



HortiCountry
by
Tim Elkner
Lancaster County
Horticulture Agent

VEGETABLES AND OUR COOL, WET WEATHER

Just like last year, I've talked with many growers who cannot remember a season like we have had so far this year. Last year was the earliest anyone could remember being done with field preparation. This year I would not be surprised if there are some fields that have not been worked yet!

I'm not telling you anything

that you don't already know regarding the weather, but how is this season affecting your vegetable crops? What can/should you be doing now?

Let me start by saying that an extended period of warm, dry weather could cure many of the problems we are seeing now. Improved light would cause increased plant growth while warmer temperatures would both increase shoot and root growth

and nutrient uptake from the soil. It would also reduce disease development both above and below ground.

While we have no control over the weather, there are some things to do and/or watch for in your vegetable fields.

Many vegetable crops are growing poorly and have a yellowish coloration to them which generally indicates nutrient problems. Excessive rain and cool conditions will reduce nutrient uptake in most crops. This is a result of the vegetables we grow being warm-temperature plants and, in general, nutrient uptake being reduced by low soil temperatures.

Crops in bare soil might need an application of fertilizer, particularly nitrogen. Nitrogen is readily washed out of the soil with excessive moisture and un-

less you used some type of slow-release fertilizer, a portion of your applied nitrogen could be gone.

Corn growers should consider using a PSNT to determine the amount of nitrogen in the soil and apply any additional nitrogen needed to mature the crop. Pumpkin growers on bare soil will need to watch nitrogen as well, but I would wait until the weather breaks and the vines start to grow to evaluate your nitrogen situation. Too much nitrogen will result in all vine and few pumpkins, so be cautious about overfertilization of this crop.

Growers using plasticulture should still have most of their applied fertilizer in the soil under the plastic. While nitrogen and other nutrients can easily be added to the crop through the drip system, plants will not use much water in cool, cloudy, or rainy weather and thus added nutrients will not quickly reach the foliage.

Although I generally do

not recommend it, this might be the time for a foliar application of fertilizer. Nitrogen will again be the most important nutrient to apply, but there may be some benefit to phosphorus and potassium as well.

Darryl Warnicke from Michigan State University also notes that for crops such as onions, radishes, muskmelon, and cucumbers, including manganese helps improve early growth.

Sweet corn may also benefit from zinc. He suggests foliar fertilization rates of 5 pound N, 1 pound phosphorus and 1 pound potassium per acre and for plants that will respond to manganese or zinc rates of 0.5 pound manganese and 0.25 pound zinc per acre.

When the weather finally breaks and your crops are actively growing, consider using tissue testing this season as well. This will let you know the exact nutrient status of your crop and, if done during fruit set and early development, you should have time to correct any deficiencies. The cost of a few tests (about \$20 each) can be more than recovered through improved yields and crop quality.

The next problem resulting from our recent cool, wet weather is a potential increase in disease problems. One disease that may be more common than normal this season is bacterial speck on tomatoes, which thrives in this type of weather. Look for lesions on the leaves that appear as small, dark brown to black spots which then develop a yellow halo. These spots may grow together, killing large areas or the entire leaf. Fruit can also be infected by this disease.

To control this disease, apply the following on a seven-day schedule: fixed copper at 1 pound active ingredient per acre plus mancozeb (Dithane, Manex II, Manzate or Pencozeb) at 1.5 pound 75 WP per acre or OLF, or use ManKocide 2.6 to 5.3 pound 61 WP per acre.

A disease that I have not heard about in our area but which weather conditions have been ideal for is late blight.

Dr. Alan MacNab, vegetable disease specialist at Penn State, notes that only three factors are necessary for a potentially serious late blight situation to develop.

tion to develop.

These are (1) availability of late blight spores, sometimes found on potato plants in cull piles or on volunteer plants where potatoes were grown last year; (2) persistence of wet mild conditions (and we have had this for several weeks); and (3) presence of tomato and potato plants that are not protected by fungicides.

He goes on to suggest that all growers in Pennsylvania who believe late blight inoculum could be nearby (in your county or in an adjacent county) apply a protective spray as soon as possible unless an application was made within the past seven days. He also notes that spores from this disease can travel more than 50 miles by the wind, so if late blight gets started somewhere in the state, it can rapidly spread around.

Finally, what about the insects? Generally, conditions that favor disease development do not favor insect population growth. In addition, the cool weather we are having has delayed the appearance of some of our common pests but it has extended the season for others.

One insect you need to be concerned about now is the European Corn Borer (ECB). Our trapping here in the county indicates we are in the first flight of this pest and the counts on one site suggest a four-day spray interval! Consider applying an insecticide to any silking corn in your fields as this stage of development of a corn crop is very attractive to ECB.

Pepper growers with fruit 1/2-inch and larger should take note of this ECB flight as well. The absence of a large number of silking corn fields (which we would normally have by now) will make your pepper fields much more attractive to this pest than normal for this time of year. Based on the counts I've seen, fields should be sprayed on a seven-day schedule to prevent excessive losses to ECB in your early (and potentially most valuable) pepper crop.

I suggest taking some time to carefully examine your vegetable crops to evaluate their condition. A timely fertilizer application may make a big difference this season on your crops. In addition, controlling any disease or insect infestations while they are small is always a sound management practice. Don't think that just because the weather is poor and your vegetables are growing slowly there is no need for you to be out in the fields! Have your crops ready to go when the weather finally returns to normal.



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