Foliar Disease

Powdery mildew

Introduction

Powdery mildew on sugar beet is caused by the fungal pathogen *Erysiphe betae*. The host range is limited to *Beta* species, including sugar beet, fodder beet, beetroot, and wild sea beet. Overwintering material has reduced viability following ground frosts so risk is higher in seasons following mild winters.

Symptoms initially begin with small, dusty, white patches on older leaves. This can spread to cover whole leaves, and the underlying leaf can become chlorotic, taking on a purplish-brown colour.

When: July to early autumn

Symptoms: Grey mould on crop, starting on outer leaves

Risk: Mild winters, dry and warm conditions, low resistance variety

Severity: Potentially one the most yield damaging foliar disease in sugar beet in the UK. Early infections can reduce yields by up to 30%

Advice: Although yield loss can be significant if no control measures are in place, powdery mildew can be well controlled through a combination of the use of varieties with good disease scores on the Recommended List, and application of foliar fungicides.

Apply first foliar spray of fungicide at the end of July/early August, as soon as symptoms of disease infection are seen.

Optimal conditions for disease development are warm temperatures (~25°C) and low humidity.

Powdery mildew in the UK has shown no development of resistance to the currently approved classes of fungicides, including strobilurins, triazoles, and SDHIs.