CROP FOCUS

DUPONT PIONEER

Anthracnose Stalk Rot of Corn

Anthracnose Facts

- Caused by *Colletotrichum graminicola*, a fungal pathogen
- Most common stalk disease of corn
- Favored by plant stress following pollination
- Disease development may result in:
  - Plant lodging
  - Reduced ability to harvest
  - Yield reduction

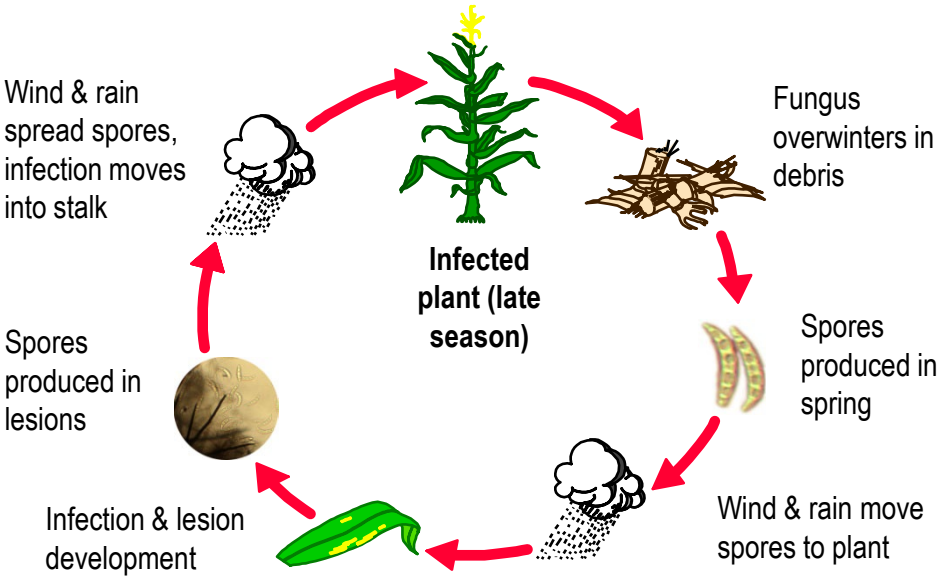
Symptoms – Early Season

- Same fungus may cause a foliar disease early in the season (below)

Symptoms –Mid-Season

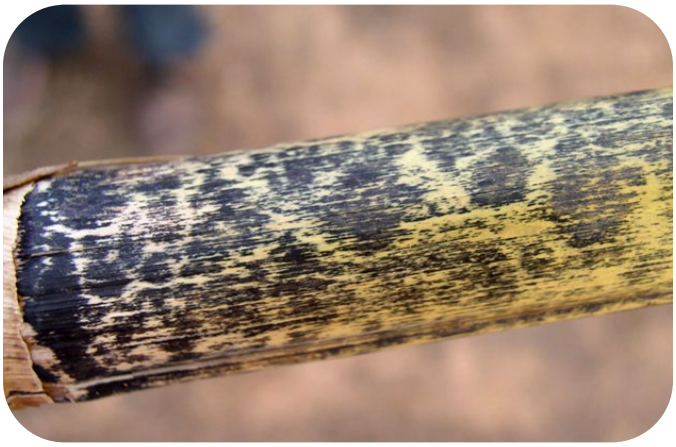
- Top-down symptom of plant death often observed a few weeks after tasseling ("top dieback" - below)

Disease cycle



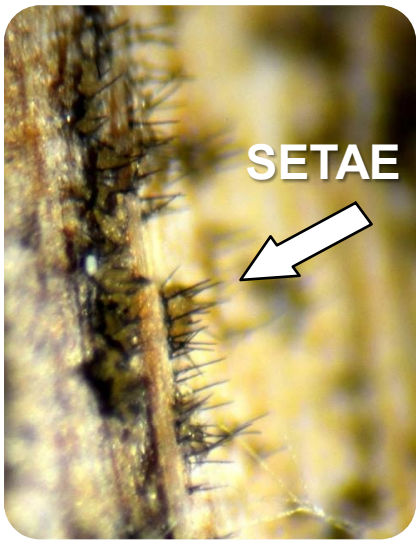
Symptoms – Late Season

- Shiny black coloration on outside of stalk late in the season
- Internal stalk discoloration at nodes
- Stalk may be easily crushed when squeezed at base
- Stalk may lodge when pushed sideways



Identification

- For a positive identification of the disease with a hand lens, look for the presence of setae, which are bristle like hair structures on the stalk surface.
  - Setae are often found within a mucous-like droplet.



- If a microscope is available, look for clear, curved spores (below).

Management

- **Crop rotation** - at least one year out of corn
- **Tillage -** encourages breakdown of crop residue, reducing disease inoculum
- **Genetic Resistance**
  - Pioneer plant breeders select hybrids and parent lines for resistance, using induced and natural infection.
  - Pioneer plant pathologists assist breeders in their efforts to inoculate, screen and characterize products.
  - Hybrids differ significantly in resistance to anthracnose. Scores for Pioneer® brand hybrids generally range from 2 to 7 on a 1 to 9 scale (9=resistant)
  - Your Pioneer sales professional can help you select high-yielding hybrids with the appropriate level of disease resistance and other key traits needed for your field.