UCONN
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
EXTENSION

Vegetable Pest Alert

August 19, 2023

Alternaria leaf spot on brassica crops

The most common symptom of Alternaria diseases is yellow, dark brown to black circular leaf spots with target like, concentric rings. Lesion centers may fall out, giving the leaf spots a shot-hole appearance. Individual spots coalesce into large necrotic areas and leaf drop can occur. Lesions can occur on petioles, stems, flowers, flower pedicels, and seed pods. Infection of broccoli and cauliflower heads can lead to complete deterioration of the heads and result in total loss of marketability.

Diseased crop debris is the primary site of survival from year to year. Incorporate diseased plant debris into the soil. Start with disease-free seeds or treat seed with hot water. Practice long rotations with non-cruciferous crops. Minimize the length of leaf wetness periods by reducing plant density, orienting rows with prevailing winds, and irrigating in the morning when leaves can dry quickly. Avoid overhead irrigation during head development. Differences in cultivar susceptibility exist so note which ones performed better for future variety selection.

chlorothalonil (Bravo Weather Stik), azoxystrobin (Quadris) are commonly used fungicides to control the spread in conventional farms, and potassium bicarbonate (PB 133, AKA MilStop), *Bacillus amyloliquefaciens* strain D747 (DoubleNickel), and polyoxin D (OSO 5%SC) are OMRI listed label fungicide for this disease. For a more complete list, see https://nevegetable.org/crops/disease-control-3.

Caterpillars of cross-striped cabbageworm, imported cabbageworm, and diamondback moth, and flea beetles are continuing to feed in brassica plantings. Spray if 5% of the plants are infested with Cross-Striped Cabbage Worm. For other caterpillars, spray at a 15% threshold from head formation to maturity, at a 35% threshold before heading. For leafy vegetables (e.g. kale and collard), spray at a 10-15%. To control flea beetles, for small plants <12" tall, treat when there is an average of 1 flea beetle per plant or damage exceeds 10%. *Bacillus thuringiensis* aizawai (XenTari), *Bacillus thuringiensis* kurstaki (Dipel DF), and azadirachtin & pyrethrins (Azera**)** among the commonly used pesticides that are also allowed in organic systems. Use a spreader-sticker to help materials adhere to waxy brassica leaves. See http://nevegetable.org/crops/insect-control-3 for more spray options.

Cross-stripped cabbageworm feeding on brassica plant

Leaf spots in tomato: Early blight and Septoria leafspot are very destructive of tomato. Both diseases may occur together, and both may be seed-borne. Plow under plant debris after harvest. Rotate away from tomatoes for at least 2 years. Provide optimum nutrition throughout the season. If planting in an area with a history of either disease, begin fungicide applications before disease is evident, usually when first fruit are half grown. Bacterial Speck can also be seed borne. Use hot-water treated seeds to avoid introducing any of these diseases through seeds. See https://nevegetable.org/crops/disease-control-23 for spray options.

Leaf spot symptoms of early blight on tomato (Photo: Univ. of Minnesota Ext)

Septoria leaf spot: note ash-grey center of lesion with tiny black pin-point dots (pycnidia). First symptoms are usually on lower leaves after the first fruit sets. Disease spreads from oldest to youngest growth.

Symptoms of bacterial specks first appear and are most common on younger leaves, but they can appear first on older leaves. Leaf spots appear water-soaked, dark brown to black, sometimes with a yellow halo, and typically small (up to 1/4 inch wide). As the disease progresses, spots coalesce forming large, irregular brown areas. Margins of leaves can be brown, sometimes extending down into the leaf forming a wedge of brown tissue (Margaret McGrath, Cornell Univ.).

Pepper and tomato anthracnose: Anthracnose is the most prevalent fruit rot of pepper and also tomato and eggplant. Primarily a pathogen of ripe fruit, a new species of anthracnose occurs on all stages of pepper fruit development. The disease is most common on red peppers that have a long ripening period. The pathogen can be seed-borne and survives in the soil through the production of sclerotia. Rotate away from solanaceous plants for at least 2 years. Start with certified, disease-free seed and transplants. Plant in well-drained fields. Control solanaceous weeds. Most peppers are susceptible but North Star and Paladin were the least susceptible in one report. Apply fungicides preventively where anthracnose has been a problem. Mancozeb plus copper hydroxide (ManKocide), cymoxanil plus chlorothalonil (Ariston), polyoxin D (OSO 5%SC) are among the labeled pesticides. See **https://nevegetable.org/crops/disease-control-16** for more comprehensive list.

