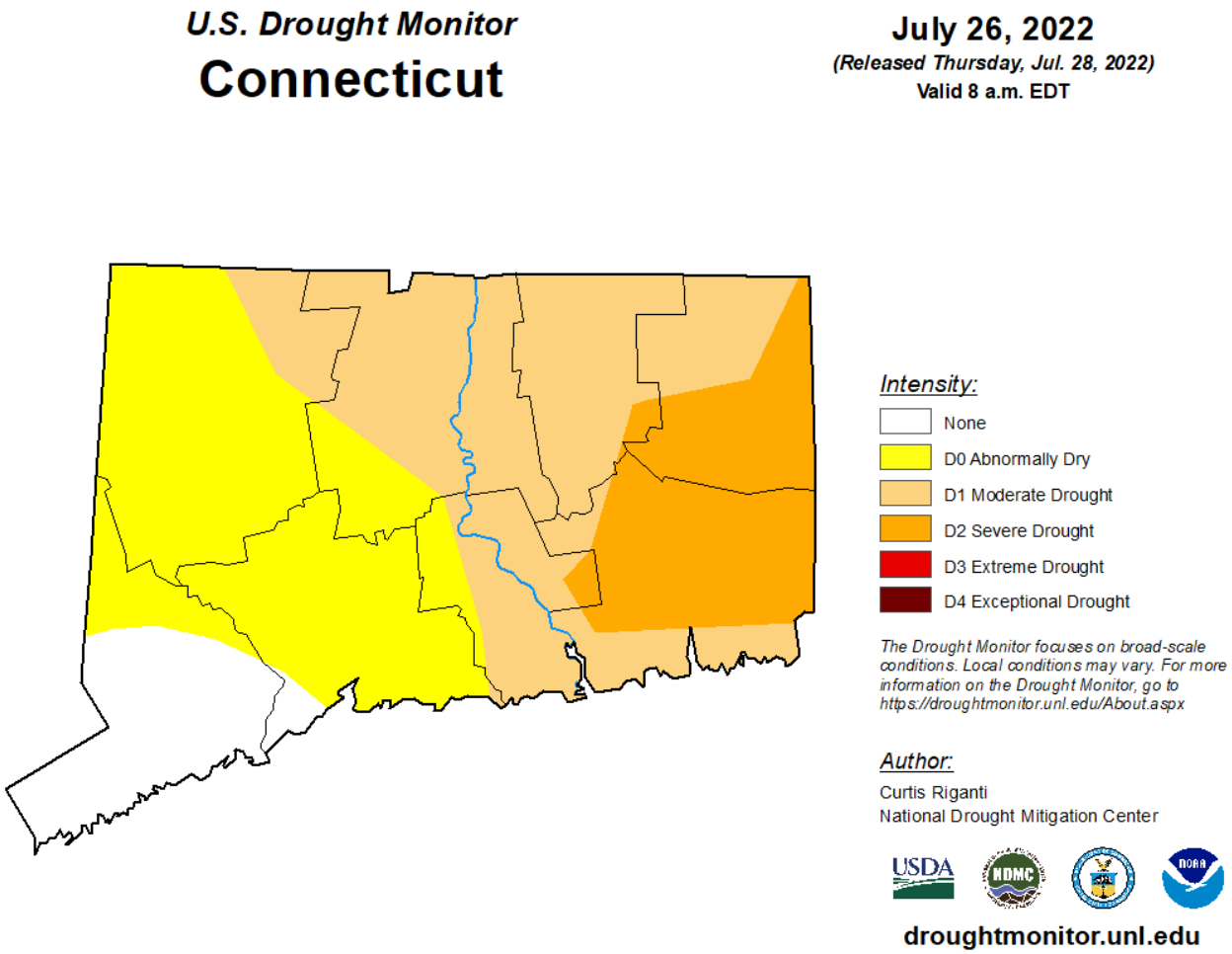
UCONN
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
EXTENSION

Vegetable Pest Alert

July 29, 2022

Drought: Drought conditions continues to persist, more severely in eastern Connecticut. High heat and moisture stress can cause pollination issues including blossom drop and fruit abortion in tomatoes, peppers, eggplants, and promote male flowers in cucurbits, poor tip fill in sweet corn. In the case of cucumbers, squash, and pumpkins, cool temperatures promote development of female flowers, and the ratio of male to female flowers is reduced. Generally high temperatures promote male flowers and delay female flower development. Typically for pumpkins, daytime temperatures of 90 ° F or above and nighttime of 70 °F or above lead to abortion of female flower buds. Please see 7.15.22 Vegetable Pest Alert for an article on tips for managing too little water.



Bacterial canker *(Clavibacter michiganensis)* was confirmed in field-grown as well as high tunnel tomato samples. Bacterial canker is one of the most devastating bacterial pathogens of tomato. The pathogen enters the tomato through natural openings, wounds (roots, stem, or fruits), or from infected seeds. Once inside a plant, this bacterium multiplies in the cells of plants that are responsible for water transport. A slimy biofilm is produced by the bacteria, which aids in pathogen colonization and movement. If conditions are favorable (77-86 ^{o}F), disease symptoms can develop in approximately a week.

