

FUSARIUM

Fusarium oxysporum

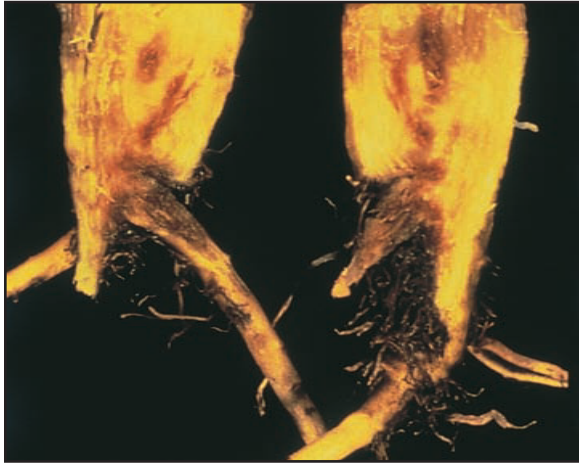


photo by: E. G. Ruppel

Identification

- Fusarium is caused by a fungus
- Fusarium is a vascular wilt disease of sugarbeets
- Typically found in hot, arid, irrigated production areas
- Survives in soil for many years
- Spreads by moving infected tare dirt
- Infected area will grow slowly
- Can be confused with seedling Aphanomyces, Pythium, Phytophthora, or Rhizoctonia
- Flooding, tillage, root aphids, and wind damage can cause similar symptoms

Detection

- Appears early to mid-summer
- Vascular system in the root becomes blocked
- Wilting of leaves
- Older leaves show yellowing between larger veins early in the growing season
- Older, lower leaves turn yellow and die
- Infects root tip and progresses upward
- Vascular discoloration, usually a red-dish brown



- A crosscut of the beet will show the darkened vascular rings
- Root tip may become completely blackened in advanced infections
- Under high soil fungus populations, damping-off of seedlings can occur
- Plant regains vigor overnight, but wilt rapidly during the day as temperatures rise

Cause of Damage

- Plugged vascular system blocks moisture and nutrients from entering the beet

Beet Damage

- Wilting of beets
- Reduced sugar and tonnage
- Sugarbeet may not survive, unless temperatures remain cool

Control

- Lengthen sugarbeet rotation
- Early planting will result in more growth before favorable temperatures for development occur
- Resistant varieties



photo by: C. L. Schneider