Spots on fruit initially are small, circular, and depressed. They can enlarge considerably over time with masses of pink to orange colored spores developing. Eventually the entire fruit will rot. Fruit nearest to the ground are most likely to be affected (Margaret McGrath, Cornell Univ.)

Sweet corn pests: Traps count winding down for European corn borers in the region with none captured in a farm in Berlin, CT. However, corn earworm counts are still high, with 0.5 per night (5 day spray schedule) in the same farm.

One thing to note that, corn earworm traps in western NY have been finding occasional adult box tree moths in the traps. Please let me know if you find any BTM in the CEW traps.


Box tree moths (pictures: https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/box-tree-moth)

Corn earworm moth (Photo: D. Ferro, UMass Extension)

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

Bt hybrids that express the insect toxin found in *Bacillus thuringiensis* (Bt) in leaves, husks and kernels offer protection against CEW and may not require additional insecticide applications for control of this pest.

Continue to be on the lookout for the following pests that were covered in the previous pest alerts (2023):

- Cucurbit powdery mildew
- Cucurbit downy mildew
- Phytophthora blight, root rot and crown rot
- Bacterial canker of tomatoes

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

NRCS Announces Program Sign-Up for EQIP and AMA

(Signing Up May Also Assist Producers Who Experienced Crop Loss as a Result of July Flooding)

Although the FY2023 growing season isn't yet over, it's not too early to look forward to the next. Machelle Simmons, Acting State Conservationist for the USDA-Natural Resources Conservation Service in Connecticut, has announced funding for two of her agency's conservation programs for FY2024 – the Environmental Quality Incentives Program (EQIP) and the Agricultural Management Assistance (AMA) Program.

Not sure if either of these programs are for you? Let's take a look …

- Are you an agricultural producer looking for ways to conserve water, or address water, air, or animal waste issues?
- Are you looking to reduce erosion, improve wildlife habitat, or obtain a seasonal high tunnel?
- Do you want to make your farm more resilient to climate change?
- Do you just want to improve overall conservation on your farming operation?

If you answered yes to any of these, you may be eligible for technical and/or financial assistance.

EQIP is a voluntary program for those engaged in livestock, forestry, or agricultural production – including organics. EQIP offers financial and technical assistance to implement conservation practices on eligible agricultural land. It also provides payments for implementing practices that have a positive environmental impact while protecting long-term production and sustainability. Eligible crop production includes, but is not limited to, field-grown ornamentals, fruits, orchards, plant materials in greenhouses, row crops, vegetables, vineyards, and small urban farms to larger rural operations.

AMA provides financial and technical assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation into farming operations.

In addition, Connecticut NRCS is now offering **ACT NOW** and **early start waivers** for some EQIP applications, *which* ***could be a benefit to producers whose fields were flooded during the July storms.***

ACT NOW allows NRCS to immediately approve and obligate a ranked EQIP application in a designated ranking pool when an eligible application meets or exceeds a state-established minimum ranking score without waiting for all applications to be ranked and preapproved in that ranking pool. Applications eligible for any of the identified ACT NOW

ranking pools will be accepted on a continuous sign-up and processed in the order received until the applicable application deadline. Any application that ranks at or above the state-established threshold ranking score will be pre-approved as funds are available. After the last ranking deadline (if funding is still available), applications with ranking scores less than the state-established threshold ranking score may be preapproved in ranking order.

In Connecticut, **ACT NOW** will be available in FY2024 for the following:

- Conservation planning, design, implementation, and monitoring activities – including Conservation Planning Activity practices (CPAs), Design and Implementation Activities (DIAs), and Conservation Evaluation and Monitoring Activities (CEMAs)
- Cropland practices limited to Cover Crop, Crop Rotation, and Tillage Management (340, 328, 329 and 345)

Also, under **ACT NOW** eligible producers whose fields were affected by the July flooding may apply for cover crops or request a waiver from the State Conservationist to start a practice prior to receiving a contract. This would allow eligible applicants to plant cover crop this fall before their contract is developed. They will receive their first payment after the contract is signed. There are some stipulations with this waiver such as: no guarantee that a contract will be selected for funding, the practice can't start before the waiver is approved, and the practice must meet NRCS standards and specifications to be eligible for payments.

Although NRCS accepts applications year-round, to be eligible for the first sign-up period for FY2024 funding, be sure to submit yours to your local NRCS office by October 31, 2023.

Not sure how to begin? Visit the ***Get Started with NRCS*** webpage. Or contact your local USDA Service Center: Danielson – (860) 779-0557; Hamden – (203) 287-8038; Norwich – (860) 887-3604; Torrington – (860) 626-8852; Windsor – (860) 688-7725.

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