

# Cercospora and Ramularia

**Cercospora** is the name of a sugar beet disease, and also of the fungus that causes it (*Cercospora beticola*). Infection results in the development of small brown spots on the leaves and, if severe, the spots may coalesce to form extensive brown patches.

The disease spreads during warm wet weather and, in Southern Europe and the USA, it can cause considerable yield loss. So far, in the UK, it has not been shown to be a serious problem. However, it appears to be becoming more widespread and, with global warming, seems likely to be more of a threat. At present it is rarely worth spraying against cercospora on isolated plants. However, if temperatures are, or are likely to be, above 25 °C sprays may well be required as a matter of urgency.



Cercospora-infected leaf



Faded spots of an old infection

The brown spots caused by cercospora are small, typically 2-3 mms across. Initially, they are dark brown towards the outside and cream inside. However, as the infection subsides during unfavourable weather, the spots fade and the outer part becomes much lighter. The spots then resemble those of ramularia (see below) in colour.

**Ramularia** also is the name of a fungus (*Ramularia beticola*) and the disease it causes. Brown spots occur on the leaves and, in severe infections, these spots may be so numerous that large brown patches develop. The individual spots are larger than those caused by cercospora, typically 4-5 mms across.

Spread is favoured by warm wet weather, but it can spread at lower temperatures than cercospora. It is rarely worth applying fungicides against ramularia alone, but if it is part of a multiple infection then control can be achieved by the use of triazole or triazole plus strobilurin fungicides..



Leaf infected with ramularia

There are **other infections** that cause brown spots to develop on leaves. For example -

**Alternaria** (various species) is a fungus that attacks leaves already damaged by other diseases or nutrient deficiencies, and kills the invaded tissue. The pattern of infection depends on the original damage.

**Phoma betae** causes large brown spots with concentric rings and black spore-bearing bodies in the centres. Though common, it does not cause significant yield loss.



Alternaria following virus yellows



Phoma