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In This Issue

1. Tomato Insects to be Looking For
2. Crop Reports
3. Are Phosphates The Same as Phosphites?
4. Pumpkin Field Day

Tomato Insects to be Looking For

Adapted from: Plant & Pest Advisory, Vegetable Crops
Edition, August 2, 2006, by Gerald M. Ghidui, Ph.D.,
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Research & Extension at the New Jersey Agricultural
Experiment Station

Brown stinkbugs. This is the time of year when adults are present and moving around in search of food and egg laying sites. In NJ, feeding has been very low in field tomatoes, but much higher in high tunnels. Tomatoes are a favored host, especially if dry weather reduces the availability of native host plants. Now is the time to pay attention to fruit in the field for signs of feeding. Stinkbug feeding on tomatoes first appears as a diffuse whitish blotch on green fruit. The spot changes to bright yellow as the fruit matures. If this feeding is on the increase in the

field or in harvested fruit, consider treating to suppress the population.

Thrips. These insects may often be detected by tapping fresh flower clusters over an index card. If fields are scouted regularly and an upsurge in thrips numbers occurs in flower clusters, consider treating to minimize subsequent fruit injury. Later in the life of the crop, observe fruit for the presence of gold colored flecks on ripening fruit. These flecks are from thrips feeding and often form trails or patches on the fruit surface. If this injury is increasing, consider treating for thrips. Foliar feeding may occur under heavy thrips pressure. This feeding appears as small necrotic patches on leaves with small black dots (droppings) in or near the patches. The tiny, yellow thrips should be easily observed on leaves if the population is this heavy.

Check fields for aphids and two-spotted spider mites (TSSM). Look at 2 complete leaves each on 5 consecutive plants in 10 random locations. Note the presence of aphid colonies on the undersides of the leaves, as well as the presence of TSSM. Increasing aphid populations are often detected by the presence of their cast skins, which adhere to the sticky droppings they produce. If colonies are increasing over several scouting visits, especially if aphid droppings are accumulating on fruit, consider an insecticide to reduce the population. TSSM feeding results in a whitish pin spot, or stipple, on the upper surface of the leaflet. The mites will be on the underside of the leaf

until colonies become large. At this point, they will make webs and travel between leaves. Note the number and location of sites with TSSM. Consider spot treating to prevent further spread into the field. When applying fungicides to limit foliar disease, remember to include a copper product in the rotation if a bacterial infection is suspected. Symptoms include necrotic spots or leaf margins (common to bacterial speck, spot and canker), as well as stem lesions (canker), dark fruit blisters (speck), dark scabby fruit lesions (spot), and fruit blisters with light halos (canker). Avoid fields when foliage is wet. Always work from the youngest planting to the oldest to avoid introducing bacterial pathogens to the younger plants.

Crop Reports by Hal Kneen and Bob Precheur

Southeast Ohio – Racine area I

Insect report – Both European Corn borer (12 moths) and Corn earworm (18 moths) were caught this past week July 26–August 2, 2006 in helio traps. No Beet army worm moths were caught. Tomato hornworm found in some homeowner tomato patches.

Sweet corn harvest includes Incredible, Silver King and several bicolor varieties. If sprays applied very little worm damage, no sprays a worm or two in each ear.

Tomatoes are still being shipped into the market, however

market price is declining as homegrown and northern suppliers are now coming into the market. Canning tomatoes being sold in the field, you pick. Cantaloupes are being harvested and small amounts of watermelon. Should have more melons next week.

Need a slow soaking rain for sweet corn growers, however tomato and melon growers are happy with lack of rainfall but would like temperatures to moderate into the low 80's during the day.

Central Ohio. Harvest continues for most vegetables.

Tomatoes and melons started coming in the last week or more. Sweet corn harvest continues and quality is good. The recent heat spell is starting to bunch some different maturities closer together than was the case earlier in the season. Interestingly, some varieties with the same maturity planted in very late April were harvested after the same varieties planted in the first week in May.

The usual diseases, as mentioned in previous newsletters, are still around but protective control measures have been started to keep these problems under control.

In pumpkins, we are noticing more virus diseases compared to the last two years.

Are Phosphates The Same as Phosphites?

By Dr. Steve Reiners, Cornell University. From: Vegetable IPM News, Cornell Cooperative Extension, Vol. 11 Number 5 Late July, 2006

There has been some confusion lately over terms used for fertilizers and chemicals containing phosphorus. Growers have been using phosphate fertilizers for generations and are familiar with formulations like super phosphate, triple super phosphate and diammonium phosphate. All of these materials provide phosphate derived from phosphoric acid (H_3PO_4). The phosphate that plants use is in the form HPO_4 and H_2PO_4 , which is quickly converted in soil from phosphoric acid fertilizers. Recently, new terms are being used including phosphorous acid (not phosphoric acid), phosphite (not phosphate), and phosphonite. Unlike the fertilizer phosphate that contains four oxygen atoms, phosphoric acid and the related compounds contain only three oxygen atoms. That difference of one atom is very important and growers need to be aware of that as they develop their fertility and disease management programs.

Phosphorous acid compounds (well include phosphite and phosphonite in this group) play an important role in agriculture as they are the active ingredient in materials like ProPhyt and Phostrol. These pesticides are useful in combating diseases like Phytophthora rot on tomato, pepper, and vine crops. The problem is some of these compounds are labeled as pesticides, which required the manufacturer/distributor to spend the time and money to register the compound. Others are advertised as fertilizers, which of course bypasses the registration process. These phosphorous acid compounds, although active against

some fungal diseases, do not provide any phosphorus nutrition to the plant. Plants can absorb these compounds through roots and leaves and once in the plant, the phosphorous acids compounds are very stable. Because the compounds lack one oxygen atom compared to the traditional phosphate molecule, plants are incapable of using the phosphorus acid as a nutrient source. The phosphorous acid compounds can break down in the soil to available forms of P, but this process is very slow and will not provide adequate P nutrition. Studies have shown that applications of phosphorus acid compounds to plants grown on soils with moderate to low levels of available P can actually induce a P deficiency.

The bottom line is that phosphates are what's needed for fertilizer but will have no effect on plant diseases like Phytophthora. Phosphites are useful in managing diseases but will not provide plants with the phosphate they need. Knowing the difference can save you money.

**Pumpkin field day – August 24th, 2006, 6–7:30 pm at
WARS**

Western Agricultural Research Station, 7639 S. Charleston Pike,
South Charleston, OH, 45368
(937) 462–8016

Topics: liquid fertilizers, mouse repellent trial, cover crop demo, Microdochium or white speck evaluation, cultivar trial, and fungicide efficacy trial.

Both CCA and ODA credits have been applied for, but probably not more than 1.5 credits for CCA and 1 for ODA.

For more information and complete details Contact:

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