CROP Insights, 6/18/2025

Observations from the Field and Research-Based Recommendations

CANTALOUPE

Transplants of cantaloupes and other vine crops having survived a dark, wet greenhouse season subsequently underwent several weeks of row cover in similar, but even cooler conditions. This allowed the proliferation of Botrytis Gray Mold, on a crop that usually does not suffer from this pathogen. There are labeled fungicides that could reduce the incidence of the disease, but by far the best remedy for field grown cantaloupes is sunshine, which is surely on the way. It is still too early in the season for Downy Mildew or Alternaria, two disease which look similar to Grey Mold, however here we can see faint target rings within irregular brown lesions, leading to the Botrytis diagnosis (Fig. 1). – JR

Figure 1. Cool, moist conditions in the greenhouse, transplant wagon, and under row cover have led to localized Botrytis outbreaks in cantaloupe. No need to spray—sunshine and dry weather will check this disease. *Photo: J. Reid, CCE*

CUCUMBERS

Greenhouse cucumbers are in full harvest this week and bringing good prices at wholesale auction. This crop is very productive but short lived due to pest pressure, nutritional demand and other abiotic stresses. One of these is Oedema, a swelling, bursting and scaring over of plant cells. This condition is more common on geraniums, tomatoes, tomatillos and Hubbard squash fruit. However, conditions over the last 6 weeks in our region have been ideal and it is now found in greenhouse cucumbers. Cool nights, cloudy days and high relative humidity conspire to decrease transpiration of moisture from the crop canopy, leading to a 'back-up' of moisture in the crop tissue. Plant cells burst under the pressure and the resulting blistered scars is the result (Fig.2). Oedema cannot be reversed, but prevented by avoiding excess rootzone moisture and adequate ventilation. Oedema injuries can be excellent sites for Botrytis Gray Mold to take hold. – JR

Figure 2. Oedema on cucumbers grown in a soil-based greenhouse. Underside of a cucumber leaf with characteristic blistering from oedema (left). Upper leaf surface of a cucumber leaf with less definitive symptoms that could easily be confused with thrips feeding (right). *Photos: J. Reid, CCE*

ONIONS

Get ready for the heat! Most of the direct seeded crops are in the 3-5 leaf stage and the earliest planted transplants have 1.5-inch bulbs. Fields are drying out in Wayne and Oswego and irrigation has begun in Elba. Growers are getting caught up on weed management including hand weeding and post-emergent herbicide applications. Injury from the latter has been variable and somewhat unpredictable. Many fields in 4-5 leaf stage are taking the week off from pesticide sprays as they are between herbicide and insecticide/fungicide applications. But not all.

Onion thrips (OT) counts were up this week in Elba and even reached the spray threshold of 0.6-1 thrips/leaf (see Scouting Tips for Onion Thrips in Onions) in the southern region of the muck. Several fields in this location will be getting their first insecticide application for OT this week: Movento 5 fl oz/Senstar 10 fl oz + spray adjuvant with spreading and penetrating properties. Both Movento and Senstar contain the active ingredient, spirotetramat, but Senstar is a premix with this active ingredient plus another that does not have any activity on thrips. Movento/Senstar is still Cornell's recommendation for the first two insecticide sprays for OT, which should be applied 7-10 days apart. Since sequential applications of Senstar may only be made 14 days apart, only one of the two spirotetramat sprays may be Senstar. This insecticide is systemic and has continued to demonstrate excellent activity on OT. It only controls the larvae however, so when you are scouting for thrips following a Movento/Senstar spray, all you will see is adult thrips. OT also showed up in Wayne and Oswego and in mid- to northern Elba muck but were below the spray threshold this week. It is expected that with the forecasted high temperatures that several fields will be reaching the spray threshold for Movento/Senstar next week. Furthermore, all fields that are in the early bulb swell stage should get their first Movento application, so that the second is applied no later than 1-inch bulb stage. Once the onions are older than 1-inch bulb stage, the systemicity of Movento dwindles substantially. We want to get the most out of this amazing insecticide. Usually, a double application of Movento applied 7-10 days apart results in 1-2 weeks (sometimes 3-4 weeks) residual thrips control.

