



Common Tomato Problems

Phosphorus deficiencies (Figure 1) occur early in the growing season when soil is still cool. Phosphorus is abundant in our soils but may be unavailable to the plant when the soil is too cold. Don't plant tomatoes too early in the season. Use plastic mulch to warm



Figure 1: Phosphorus deficiencies

the soil. Once soil temperatures rise, the problem usually corrects itself.

Curly top virus is transmitted by the beet leafhopper. This problem is common in western Colorado but seldom found in eastern Colorado. Infected plants turn yellow and stop growing. Upper leaflets roll and develop a purplish color, especially along the veins. Leaves and stems become stiff; fruit ripens prematurely. It is difficult to control because leafhoppers migrate from southern areas. Hot, dry springs with predominantly southwest winds usually indicate increased problems with this disease. No chemical controls are effective. Use row covers to protect tomato plants from the leafhopper.

Psyllids (Figure 2) are more commonly found in eastern Colorado and are seldom a problem in western Colorado. They feed on tomato or potato plant sap and inject a toxic saliva that causes the characteristic "psyllid yellows." Leaves turn yellow; veins often turn purple. Stems may become distorted, giving the bush a zig-zag appearance. To confirm psyllids, check the undersides of leaves for nymphs. Nymphs are about the size of an aphid. At first, they are yellow, then they turn green. They are sedentary while feeding and secrete small, white granules that resemble sugar. For best control, dust the foliage, especially the undersides, with sulfur. See Fact Sheet 5.540, Potato and Tomato Psyllids.



Figure 2: Psyllids

Flea beetles (Figure 3) are small, black or brown beetles that jump when disturbed. The adults chew small holes or pits in leaves. Wounded tissue may be more susceptible to diseases such as early blight. Most plants outgrow flea beetle damage. Insecticides such as cabaryl or permethrin are effective controls, if needed. See 5.592,



Figure 3: Flea Beetles

Flea Beetles.

Tomato or tobacco hornworms (Figure 4) are large, green or gray-green caterpillars with white to tan v-shaped or dashed markings on their sides. A green to reddish horn protrudes from the hind end. They are voracious feeders, stripping leaves from stems and even eating unripe fruit. Pick them off by hand. The caterpillars are susceptible to *Bacillus thuringiensis* (Bt), as well as to many common vegetable insecticides.



Figure 4: Tomato Hornworms

Early blight (*Alternaria leaf spot*) (Figure 5) is caused by the fungus *Alternaria solani*. Symptoms become prevalent during the hotter months. This disease produces brown to black, target-like spots on older leaves. If severe, the fungus also attacks stems and fruit. Affected leaves may turn yellow, then drop, leaving the fruit exposed to sunburn. Sanitation is the best control. Remove all diseased plant tissue on the ground, as the fungus overwinters on leaf debris. Do not plant tomatoes in the same place next year. Space plants farther apart to improve air circulation. Avoid overhead irrigation. If the infestation is heavy, sulfur dust may help protect new leaves from infection.



Figure 5: Early Blight

Septoria leaf spot is less common in Colorado than early blight. It, too, is a fungal disease. Characteristic symptoms are white or gray spots on leaves, surrounded by a black or brown margin. Control is similar to early blight.

Whiteflies and aphids (Figure 6) both cause leaf yellowing and leave a characteristic sticky excrement called honeydew. Leaves appear shiny and are somewhat sticky when honeydew is present. Damage usually is minimal on tomatoes and often can be ignored. If aphids become a problem, some applications of insecticidal soap are quite effective.



Figure 6: Aphids

Cucumber mosaic virus and herbicide injury are almost impossible to tell apart without previous knowledge of chemicals applied or laboratory confirmation. Cucumber mosaic virus causes tomato plants to yellow and become bushy and stunted. Leaves may be mottled. The virus most often is carried in tomato seeds. Mechanical transmission by workers touching plants and movement by aphid carriers can occur, but this is much less common in tomatoes than in cucurbits. Remove and destroy plants. There are no chemical controls.