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COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
EXTENSION

Vegetable Pest Alert

June 24, 2022

Tomato Spotted Wilt Virus (TSWV) was confirmed this week. TSWV causes black, small, irregularly shaped lesions on tomato foliage. Stems and shoots may exhibit black streaks. Severely affected plants may wilt and become stunted. Fruit develops chlorotic rings, patches, or lesions. Numerous landscape plants, greenhouse ornamentals, and weeds may be reservoirs of the virus. Thrips transfer the virus in a persistent manner. The virus is not seed-borne.

There is no cure or chemical treatment for plant viruses. Discard affected plants. Eradicate weeds that may be hosts. Control thrips populations. Inspect plant material at arrival. Do not grow vegetable transplants and ornamental bedding plants in the same greenhouse.

TSWV causes black, small, irregularly shaped lesions on tomato foliage (Photos: S. Ghimire)

Verticillium wilt on eggplant was seen last week. It can also infect tomato, pepper, cucurbit, and many other plants. A yellowing of lower leaves followed by wilting is the first sign of disease. Lesions have a characteristic V-shaped pattern which is widest at the leaf margin. Symptoms can appear on one side of the plant or on one side of a leaf, more prevalent in eggplant and tomatoes. When the stems of infected plants are cut lengthwise, the vascular tissue exhibits a brown discoloration. *Verticillium* species can persist in the soil for many years in the absence of susceptible plants. Follow a 4- to 5-year crop rotation with non-solanaceous and non-cucurbit crops to reduce inoculum levels in fields. Include grain crops in the rotation. Control weeds as many weeds are susceptible to Verticillium. Remove and destroy infected plant material after harvest. There are no effective chemical controls.

European corn borer (ECB) and Corn earworm (also called tomato fruit worm) on tomatoes and peppers. While they are well-documented pests of sweet corn, they can also affect pepper and tomatoes. Damage on tomatoes reported this week in New York from both of these pests. Since corn ear worm are early this year in CT as well and some farms have captured before the corn is silking, the chances are high that they end up laying eggs on tomatoes and peppers. Please keep an eye out for signs and symptoms (pictures included on the right and below). Use selective insecticides to avoid disrupting natural enemies that control secondary pests, such as mites and aphids.

Once inside the stem of a young tomato plant, insecticides are unlikely to reach ECB, and even if they do the damage is done. *Photo by Judson Reid, CCE*

Corn borers chew through the center of the planting causing a complete wilt. *Photo by Judson Reid, CCE Cornell Vegetable Program*

Corn earworm in tomatoes. *Photos: Judson Reid, CCE Cornell Vegetable Program*

Slug activity is promoted by plant residue on the soil surface and moist conditions. Slugs are active at night. During the day, they hide under clods and debris or in unsealed seed slots. However, they are sometimes active during daylight hours, if cloudy and humid conditions prevail. As they move about, they leave a slimy, silver-colored trail behind them. They feed on decaying organic matter and plant foliage.

Slugs usually feed on the lower part of plants, eating partly or completely through the leaf. They leave narrow, irregular, linear tracks or scars of various lengths. Severe feeding can result in split or tattered leaves that resembles damage from hailstorms. The damage they cause is similar in appearance to that caused by some insects (e.g., corn flea beetle), but the presence of silver-colored slime trails is a sign of the presence of slugs. Normally, damage is severe only on emerging to four-leaf stage corn. Stand losses due to slug feeding often occur when fields are too wet for seed slots to properly close during planting operations and remain open during early plant growth. In this situation, slugs are able to feed day or night on the seedlings, often destroying the growing point. Iron phosphate (Sluggo: Snail and Slug Bait) is labeled for slug control in many vegetables including corn, cucumbers, eggplants, peppers, squash, and tomatoes.

Slug damage on sweet corn and okra (Photos: S. Ghimire)

Basil downy mildew: confirmed in MA, VT, RI. So, inoculum may be spreading around (air-borne dissemination).

Yellow banding on upper leaf surface (left; Photo courtesy of University of Florida) and Dark, downy sporulation on underside of leaf (photo courtesy of UMass Extension).

Leaf yellowing is often the first symptom of basil downy mildew. Yellowed areas are usually bordered by leaf veins. When spores are produced, a characteristic fuzzy, dark gray to purple growth on the underside of the leaves is evident. Sporulation on the upper surfaces of leaves may be seen in severe cases.

Preventively applied fungicides can provide control of this disease with regular, timely applications. Resistant varieties have also been available for several years and have been providing an extra ~2 or more weeks of basil harvest compared to standard varieties. For example, Prospera series, available from several seed companies, have performed well.

Continue to be on the lookout for

- Squash bugs
- Squash vine borers
- Bacterial leaf spots on peppers
- Imported cabbageworm and Diamond back moth in brassica
- Colorado potato beetle
- Potato leaf hopper
- Thrips and aphids on tomato, peppers
- Brassica flea beetle
- Striped cucumber beetles
- Allium leaf miner

This report is prepared by Shuresh Ghimire, UConn Extension. The information in this document is for educational purposes only. The recommendations contained are based on the best available knowledge at the time of publication. Any reference to commercial products, trade or brand names is for information only, and no endorsement or approval is intended. UConn Extension does not guarantee or warrant the standard of any product referenced or imply approval of the product to the exclusion of others which also may be available. The University of Connecticut, UConn Extension, College of Agriculture, Health and Natural Resources is an equal opportunity program provider and employer.

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