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Botrytis leaf blight (BLB) halo lesions (Fig. 3) were detected in much higher numbers (e.g. 3.6 to 6.7/leaf) in Elba this week, but they were very faint, often smaller than a pin head and not having a yellow necrotic center. I attribute this to not enough hours of leaf wetness to form a "model" lesion, but I do not know for sure. BLB just started to show up in Wayne Co., but in very low numbers. Oswego is being scouted today (Wednesday). Mancozeb is an economic fungicide choice for early season BLB halo lesion control. Bravo 1.5 – 3 pt/A is also effective.

I will be working feverishly this week preparing for the **2025 Muck Onion Growers Twilight Meeting**. As always, I promise it to be rich in educational value and the herbicide demonstration is shaping up to be "showy" – I hope to see you there! – CH

Figure 3. Botrytis leaf blight (BLB) halo lesions, some quite faint without a distinct yellow center. *Photo: C. Hoepting, CCE*

PEAS

The earliest processing peas are in the pod filling stage and nearing harvest. Vines are yellow and have poor growth where there are compacted soils on the headlands or in the field. Wet soils are also favorable for root rot. Downy mildew is present in some fields. In addition to leaf symptoms, stems may be distorted, and leaves may drop off (Fig. 4). Pods may become affected and appear off-color or with brown blotches, and the seeds may fail to form properly, with mold growing inside the pods. Varieties differ in their tolerance for the disease. The pathogen can overwinter on infected debris in the soil, and a crop rotation of 3 years is recommended. Seed treatment with metalaxyl (e.g. Allegiance FL or Apron XL) aids management. A foliar application of Priaxor can be applied. Priaxor has a 7-day pre-harvest interval. – JK

Figure 4. Downy mildew symptoms appear as a grayish white growth on the undersurface of the leaf (left), with an opposite yellow area on the upper leaf surface (right). *Photos: J. Kikkert, CCE*

POTATOES

Rainy conditions have led to a slow start in potatoes this year. However, Colorado potato beetle adults are active and laying eggs in potato fields. Early egg clusters are hatching, and larvae are starting to feed on foliage. Seed treatments or insecticides sprayed at planting should provide early control, but populations should be monitored for resistance. – ML

SNAP BEANS

Field conditions have been more favorable for planting this week. If cutworms are above the economic threshold of 2 larvae/row foot, then a pyrethroid spray is recommended. – JK

SWEET CORN

Planting continued this week with more favorable soil conditions than last week. Cutworms are still active (Fig. 5). The economic threshold for sweet corn is greater than 5% of plants cut. If cutworm larvae are 1 inch long or larger they will soon be pupating and stop feeding on plants. As corn grows it becomes less susceptible to being cut. Tar spot was detected in five midwestern states this week. You can follow the map of positive reports at Tar Spot - CornipmPIPE. If you've had infested fields in the past, it is a good idea to be on the lookout for tar spot. Please let Julie or Elizabeth know if you find tar spot so we can confirm it. – JK

Figure 5. Sweet corn cut off by cutworms. *Photo: CCE*

TOMATOES

We have written extensively on Botrytis Gray Mold in high tunnel tomatoes this spring. Many growers have gotten ahead of widespread infections with the application of a fungicide such as Decree (FRAC group 17) or Luna Tranquility (FRAC groups 7 and 9). However, these fungicides will not clear up infections under the skin of tomato fruit. These are sometimes called 'ghost spots' as they appear as faint rings under the surface of the fruit (Fig. 6). These tomatoes will still mature and be perfectly edible, although the spots will decrease their marketability. Reducing relative humidity via ventilation and leaf pruning and plant density are the first steps in managing Botrytis. Consider leaf pruning on the lower 12-18" of any crop (up to the lowest hanging cluster) to promote canopy airflow.

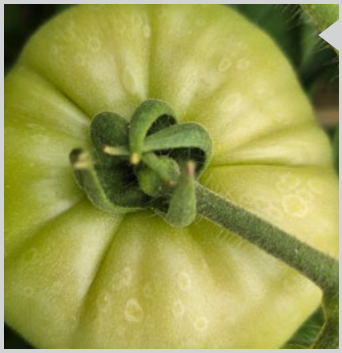

Figure 6. Fungicides will not clear up Botrytis infections under the skin of tomato fruit. These tomatoes will still mature and be perfectly edible, although the spots will decrease their marketability. *Photo: J. Reid, CCE*