

CERCOSPORA LEAF SPOT

Cercospora beticola



photo by: C. Schlagerl



photo by: H. A. Lamey



Identification

- Cercospora leaf spot is caused by a fungus
- Can cause reduced tonnage, sugar, and sugar quality

Detection

- Begins on older leaves
- Progresses to younger leaves
- Symptoms may occur in as few as five days after infection (10 – 14 day infection cycle)
- Circular spots about 1/8 inch in diameter with ash gray centers
- Dark brown to reddish purple brown borders
- Gray centers will have tiny black dots or a fuzzy blue-gray appearance
- In severe cases, spots may grow together to kill entire leaf
- Under ideal conditions, more spores are produced every 5 days

Cause of infestation

- Primary infections occur from germination of spores in infected beet debris
- Spores spread by wind, water, and insects
- Thrives in temperatures between 68° to 79° F, greatest at 75° to 79° F
- Thrives in a relative humidity between 90 & 100%, greatest at 100% for 8.5 hours
- Spores will not form in temperatures below 50° F
- Daytime temperatures of 80° to 90° and nighttime temperatures above 60° favor disease development

photo by: H. A. Lamey



Cause of Damage

- Cercospora spots are a form of defoliation
- Under normal conditions, sugarbeets draw energy from their leaves to produce sugar in their roots
- Defoliation diminishes a beet's ability complete this process and produce sugar and root yield
- As leaves are defoliated, the beet cannot produce sugar
- As leaves are defoliated, the beet uses stored sugar to grow new leaves, rather than growing a larger root or storing additional sugar
- Severely diseased leaves wither and die, resulting in full leaf defoliation

Beet Damage

- Reduced tonnage
- Reduced sugar
- Roots of diseased plants do not store as well as healthy plants

Control

- Crop rotation – three years or longer
- Plant beets at least 100 yards from a field infected last year
- Good control is needed in adjacent fields to reduce infection in subsequent years crops
- Plowing beet refuse helps reduce inoculum survival and dispersal
- Variety resistance
- Fungicides – two types: protectant and systemic (Fungicides should be rotated to avoid fungal resistance)

