UCONN EXTENSION

Vegetable Pest Alert

July 19, 2024

What to be on the lookout for…

Cucurbit downy mildew

CDM is closer to us this week than last week. The nearest report is from Columbina County in PA (July 16 on cucumber). This CDM map gets updated as new CDM cases are reported.

Cucurbit downy mildew on upperside and underside of cucumber leaf

Growers should consider putting down a preventive spray such as chlorothalonil (Bravo) and mancozeb (Dithane F45). For organic growers, Copper and Zonix are options. If infection does occur, symptoms will start to appear as soon as 5 days afterwards. Thanks to Margaret McGrath at Cornell University detailed information about downy mildew and its management for conventional and organic systems:
Biopesticides for Managing Cucurbit Downy Mildew Organically
Mobile Fungicides for Managing Three Major Cucurbit Diseases

If it arrives to your farm:
Mobile fungicides are needed to effectively manage downy mildew on the underside of leaves but are at risk for resistance development. For pesticide resistance management, alternate among chemical classes and apply these products with protectant fungicides; note that this is a label requirement for some products. Orondis Ultra, Ranman, Zing! or Gavel, and Omega, are considered the most effective choices. Efficacy recently in some research plots and commercial fields has been substantially reduced compared to when first available for several fungicides, including Revus, Forum, Presidio, Previcur Flex, Curzate, and Tanos. These changes are likely due to

resistance having developed. Revus has exhibited variable control across crop types; efficacy has been poor on cucumber and excellent on pumpkin. Curzate and Tanos have limited residual activity, which partly explains poor control when applied on a weekly schedule. Phosphorous acid fungicides are not as effective for this DM as for others. Ridomil Gold, and the QoI fungicides (Quadris F, Quadris Opti, Flint Extra, Cabrio, Pristine, and Reason are no longer recommended because of resistance. (Source: 2024 Cornell Integrated Crop and Pest Management Guidelines, Cornell Cooperative Ext Publication)

Black rot of brassica

Symptoms include the trademark yellow "V-shaped" lesions, with blackened veins within lesions. Infection can spread quickly and lead to high yield losses. Infections are seedborne, so selecting certified disease-free seed is important! Hot water seed treatment is also an option to reduce instance of infection. UConn currently offers hot water seed treatment for black rot in brassicas, amongst other things—see the table on their webpage for a list of eligible crops.

Once infection is confirmed, rotate away from brassicas for 3 to 4 years. Avoid working in fields when foliage is wet. Promptly incorporate plant debris after harvest, or mow if tillage is not possible in late fall crops. See this section of the New England Vegetable Management Guide for more information.

Black rot lesion on a broccoli leaf.

Cercospora leaf spot of beet

Cercospora leaf spot (CLS) can affect beets, swiss chard, or spinach. The intial symptoms are small lesions on leaf tissue that eventually coalesce into large necrotic areas and cause defoliation. The pathogen can survive in seed, soil, or overwinter in crop debris and alternate hosts (weeds, overwintered Chenopodiaceae crops).

Cultural practices for management of CLS includes incorporation of any crop debris after harvest and elimination of alternate hosts between growing seasons, using fungicide-treated seeds, and rotating away from host crops for 3 years.

Chemical management includes conventional and organic fungicides. See this section of the NE Vegetable Management Guide under "Leaf Spots and Blights" for more detailed information.

Cercospora leaf spot lesions on beet leaves.

Plectosporium blight of cucurbit

Its development is favored by rainy weather. Symptoms include diamond-shaped white spots on petioles, vines, leaf blades, and fruit that coalesce and kill large portions of the plant.

The Strobilurin (QoI) fungicides Flint (trifloxystrobin), Cabrio (pyraclostrobin), and Quadris (azoxystrobin) will control this disease but should not be rotated with each other or the pathogen will develop resistance. Apply a protectant fungicide such as chlorothalonil (Bravo) or mancozeb (Dithane) following a strobilurin.

White, diamond-shaped lesions of Plectosporium blight.

Cucurbit anthracnose

Anthracnose of cucurbits is a serious disease of cucurbit crops in warm, rainy summers. Lesions can form on seedlings, leaves, petioles, stems, and fruits. The pathogen affects cucumbers, melon, squash, watermelon, and pumpkins.

Symptoms on seedlings occur as wilt of cotyledons and stem lesions near the soil line when the fungus is seed borne. On mature leaves, small pale yellow, water-soaked areas emerge near veins and enlarge rapidly, turning tan to dark brown. The spots may coalesce, resulting in blighting, distortion, and death of entire leaves. The dry, dead centers of old lesions often crack and tear, giving a ragged appearance to the foliage. Lesions on petioles and stems are elongate and slightly sunken. Young fruit may turn black and die if their pedicels are infected, while older fruit develop circular, noticeably sunken, dark-green to black lesions which may exhibit a salmon colored exudate in moist weather.

Reduce weeds to allow for faster drying of plant surfaces. Plow under plant debris after harvest. See https://nevegetable.org/crops/disease-control-18 for spray options.

Anthracnose on cantaloupe. Symptoms appear on leaves as small, brown-black spots usually after vines begin to "run". These lesions are also visible on the underside of leaves. (Image: Susan Mitchell, Cloverleigh Farm, Columbia)

Corn earworm

Trap capture was 1.66 moths/night this week in a farm in Berlin; 0.14 moths/night in Glasstonbury; 0.5 moths/night in Shelton.

Table. Spray Intervals for Corn Earworm based on moth captures in Heliothis net traps.

Moths/Night	Moths/Week	Spray Interval
0 - 0.2	0 - 1.4	no spray
0.2 -0.5	1.4 - 3.5	6 days
0.5 - 1	3.5 – 7	5 days
1 - 13	7 – 91	4 days
Over 13	Over 91	3 days

European corn borers

ECB are continuing to be trapped, but in low numbers (3 moths/trap/week in Berlin; 0 in Glastonbury; and 0 in Shelton).

Continue to be othe lookout for

- Pepper maggot
- Leaf mold in tunnel tomatoes
- Early blight of tomatoes
- Bacterial canker in tomatoes
- Squah vine borers (1/week in Glastonbury; 5/week in Berlin)
- Cucurbit powdery mildew
- Bacterial wilt of cucurbits

Agritourism Interest:

UConn Extension is considering offering an agritourism/agri-entertainment workshop and wants to gauge your interest in attending. Please complete this brief survey to help us plan.

Survey link: https://s.uconn.edu/agritourism

2024 New England Vegetable & Fruit Conference

December 17, 18, 19, 2024

Manchester,
New Hampshire
at the DoubleTree by Hilton Downtown

Conference website:
https://newenglandvfc.org/

Thanks for reading!

This report was prepared by Shuresh Ghimire, UConn Extension. All photos in this publication are credited to UConn Extension Vegetable Program unless otherwise noted.

Contact us with any vegetable production related questions!

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