

2007 Disease Prevention and Spray Guide (Tomato)

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Soilborne diseases. There are several soilborne diseases that affect tomato. These diseases can attack the crop from seedling stage through harvest and are referred to as collar-rot diseases. Many of these diseases, however, attack the foliage and pods and are deposited there by water splash or by physical contact between the fruit and the soil. Early, seedling crown rot can be caused by either *Rhizoctonia solani*, and species of *Pythium*. **Southern stem rot** (*Sclerotium rolfsii*) can cause both seedling and pod rots and is more of a problem in warmer weather. *Fusarium oxysporum* f.sp. *lycopersici* is the causal agent of **Fusarium wilt**. Symptoms caused by Fusarium wilt show up during the fruiting stage of the crop.

Recommended practices in chronological order are as follows:

1. Rotation with non-solanaceous crops reduces potential inoculum of all of the above diseases.
2. Deep turning with a moldboard plow will help with all diseases except *Pythium*.
3. Plant varieties resistant to known Fusarium wilt races.
4. Fumigation with methyl bromide will suppress all soilborne diseases. Alternatives to methyl bromide that suppress diseases are Telone C-35, K-Pam, Vapam, and chloropicrin. Telone products are nematicidal. However, roots will grow out of the treated zone and may still be susceptible to Fusarium wilt.
5. Terraclor can be used as an at-plant drench to suppress Southern stem rot.
6. Products containing mefenoxam (Ridomil, UltraFlourish) can suppress losses to *Pythium*.

Foliar diseases. There are several foliar diseases of tomatoes. Bacterial spot (*Xanthomonas campestris* pv. *vesicatoria*) is a problem on some tomatoes almost every year. Unlike pepper, there is no commercial bacterial spot resistance. Generally, bacterial spot control starts with clean seed and transplants. In-field suppression of bacterial spot is achieved by avoiding working in wet foliage and copper + maneb/mancozeb tank-mixes sprayed 2 – 3X a week (at least weekly during dry weather). Actigard has also been shown to suppress bacterial spot. Tanos may provide some additional suppression of bacterial spot. Early blight (*Alternaria solani*) can cause losses if left unchecked, however, intensive sprays for bacteria generally inhibit development of foliar fungal pathogens of tomato. Late blight occurs in North Georgia primarily and is suppressed with several preventive fungicides. Tomato Spotted Wilt Virus (TSWV) has been a perennial problem in tomatoes and damage varies from year to year. TSWV is best suppressed by using resistant varieties but reflective, “metalized” mulches coupled with Actigard and early season insecticides like Admire have shown promise.

Recommended practices in chronological order are as follows:

1. Rotation with non-solanaceous crops reduces potential inoculum from early blight.
2. Use TSWV resistant varieties if available. Use reflective mulch, Actigard and insecticides for TSWV.
3. Avoid stringing or staking tomatoes when fields are wet.
4. Spray copper + maneb/mancozeb beginning at transplanting and carry through harvest for bacterial spot.
5. Augment copper program with Actigard for bacterial spot (also helps with TSWV).
6. Rotate-in fungicides for early and late blight as needed.

Note (be sure to follow label on high fungicide resistance risk products like these).

Spray Schedule for Tomatoes

<u>Transplanting</u>	<u>Blooming</u>	<u>First Fruit Begin to Form</u>	<u>Fruit Set</u>	<u>Harvest</u>
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copper + maneb/mancozeb from 1 – 3 sprays/week until harvest.....

Actigard in addition to copper + maneb/mancozeb for bacterial spot and TSWV (see label).....

Once a week use an early blight material: chlorothalonil, Amistar/Quadris, Cabrio, Pristine, Scala, Tanos.

For early blight rotate Amistar/Quadris, Pristine, Tanos, or Cabrio with chlorothalonil or Scala.

Spray for late blight at first onset. Use chlorothalonil, Ridomil Gold Bravo, Acrobat, Gavel, Previcur Flex, or Curzate rotated with Amistar/Quadris, Pristine, Tanos, or Cabrio. Remember that Acrobat, Tanos, Previcur Flex, and Curzate must be tank-mixed with chlorothalonil or mancozeb.