CONTROL MEASURES AGAINST PHYTOPHTORIOSIS DISEASE IN TOMATO PLANTS

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Abstract. This article explains how to take reasonable measures to fight against fungal diseases of the tomato plant. He talked about modern solutions of tomato diseases, how and which method to fight them, which plants they meet.

Key words. Tomato, phytophthora infestans, barana, drainage, laser, monitoring, pathogen.

Introduction:

Tomato, one of the most cultivated and consumed crops in the world, is susceptible to various diseases, which significantly affect the productivity of tomatoes. Phytophthora infestans is one of the major threats to tomato production, causing great damage and reducing productivity. Phytophtora infestans has been found to damage potatoes, tomatoes, onions, citrus crops, apples and other plants. Phytophthora control in tomatoes requires a multifaceted approach that combines preventive measures, early detection and sustainable management strategies.

Understanding Phytophthora:

Phytophthora is a soil-borne pathogen that thrives in moist conditions. Its ability to produce resistant oospores makes it difficult to manage, especially after establishment in the field. Phytophthora infections can cause root and crown rot, which reduces the plant's ability to absorb water and nutrients, and can eventually cause widespread crop blight if left unchecked.

Resistant tomato varieties:

One of the main countermeasures in the fight against phytophthora disease is the use of tomato varieties that can create immunity against the pathogen. The production of resistant varieties with genetic characteristics that

limit the effects of diseases caused by phytophthora is becoming one of the topical topics of plant breeders. Farmers should prioritize breeding these resistant varieties to reduce the risk of infestans and improve overall crop health. Phytophthora thrives in moist conditions, making proper soil drainage an important component of disease control. Using well-drained soil management practices, such as laser leveling of raised soil, can help reduce the risk of waterlogging around tomato roots, thereby reducing the favorable conditions for phytophthora growth and development.

The introduction of tomato crop rotation is an effective cultural practice. This has a negative effect on the growth, development and spread of the fungus. By alternating tomato crops with other crops, farmers can reduce the pathogen's ability to develop and persist in the soil. This practice also helps maintain soil health and fertility and contributes to overall sustainable agricultural practices.

Use of fungicides:

When using fumigides, it is especially appropriate to use them for preventive purposes, because the fight against fungal diseases causes some difficulties. Or, when used in the early stages of disease development, Phytophthora infestation can be controlled. Mainly copper-based fungicides and systemic fungicides designed specifically for oomycetes can help control the pathogen. It is important to follow recommended application rates and schedules to maximize effectiveness while minimizing the risk of fungal development.

Hygiene and sanitation:

Good hygiene and sanitation in the field is essential to prevent the spread of Phytophthora. Infected plant debris, soil, and contaminated equipment can serve as inoculum sources. Regular removal and destruction of infected plant material, cleaning of tools, and preventing movement of soil between fields can help prevent the spread of the pathogen.

Early detection and monitoring:

Regular monitoring and early detection of phytophthora symptoms are essential for effective disease management. Farmers should learn to recognize the specific

symptoms of phytophthora infection, such as wilting and yellowing of stems and leaves. Early detection reduces the severity of the disease, harvests the intended crop in tomato crops, and gives some relief from the economic side.

Summary:

Phytophthora infestation in tomato production requires a coordinated and active approach. By creating resistant tomato varieties, using proper soil management methods, implementing crop rotation, judicious use of fungicides, and encouraging early detection, farmers can effectively manage the effects of phytophthora on tomato crops and facilitate control. Through sustainable and integrated pest management practices, the agricultural community can protect the tomato crop, ensure food security and contribute to the overall sustainability of the agricultural sector.

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