Bacterial Spot, Thrips and Mites; Problem Pests Now in Tomatoes

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Last week several fields were found with one or more of the big 3 for mid-summer pests in tomato. These disease and insect pests do well in hot weather, although two spotted spider mites (Tetranychus urticae) and thrips (Frankliniella spp) do best in hot dry weather and bacterial spot (Xanthomonas spp) likes it wetter.

Bacterial spot in tomatoes and peppers is a tough one to manage and it seems to be more difficult to do so in the last several years. One of the possible reasons is that copper is not working as well as it once did because of the development of resistance. Combining copper with mancozeb has helped, but in hot rainy weather it is still difficult to slow its spread. It has been my observation over the years that the copper-fungicide combination seems to protect the fruit fairly well (but not always) from becoming infected with bacterial spot or speck. So even if the foliage is infected by the bacteria much of the fruit is usually OK, although the bacteria will infect the pedicel and flower, which can cause flower abortion (fig. 1). The big problem is the infected foliage eventually dies and the plant has exposed fruit (fig. 2) that at first is not a problem but as the season moves on the exposed fruit becomes sunburned and unmarketable (fig. 3). Actigard is a plant activator and when used preventively with copper-fungicide treatments has done a very good job of reducing bacterial spot and speck problems in tomato fields.

With thrips, the difficulty is getting the chemical controls to the pest on the underside of a leaf on plants with heavy foliage. Thrips feeding damage appears as small white dots or stipple scattered on a leaf often with tiny black specks around these feeding scars which is thrips feces (fig. 4). Radiant insecticide would be good to try first if it has not been used much before in the field, if it has a different chemistry such as Torac or Harvanta should offer better control (each has a 1-day PHI and a 4-12 hr REI). Growers also report success with controlling thrips using combination products that use a pyrethroid and a neonicotinoid such as Endigo, Brigadier or Leverage, etc. However, growers need to be sure to use high gallonages (50-90 gal/a) and pressures (150-200 psi) and if possible hollow cone nozzles to get the insecticide into the tomato’s dense canopy and to the underside of leaves.

Two spotted spider mites do damage that looks similar to thrips, but they do not produce black flecks where they have scarred the leaf tissue (fig. 5). Mites become very difficult to control if you see webbing on the underside or top of an infested leaf (fig. 6). This is because the webbing reduces the mites exposure to any miticides. There are several miticides that work well, provided the material gets to the mites, such as Agri-Mek, Portal, Oberon or Acramide.

Fig. 1 Bacterial spot lesions on stems and pedicels of tomato.
Fig. 2 Bacterial spot infected tomato plants with exposed fruit in foreground row and little to no bacterial spot problems in background rows of tomatoes.

Fig. 3 In mid-August plants defoliated because of bacterial spot allow fruit to become sunburned.
Fig. 4 Thrips feeding damage and black specks-thrips feces.

Fig. 5 Two spotted spider mite feeding damage to tomato foliage.

Fig. 6 Tomato leaf with two spotted spider mite silken webbing on underside of leaf.