

# Sugar beet root rots

**Violet root rot** is often seen as a dark purplish layer on the surface of tap roots when beet crops are harvested. The infection usually, but not always, starts at the tip of the tap root and spreads upwards. The fungus (*Rhizoctonia crocorum*) that causes it can infect healthy plants but the extent of infection in fields by the disease is rarely serious. It penetrates only a few millimetres into the root tissue but may allow invasion by secondary pathogens, such as *Fusarium*, which can invade the entire root (see below).



Violet root rot

Violet root rot has a wide host range that includes potatoes and carrots but, fortunately, not cereals. The most effective method of control is to remove host crops from the rotation for a number of years.

**Fusarium root rot** is caused by the fungus *Fusarium culmorum*, which can also cause foot rot in cereals. The fungus is only able to invade the tissue of roots that have previously been damaged in some way. This can be through leaf scars following severe wilting on light land, when roots are bruised during harvest, or following infection by violet root rot. The cracks that develop in some root crowns during late summer and autumn can, if they do not heal sufficiently quickly, also be the point of entry.



Rot spreading from crack in crown



**Fusarium** visible as a white mould on the surface of rotten roots

Secondary rots can cause serious losses in storage. Growers intending to store harvested roots should inspect them for signs of rotting, because *Fusarium* rot can spread quickly in clamps. If there is a substantial incidence of rotting the roots should be delivered to the factory as soon as possible.

**Wet rot**, caused by the fungus *Phytophthora megasperma*, is rarely troublesome but it can attack roots in waterlogged or very damp soils. The rot usually spreads from the tip upwards. Some roots become completely rotten and die but sometimes the upper part of the tap root survives and sends out new lateral roots (see picture).



Wet rot