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PREVENTION AND CONTROL OF TOMATO DISEASES AND PESTS

Abstract: *In the article Foliar illnesses, soil-borne diseases, seed-borne diseases, stem diseases, and tomato viruses are the several types of tomato diseases. Untreated seeds are the source of seedborne illness. Preventive seed treatment measures can be used to manage them. Seed-borne illness can be avoided by purchasing types from reliable seed providers. These small white winged insects feed on plant liquids, leaving a sticky residue called honeydew behind that serves as a home for sooty mould. Abiotic elements include ambient circumstances, temperature, climatic conditions, and soil ph can all contribute to tomato plant difficulties. As a result, know what works best for your particular plant.*

Key words: *tomato diseases, viruses, leaves, types, control, temperatures.*

Language: *English*

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Introduction

Tomatoes are quite simple to cultivate if given the right circumstances and care. They are, however, not without flaws. Because prevention is better than cure, it's a good idea to learn about the most frequent pests and diseases that might transform your otherwise fruitful farm into a sterile one.

Naturally, the extent of insect infestations and disease infections on your farm will be influenced by your location, cultural practices, and environmental circumstances. Our mission is to assist you in growing healthier tomatoes.

Foliar illnesses, soil-borne diseases, seed-borne diseases, stem diseases, and tomato viruses are the several types of tomato diseases. Because many tomato problems look same, it may take a trained eye to figure out which organism is causing your condition.

Foliar infections of tomatoes develop on the leaves. Fungi are the primary cause of foliar diseases. Environmental variables that facilitate the spread of the disease include high humidity, a lack of appropriate air circulation, and high temperatures [1].

Early blight (Alternaria tomatophila and A. solani) Early blight causes a black spot on the plant to grow larger, producing a yellow halo-like ring that resembles a bull's eye target. They begin on the elder leaves and spread upwards to the top leaves, stem, and fruits. As the illness progresses, severe blight kills the leaves, reducing the overall yield [2].

Late blight (Phytophthora infestans) Due to its pervasive nature, late blight disease has the potential to be quite damaging to your farm. The fungus can damage any plant component, starting with a tiny black legion that grows into a white mould at the edge [3,4].

Within 14 days of the initial symptom, the fruit is completely defoliated, and deep, sunken dark-colored lesions appear (Eseohe Gift Asuelimen).

Picture-1. (Early Blight on leaves)

Picture-2. (Early blight on fruits)

Powdery mildew (Oidium neolycopersici and Leveillula taurica) Circular clumps of white powdery fungal spores are the most obvious indications of this illness. A faint yellow speck on the leaves marks the start of the illness. The pale section gets dark, dry, and brittle as the condition advances. Infections spread quickly, causing affected plants to perish.

Picture-3. (Late blight on leaves)

Picture-4. (Late blight on fruits)

Tomato Pests. These small white winged insects feed on plant liquids and leave a sticky residue known as honeydew, which serves as a home for sooty mould. They eat the tomatoes' fruit and foliage. Diseases like tomato yellow leaf curl virus can be transmitted.

Aphids. Green peach aphids and potato aphids are the two types of aphids that attack tomato plants (Macrosiphum euphorbiae). The thin and striped dark green insect's activity might cause wilting and a delay in maturity. Virus vectors are well-known [5,6]. When large populations of potato aphids are present, they inflict serious harm. Malformed leaves, stunted plants, necrosis, or dead plant tissue are examples of plant damage. Their excrement (honeydew) also generates an atmosphere conducive to mold growth. Tomato yields are reduced as a result of infestations [7,8].

Picture 5-6. Aphids (Eseohe Gift Asuelimen)

Flea Beetles. On the top and bottom edges of tomato plants, the potentially destructive bug assaults. Adults consume the leaves, leaving many tiny holes, while the larvae eat the roots. Damages can be controlled using preventative approaches unless they are present in large quantities [9,10].

Picture 7-8. Flea Beetle (Eseohe Gift Asuelimen)

Pest control. and disease prevention. When it comes to preventing disease infections on your farm, prevention is key. Here are some pointers to help you get started on your path to a disease-free farm.

- Rotation of crops.
- Seeds that are disease-resistant should be chosen.
- To minimize the spread of fungal spores, maintain appropriate hygiene and drainage.
- At the end of the growing season, burn any disease-infected plant detritus.
- Frequently weed.
- Your tomatoes should be mulched.
- Keep your plants dry.
- Maintain adequate spacing.

Controlling pests. There are pest resistant/tolerant variations as well, so figure out which insect pest is creating problems and choose a decent seed type.

- Natural enemies are used.
- Cropping with non-host species in a rotation.
- Insecticides such horticultural oils and insecticidal soaps can be used.
- Whiteflies and aphids can be deterred by using silver or aluminum mulch.
- Maintain a clean environment.

Conclusion. Abiotic elements such as ambient conditions, temperature, climatic conditions, and soil ph all contribute to tomato plant difficulties. As a result, learn what works best for your plant. Make it a point to find resistant or tolerant seed kinds; this will go a long way toward preventing future difficulties.

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