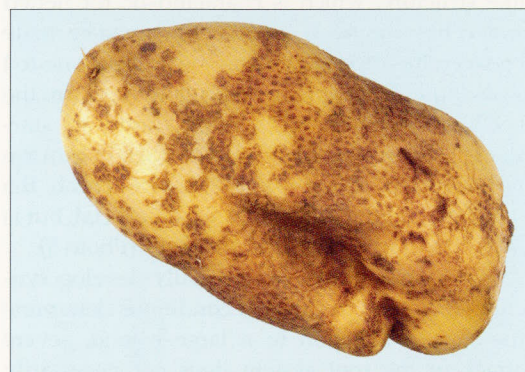


3. Textbook example of the net-like structure of tuber infestation (variety Désirée). (Photo CWE)



4. Superficial brown lesions of netted scab (variety Bintje). (Photo CWE)



5. Growth cracks associated with skin damage by netted scab (variety Bintje). (Photo CWE)

Life cycle

It is not known how the netted scab pathogen survives in the soil. However, soil infestation decreases as less susceptible potato varieties are used in the crop rotation scheme. It is not known which other crops or herbaceous plants act as host. Cereals do not appear to function as important host plants. Infested seed potatoes are an important source of infection. Irrigation favours the development of netted scab.

Prevention/control

Irrigation during tuber initiation is a highly effective method for preventing common scab. However, for netted scab irrigation has an adverse effect because it is favoured by high moisture contents of the soil. On fields severely infested with netted scab, the most effective control measure is growing non-susceptible varieties. Most current Dutch varieties are immune to netted scab; varieties Bintje and Désirée appear to be highly susceptible and sensitive to damage.

K. Scholte

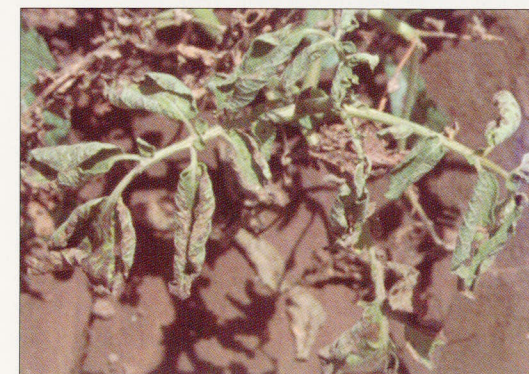
RING ROT

General

Ring rot is caused by *Clavibacter michiganensis* subsp. *sepedonicus* (synonym for *Corynebacterium sepedonicum*). It is an extremely contagious disease that is particularly known from the northern hemisphere, where it has now settled in various potato growing areas in Europe and North America. Despite the fact that ring rot is subject to quarantine legislation and despite the availability of modern detection methods, the pathogen appears to be difficult to eliminate. As this pathogen survives poorly in soil, with a rotation frequency of maximum one potato crop every 2 years and an effective control of volunteer potatoes, ring rot is in fact not a crop rotation disease.

Symptoms

Plant symptoms. In case of latent infections of the seed, the first symptoms do not occur until the latter part of the summer. The onset of the infection is characterised by wilting of usually the lower leaves, accompanied by chlorosis, yellowing and upward rolling of the leaf margins (Photo



1. Chlorotic leaves with rolling necrotic leaf margins caused by ring rot. (Photo S&C)

1). In later stages, pale yellow discoloured patches appear between the veins and subsequently the entire stem wilts.

One or more stems of a plant may show symptoms. Some potato varieties show typical rosette formation in the top leaves. Like brown rot, ring rot shows spontaneous jets of bacterial slime when the cut bottom end of an affected stem is held in water (see page 79 and photo 3). In more

2. Slightly discoloured vascular ring tissues, releasing a milky-white bacterial slime after firm squeezing. (Photo PRI)

