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Late Blight of Potato: Symptoms, Impact and Management

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Late blight is one of the most destructive diseases of potato worldwide. It is caused by *Phytophthora infestans* and can severely reduce crop yield and quality under cool and humid conditions. The disease affects leaves, stems, and tubers, leading to significant economic losses. This article briefly discusses the symptoms, historical importance, and management practices of late blight in potato cultivation.

Introduction

Potato (*Solanum tuberosum L.*) is an important vegetable crop grown throughout the world. However, its production is often threatened by several diseases, among which late blight is the most serious. The disease is caused by the fungus-like pathogen *Phytophthora infestans*. It gained historical importance during the Irish Potato Famine of the 1840s, which resulted in widespread starvation and migration. Even today, late blight remains a major challenge for potato growers due to its rapid spread and destructive nature.

Symptoms of Late Blight

Late blight can infect all above-ground parts of the potato plant as well as the tubers. Initial symptoms appear as small, water-soaked spots on leaves. These spots enlarge rapidly and turn brown to black. Under humid conditions, a white fungal growth develops on the underside of infected leaves. The infection spreads to petioles and stems, causing dark lesions and weakening the plant. In severe cases, the stems collapse, resulting in complete destruction of the foliage. Tubers develop purplish-brown lesions on the surface, and when cut open, rusty-brown discoloration extends into the internal tissues, reducing market quality and storage life.

Management Practices

Effective management of late blight requires an integrated approach. The use of healthy seed tubers and resistant varieties is highly recommended. Resistant potato varieties such as Kufri Naveen, Kufri Jeevan, Kufri Alankar, Kufri Khasi Garo, and Kufri Moti have shown better tolerance against the disease. Preventive fungicide sprays, particularly Mancozeb or Zineb at 0.2%, help reduce disease incidence. Proper field sanitation, removal of infected plant debris, and destruction of foliage before harvesting can further minimize disease spread. Care should also be taken during harvesting and storage to avoid injuries to tubers, as wounds increase the risk of infection.

Conclusion

Late blight is a serious disease that can cause severe losses in potato production if not managed properly. Early detection, use of resistant varieties, preventive fungicide applications, and proper crop management practices are essential for effective disease control. Adoption of integrated disease management strategies can help farmers protect their potato crops and maintain higher productivity.

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