LATE BLIGHT *(Phytophthora infestans)*

Late blight is caused by *Phytophthora infestans* and is one of the best known plant diseases. It occurs wherever potatoes and tomatoes are grown, provided that the climate is not too hot and dry. From time to time serious losses can occur depending on weather conditions.

DISEASE SYMPTOMS

Initial symptoms are small, pale to dark green, irregularly shaped spots. Under favorable climatic conditions water-soaked leaf lesions develop within a few days of infestation. The lesions become necrotic and turn brown when dry. The lesions are irregular in form and size, often with a narrow light green to yellow rim.

On the underside of the leaf a white fungal growth can develop at the edge of the lesion. This white fungal growth disappears when the humidity decreases and the lesions become necrotic. Lesions become black and watery and the whole leaf dies.

Stems and petioles can also develop black or brown lesions and all growth above the lesion can die off. With continuing cool, moist weather conditions an unprotected crop can completely die off within several days.

Tubers may also be infected, but it is not common in South Africa as the soil of potato fields are usually quite dry at the end of the growing season. In wet weather, spores from affected leaves are washed into the soil. At first a shallow light brown dry rot lesion develops. This can enlarge during storage. Infection is often followed by bacterial soft rot that destroys the whole tuber. There is less secondary rotting of late blight infected tubers during cold storage, and such seed tubers can serve as a source of infection in the following season.

Optimal conditions for disease

Favorable conditions for late blight development are a period of 48 hours with day temperatures between 15 and 24°C and a minimum night temperature above 10°C. Cloudy conditions, with high humidity, are also necessary. Infection takes place on wet surfaces.

Other Hosts

Tomatoes, eggplant and other members of the *Solanaceae*.