in the [2020-21 Mid-Atlantic Vegetable Production Recommendations](#) for a listing of products labeled for greenhouse production.

The closest report on a cucurbit crop other than cucumber and cantaloupe is in southern South Carolina on watermelon. The next closest is in southern Mississippi on butternut squash. The strain of the pathogen that infects pumpkin, squash, and watermelon is different from the one that infects cucumber and cantaloupe. This means that the downy mildew on your cucumbers will not infect your pumpkin or butternut squash.

It is important to be able to distinguish between downy mildew (oomycete pathogen – yellow/tan lesions on upper leaf surface and darker purplish sporulation on lower leaf surface), powdery mildew (fungal pathogen – white colonies on upper and lower leaf surface), and angular leaf spot (bacterial pathogen – no spores on the underside of the leaf). Although some protectant fungicides may help protect to varying degrees against these diseases the recommended targeted protects differ especially for powdery and downy mildews.

If you suspect downy mildew on your farm, please let me know either by email at bkgugino@psu.edu or by phone at 814-865-7328 or contact your local Extension Office. Knowing where the disease is an important component for area-wide management. See <https://cdm.ipmpipe.org> for the latest reports and disease risk forecasts.

Penn State College of Agricultural Sciences research and extension programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Extension is implied.

Sweet Corn Insect Pest Monitoring

Shelby Fleisher, Extension Vegetable Entomologist, Penn State University

Corn earworm (CEW) catch is positive in 19 of 20 sites, with an increasing trend. Sites in Blair, Bedford, Juniata, Lancaster, Lycoming, Mifflin, Washington, and York exceeds thresholds, sites in Indiana are close to thresholds. Sites in Bedford, Lancaster, and Mifflin suggest tightening spray frequencies. **Taseling and silking corn will be very attractive.** Moths will also lay eggs on many host plants when corn is not available. Tomatoes and hemp make a good host (CEW is also known as “tomato fruitworm”).

European corn borer (ECB) adults should be active, but counts were very low (≤ 1) or zero at 13 sites. ECB levels have been declining due to Bt field corn. However, localized ECB populations remain. Scout for feeding damage and shothole patterns. **Fall armyworm (FAW)** counts were all ≤ 2 .

Average weekly catch –moving average for the last 7 days.

County	Trap Name	CEW			ECB			FAW		
		15-Jun	22-Jun	29-Jun	15-Jun	22-Jun	29-Jun	15-Jun	22-Jun	29-Jun
Blair	Tyrone	4	6	25	0	0	0	0	0	0
Bedford	Martinsburg	31	58	48	0	0	0	0	0	0
Bucks	Bedminster	0	0	0	0	1	0		0	0
Centre	State College	2	1	5	0	0	0	0	0	1
Centre	Rock Springs	2	6	3	0	0	0	0	0	1
Clinton	Loganton		0	4		0	0			
Indiana	Brush Valley			11						
Indiana	Creekside		9	5						
Juniata	Port Royle		8	22					1	
Juniata	Greenbar		10	5						
Lancaster	Landisville	7	29	49	0	0	0	0	0	0
Lancaster	Neffsville	5	1	3	0	2	1	0	0	1
Lancaster	New Danville	11	2	4	0	0	0	0	0	0
Lycoming	Linden			2						2
Lycoming	Montoursville		4	9		2	0		0	0
Lycoming	Muncy			31						0
Mifflin	Belleville			40			1			0
Montour	Washingtonville			8			1			
Washington	Venetia		8	19						
Bradford	Bristols		3			0			0	
Bradford	Ahern		0							
York	York	4	11	29	0	1	0	3	0	1

THRESHOLDS: Reproductive (tassel/silk) and late vegetative corn attracts moths. Shorten spray schedules when populations increase. If CEW is not a problem, then consider ECB.

	CEW		ECB	
	Catch/Week	Spray Frequency (days)	Catch/Week	Spray Frequency (days)
Almost Absent	1-13	7 or more	<15	7 or more
Very low	14-35	5-6	15-35	6
Low	36-70	4-5	36-70	5
Moderate	71-349	3-4	>70	4
High	>350	2-3		