

Tomato Plant Diseases and how to Control Them

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ABSTRACT: The article provides information about bacterial diseases in tomatoes. Bacterial canker appears on ripe tomatoes as yellow spots. The rims of these yellow specks are black. It may appear to be a hazy spot illness, but the black rims assist distinguish it. A bacterial canker is impossible to cure. Remove and discard your contaminated plant after it has become infested. For a period of two to three years, avoid planting in the same soil. It may be avoided by rotating your crops and removing weeds. Bacterial Wilt in the South If Southern bacterial wilt strikes, it may wreak havoc in your tomato garden. The illness is propagating through the soil at an incredible rate. It thrives in high-humidity and high-temperature environments. It might be Southern bacterial wilt if only a few leaves are withering but the rest of the leaves and plant are healthy. Unfortunately, there is no remedy for bacterial wilt in the South. You may avoid this by purchasing only resistant kinds and growing your plant from seeds.

KEY WORDS: tomato, control, diseases, plant, fungicide, bacterial wilt

Published Online:
19 April 2022

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INTRODUCTION

The tomato plant is one of those plants that practically every gardener tries to grow at least once in their lives. This simple-to-grow plant is vulnerable to pests and illnesses that may wreak havoc in your garden. Continue reading to discover how to diagnose and cure tomato plant illnesses. Rotating the plant, nipping off the leaves, mulching, giving adequate airflow, choosing disease-resistant types, and companion planting are all easy ways to prevent tomato plant infections. Certain fungicides, insecticides, and other chemical treatments can be used to manage and treat the problem.

The Solanaceae family includes tomatoes. Let's take a look at the illnesses that may wreak havoc on your tomato crop and how to combat them. The prevention and management of each illness will be followed.

The most frequent disease that damages tomato leaf is early blight. Leaf spots and blight on older leaves are caused by the fungus *Alternaria Solani*. Early blight has afflicted your plant if you detect dark lesions on the leaves and concentric rings on the leaves. The leaves are destroyed by high temperatures and humidity. To combat the spread of early blight, use an organic fungicide or a copper fungicide every two weeks.

Late blight, unlike Early blight, develops during chilly, wet seasons, generally at the conclusion of the growing season. It is one of the most damaging diseases to tomato plants. Late blight is caused by the *Phytophthora infestans* fungus. It spreads quickly because of the winds. Excessive dampness, heat, and overcrowding of plants can all contribute to fungal development. In the event of a severe infestation, remove the sick plant and treat the remaining plants with an organic fungicide.

Blossom end rot might impact your crop if you observe a leathery, black spot on the bottom side of the leaves. The shortage of calcium causes deterioration. Extreme changes in environmental circumstances might exacerbate the problem of blossom end rot. Blossom end rot may be prevented by increasing calcium levels in the soil. Epsom salt should be avoided because it includes magnesium, which competes with calcium for absorption. Mulching helps to keep the soil wet.

Pythium aphanidermatum fungus produces damping-off, which is most common in seedlings. Pre-emergence and post-emergence are the two stages. Seedlings perish even before they reach the soil surface during the pre-emergence period. Young seedlings that make it to the soil surface during the post-emergence period perish quickly after transplantation. They get mushy, saturated with water, and finally die. To avoid damping-off, use elevated seedbeds. Allow plenty of sunshine, well-draining soil, and regular watering. When seedlings are planted too early in the spring, the disease develops. Start your seedlings in a clean potting mix inside. Allow the soil to dry out between waterings if you're using nitrogen-rich soil. As a preventative step, use a fungicide.

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Bacterial Wilt in the South If Southern bacterial wilt strikes, it may wreak havoc in your tomato garden. The illness is propagating through the soil at an incredible rate. It thrives in high-humidity and high-temperature environments. It might be Southern bacterial wilt if only a few leaves are withering but the rest of the leaves and plant are healthy. Unfortunately, there is no remedy for bacterial wilt in the South. You may avoid this by purchasing only resistant kinds and growing your plant from seeds.



1. *Picture (Bacterial canker)*

2.

Septoria leaf spot is a fungal disease that strikes when the plant begins to fruit in hot, humid conditions. Blotches on the bottom surfaces of the leaves in the lowest section of the plant start the process. The leaves that are impacted perish and fall off. To stop the infection from spreading, remove the affected leaves. Apply an organic or chemical fungicide if the plant is severely affected. The fungicide Certis Double Nickel is effective against it.



3. *Picture (Bacterial Wilt)*

Anthracoze is a fungus that appears as round, sunken, and mushy areas at first. Over time, the spots enlarge. This illness is spread through overhead irrigation and splashing water. To begin, acquire disease-free seeds, as fungus can occasionally be found within them. Water your plant such that water flows straight into the soil and does not come into contact with the foliage. Overripe tomatoes are more susceptible to Anthracnose, therefore harvest them as soon as possible.

CONCLUSIONS

Tomato plant illnesses are extremely prevalent, and you won't have to worry about them if you focus more on prevention. You will have healthier produce and fewer future issues if you focus more on preventive efforts than remedial procedures. We

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recommend using resistant tomato types, keeping the garden space clean, avoiding overhead watering, and maintaining good air circulation. To prevent ruining the entire tomato crop, try to detect the illness and cure it as soon as possible. Mulching, for example, may go a long way toward keeping your plant healthy.

LITERATURE

1. Sen, Y., van der Wolf, J., Visser, R. G., & van Heusden, S. (2015). Bacterial canker of tomato: current knowledge of detection, management, resistance, and interactions. *Plant Disease*, 99(1), 4-13.
2. Lanteigne, C., Gadkar, V. J., Wallon, T., Novinscak, A., & Fillion, M. (2012). Production of DAPG and HCN by *Pseudomonas* sp. LBUM300 contributes to the biological control of bacterial canker of tomato. *Phytopathology*, 102(10), 967-973.
3. Utkhede, R., & Koch, C. (2004). Biological treatments to control bacterial canker of greenhouse tomatoes. *Biocontrol*, 49(3), 305-313.
4. Francis, D. M., Kabelka, E., Bell, J., Franchino, B., & St. Clair, D. (2001). Resistance to bacterial canker in tomato (*Lycopersicon hirsutum* LA407) and its progeny derived from crosses to *L. esculentum*. *Plant Disease*, 85(11), 1171-1176.
5. Chang, R. J., Ries, S. M., & Pataky, J. K. (1992). Effects of temperature, plant age, inoculum concentration, and cultivar on the incubation period and severity of bacterial canker of tomato. *Plant disease*, 76(11), 1150-1155.