Bacterial canker of tomato often causes brown and yellow margins on leaves and stem canker and pith necrosis develop as a result of bacterial canker (photos: S. Ghimire).

Recommendations for next season would be, buy hot-water treated seed or seed certified to be free of bacteria. Hot water seed treatment can be done at home. Treat seed for 25 minutes at 122°F. Use copper or streptomycin on plants before transplanting. Disinfect stakes before reusing.

Bacillus subtilis strain QST 713 (Serenade ASO) is labeled for both field and greenhouse use. Also, Copper-based products can help protect healthy plants.

A fact sheet from Cornell on this disease: https://cpb-us-e1.wpmucdn.com/blogs.cornell.edu/dist/1/7446/files/2020/04/bacterialcanker_factsheet.pdf

Mites on multiple crops. Two-spotted spider mite is the most common mite species that attacks vegetable and fruit crops in New England. Spider mites can occur in tomato, eggplant, potato, vine crops such as melons, cucumbers, and other crops such as sweet corn. They have up to 20 generations per year and are favored by excess nitrogen and dry and dusty conditions. Outbreaks are often caused by the use of broad-spectrum insecticides which interfere with the numerous natural enemies that help to manage mite populations. As with most pests, catching the problem early will mean easier control.

Damage is often underestimated since the wounds and the pest are not apparent to our eyes without close inspection. Cultural practices can have a significant impact on spider mites. Dusty conditions often lead to mite outbreaks. Water-stressed plants are less tolerant of spider mite damage.

Preventative releases of the predatory mite, *Phytoseiulus persimilis*, may suppress TSSM populations in greenhousese and vegetable fields, as they do in strawberry fields. Abamectin (Agri-Mek), spirotetramat (Movento), insecticidal soap (M-Pede), neem oil (Trilogy) are some labeled pesticides among others but consult the label as there are restrictions in applying these products.

Spider mite feeding causes a mottled color pattern to leaves called stippling (left photo: Ric Bessin, Univ of Kentucky). Corn leaf from lower in the canopy with stippling from spider mite feeding. The most significant damage occurs when spider mites feed on leaves at or above the ear leaf (right photo by Rebecca Vittetoe).

Squash vine borers trap capture was 25 in a farm Norwich, and 2 in a farm in Berlin.

Corn earworm (CEW). Trap capture was 0.33/night in a farm in Norwich; 0.5/night in Belin.

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). This week 6 ECB NY, 2 IA and 8 hybrid ECB was captured in a farm in Norwich; 0 ECB NY, 3 ECB IA and 1 ECB Hybrid moths were captured in each trap set in Berlin.

Continue to be on the lookout for the following pests:

- Alternaria leaf spot and head rot on broccoli
- Black rot in brassica crops
- Early blight, Septoria leaf spot, and leaf mold of tomatoes
- Phytophthora blight on squash
- Cucurbit downy mildew
- Cucurbit powdery mildew
- Leaf mold in high tunnel tomatoes
- Bacterial diseases of pumpkins
- Verticillium wilt on tomatoes and eggplants
- Mexican bean beetles
- Tobacco/tomato hornworms
- Squash bugs
- Pepper maggot
- Bacterial leaf spots on peppers
- Colorado potato beetle
- Potato leaf hopper
- Brassica flea beetle
- Striped and spotted cucumber beetles

2022 ORGANIC CERTIFICATION COST SHARE GRANT PROGRAM APPLICATIONS OPEN AUGUST 1

The Connecticut Department of Agriculture has received the National Organic Certification Cost Share Program (NOCCSP) Grant from the USDA Farm Service Agency.

Through this grant program, Connecticut certified organic growers and processors can be reimbursed for 50%, up to $500, for the costs of receiving and maintaining USDA organic certification. A list of certified organic growers and processors is available through USDA's Organic INTEGRITY Database at https://organic.ams.usda.gov/integrity.

The program is administered on a first-come, first-served basis until funds are exhausted. **Applications will be accepted August 1, 2022, through October 3, 2022 at 4:00 p.m.**

The amount reimbursed will be 50%, up to $500, of certification costs paid between October 1, 2021 and September 30, 2022.

To apply, please visit the link below for required materials and detailed instructions. Completed applications are to be submitted electronically by October 3, 2022 at 4:00 p.m. If you have any questions, please contact Alison.Grabarz@ct.gov.

More info: https://portal.ct.gov/DOAG/ADaRC/ADaRC/Organic-Certification-Cost-Share-Grant-Program

Food Safety Certification for Specialty Crops Program

Did your specialty crop operation recently incur on-farm food safety program expenses related to obtaining or renewing a food safety certification in calendar years 2022 or 2023? You may be eligible for financial assistance through USDA's Food Safety Certification for Specialty Crops Program (FSCSC).

USDA's Farm Service Agency will accept FSCSC applications for program year 2022 from June 27, 2022, through January 31, 2023. Applications for program year 2023 will be announced at a later date. More info here: https://www.farmers.gov/pandemic-assistance/food-safety?utm_medium=email&utm_source=govdelivery.

This report is prepared by Shuresh Ghimire, UConn Extension.

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