Sugarbeet XX

Fusarium Yellows

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Identification and Life Cycle

Fusarium yellows is caused by the fungus *Fusarium oxysporum* f. sp. *betae*. The pathogen infects sugarbeets through roots and grows into water conductive tissues (vascular tissue), releasing toxins that causing wilting and yellowing symptoms. Disease symptoms are most pronounced during high temperatures and usually do not occur before July in the High Plains region. The fungus is spread primarily in contaminated soil. *Fusarium oxysporum* can survive between sugarbeet crops in soil and crop debris as dormant chlamydospores. *F. oxysporum* strains pathogenic to sugarbeets may also be pathogenic on other hosts, including dry bean.

Plant Response and Damage

Disease symptoms initially appear as yellowing (chlorosis) between veins on older leaves; younger leaves later become chlorotic. Often only one side of a leaf is affected. Leaves eventually become dry and brittle as the disease progresses. When beets are cut open, the internal vascular tissue appears grayish brown and discolored. Yield losses can be significant when large populations of the pathogen build up in soils.

Management Approaches

Biological Control

No biological control strategies have been developed for Fusarium yellows.

Cultural Control

Plant varieties less susceptible or resistant to Fusarium yellows. Long crop rotations with non-hosts (i.e., small grains, corn, alfalfa) provide some control, but are not always effective because the fungus can survive on several alternate hosts. Reduce plant stress caused by compaction, moisture extremes, and other sub-optimal soil conditions.

Chemical Control

No chemical controls are available for Fusarium yellows.

Categories: Sugarbeet, Diseases, Fusarium Yellows

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