The Week in Vegetables

Hang on, Tomatoes!! Disease pressure is up on tomatoes, and many of you are watching Septoria and Alternaria creep their way upward from lower leaves in your field tomatoes, while leaf mold and powdery mildew are thriving in high tunnel humidity. Meanwhile, Fari Gheshm, a visiting scientist at URI, was beginning to get impatient waiting for PM to strike on his high tunnel variety trial, where he is looking for PM Resistance. Heather Faubert has also confirmed Stemphylium leaf spot from two separate farms, and a tomato powdery mildew on field tomatoes that is different from the one seen in high tunnels. Add to that, Tomato spotted wilt virus (TSWV) and two more cases of tomato russet mite at URI. Lastly, Late Blight has now been recorded in Franklin and Hampshire Counties, MA. It’s hard to know where the source of inoculum came from: did it waft in on the weather, and if so, why are the nearest cases much farther away? (See the map on USABlight: https://usablight.org/map). OR, did someone have a potato cull pile somewhere that provided an overwintering place from previous years? (Note that there was virtually no late blight in the Northeast in 2016). OR, was someone using store bought potatoes in their garden and those tubers were carrying the disease? But the take-home message is: Protect your tomatoes. Inside of tunnels, remove infected foliage and apply a protectant. In the field, if you are losing foliage cover, get fruits out of the field at first flush to avoid sun-scald, and again, apply a protectant.

Diseases to watch for: Immediately below is the powdery mildew, which to the naked eye, doesn’t really look powdery. In fact it resembles early blight (Alternaria). This was found on lower leaves down in the humid canopy. The leaves were pretty green, whereas early blight is found on lower leaves that are already looking pale green, if not yellow. Below, left, Heather Faubert found both Septoria and Stemphylium leaf spot diseases on this leaf, the irregularly-shaped spots being the latter. It was necessary for her to find their distinctive spores by making a slide and studying it through a compound microscope. The bronzed stems below represent the damage caused by tomato russet mites, which attack plants at the base and work their way upwards along the stems, leaf petioles and fruit clusters. They are difficult to control without some very strong medicine. Frighteningly, the egg to adult period in warm conditions is less than a week...
Diseases to watch for, continued:

Here is the Garmans’ small scale solution for **sun-scald** prevention due to foliar disease in Middletown: a trip to the fabric superstore. Getting this pick of tomatoes is important enough to take this action.

**Insect pests to watch for:**

Beware of **caterpillars in Peppers and Tomatoes**: Corn Earworm, *Helicoverpa zea*, is also known as the tomato fruitworm. In peppers, the European corn borer is usually the culprit. This year, however, we’ve also seen two cases of pinworm, which is much more common in the south but seems to be moving northward, along with many other pests and diseases. The pinworm is a leaf-mining caterpillar early in the season (see photo left), but subsequent generations bore into fruit.

If your potato foliage looks **crispy brown** by now, it’s likely not foliar disease but rather, **hopper burn from potato leafhoppers** that were never brought under control. Those very small, mobile insects can significantly reduce yield by killing off vines much earlier than you would want, especially for longer season varieties. Be prepared for next year by monitoring and taking action so your tubers have strong, healthy vines to size them up.

**Additional update snippets:**

**Corn earworm moth** numbers have not declined in South Count over the last several weeks, with trap catches of 20 to 30 each week. No real increase has been seen in **Fall Armyworm moths**.

**Onions** should be nearly sized-up, so take advantage of what is forecast to be a dry stretch of weather coming to yank out and field-dry the bulbs.

Weather Note: Tim Sherman reports from the URI Agronomy farm that July was just about exactly average as far as rain fall and temperatures...

**European corn borers** usually enter pepper fruits from the stem end (the calyx) and bore their way into the placenta, which is the white flesh where the seeds attach.