THE UNIVERSITY OF RHODE ISLAND COOPERATIVE EXTENSION

Pest Update

Pest Alerts, 8/20/2015

Vegetable scouting sheets can be found on the UMass Extension Vegetable Program website. When not given here, refer to the **New England Vegetable Management Guide** for scouting thresholds and treatment options.

Brassica: **Cabbage aphid** infestations have been heavy in areas of Western MA and now are being reported in Chittenden Co., VT causing severe curling and twisting of kale, cabbage and Brussels sprouts leaves. Growers are reporting presence of aphid mummies indicating the activity of beneficial parasitoids. Syrphid fly larvae, predators of aphids, have also been seen in a brassica field in MA. However in fields with severe infestation, using a drop nozzle sprayer with combinations of insecticidal soap, neem, pyrethrum and a surfactant has been successful. Incorporating residues of older successions is important for avoiding **alternaria leaf spot** in the future (reported causing significant damage in fields in Washington Co, RI). Summer infections can spread into fall plantings if field sanitation practices are not followed.

Sweet Corn: The second generation of **European corn borer** larvae have begun feeding in Chittenden Co., VT, where GDD (base 50°F) is 1857 (the second flight begins around 1400 GDD; first eggs at 1450 GDD; and egg hatch at 1550 GDD). When moths are active during silking, eggs are laid on leaves near the ear and larvae move directly into the ear by tunneling through the husk or down the silk channel. All locations in the Northeast should be scouting for caterpillar damage form the second generation of ECB now. **Corn earworm** trap captures are high in Southeastern MA where spray intervals are down to 4 days. See article earlier this season on Corn Earworm Management. **Fall armyworm** captures are more varied with a few hot spots around the state capturing numbers high enough to warrant scouting for this pest and treating at a threshold of 15% combined damage including ECB. There are likely three to 4 more successions of corn left in MA with some growers picking until October, though harvests will drop off after Labor Day.

Cucurbit: **Cucurbit downy mildew** was newly confirmed this week on cucumber in Worcester Co., MA but still not in VT or RI where scouts have also been on the lookout. In MA, if you have not done so already, it is time to switch over to using downy mildew specific materials to protect cucurbits, rotating between classes of fungicides for resistance management. Products with good to excellent efficacy against downy mildew (with FRAC codes) include: Ranman (21), Previcure Flex (28), Revus (40), Presidio (43), or Zampro (45+40). Track occurrence of the disease here: http://cdm.ipmpipe.org/scripts/map.php. **Powdery mildew** is caused by two organisms, *Podosphaera xanthii* (Px) and *Golovinomyces cichoracearum* (Gc). In the past, Gc was considered to be the primary causal organism of powdery mildew. However, in recent years, Px is more commonly reported worldwide. Different races of Px and Gc exist (making resistance to fungicides a real problem in some areas). Also, these different races may express themselves with different symptoms such as chlorotic spotting (reported in Franklin Co., MA and Washington Co., RI this week) instead of the traditional whole-leaf powdered sugar look. Mow down

older successions after harvest and protect younger plants with fungicides. Effective materials are different from those used against downy mildew. There are many good options for conventional and organic systems including: Torino, Quintec (rated very effective), Group 3 (Procure, Rally, Tebuzol, Folicur, Inspire Super), or Group 7 (Pristine, Fontelis, Luna), as well as Zing!, Milstop, Kaligreen, Sulfur, and Oxidate. **Squash bugs** are heavy especially in no-till fields where the adults like to seek shelter in surface residues. Rip out, chop up and turn under (if not practicing no-till) first and second plantings of summer squash and zucchini now in order to rid the field of squash bug and **squash vine borer** for next year. Traps are capturing 1 or fewer SVB this week, indicating that the emergence from the overwintering generation is complete, and any newly emerging adults will be first generation for this year and will be more of a threat to pumpkin fruit than stalks.

Many fungal fruit rots of cucurbits are being reported now in several New England states. In RI: alternaria on Charentais melon. Fancy melons are great for sales but can be trouble in the fields. In VT: Gummy stem blight, plectosporium, and anthracnose. In NH: scab in low spray fields, and in MA: plectosporium, scab, and anthracnose. See article in last week's issue for cultural practices to help you protect future plantings from these diseases. Again, residue management is important for keeping many of these pathogens from building up inoculum, so chop up and turn under older successions now if possible.

Solanaceous: **Late blight** was confirmed by the UMass Disease Diagnostic Lab in Franklin Co., MA this week at a higher elevation where conditions have remained conducive to infection (high humidity and 60-80°F); still no confirmation of the disease in RI although scouting continues. See the MA late blight DSS for preventive spray intervals. Track progression of the disease here: http://usablight.org/map. **Two-spotted spider mite** in greenhouses now will become a problem again next spring if steps are not taken to clean up infestations before fall. Populations explode during hot weather, taking just 8 days to develop from egg to adult at 77-95°F. See the recent Greenhouse Floriculture pest message to learn more: http://negreenhouseupdate.info/updates. **Powdery mildew** and **fulvia leaf mold** (see photo below), normally greenhouse diseases, have been reported in fields in Bristol, Franklin, and Hampshire Cos., MA and in Chittenden Co., VT on field tomatoes. There are 12 races of leaf mold but resistance in tomatoes is not bred across races. So, keep track of varieties with leaf mold this year and don't grow them again. Fulvia is not well-controlled with copper. One RI grower has achieved excellent control with Inspire Super (a mixed group 3 and 9 fungicide which is better for resistance management than a group 3 fungicide applied alone).

Two farms had tomato wilt diseases in RI, and *Verticillium* was confirmed in one of the cases. This, as well as *Fusarium*, can first display wilting symptoms in the midday heat. The leaf yellowing and dying of a whole branch or even a whole plant progresses from the bottom up. Often, leaflets on one side of a compound leaf will be yellow while leaflets on the other side of the same leaf will still be green (see photo below).

Management of these diseases can be difficult: it can remain in the soil for several years, so removal of plant residue is recommended, if possible. Crop rotation is important. If heirloom tomatoes are part of your crop mix, you may want to have these custom grafted onto resistant rootstocks, or else graft them yourself. There are several rootstock seed varieties available that show good resistance. Otherwise, plant resistant tomato varieties, which is available among the various traits of most hybrids.

Bacterial canker was confirmed in pepper in Vermont causing total crop loss. It was likely seed-borne. This is the first report of this disease on pepper in New England.

Multiple: **Spotted Wing Drosophila** trap captures are going up around the state.