

Gray Leaf Spot Management

- Fungicide application is the only management strategy available after planting to lessen the impact of foliar disease outbreaks in corn.
- Gray leaf spot (GLS), first discovered in Illinois in 1924, is the most common foliar disease of corn.
- GLS spores mature and are splashed or blown onto the lower leaves of the growing crop.
 - Young leaves tend to resist development and spread of GLS.
 - Leaves lose this natural resistance as they age, allowing the disease to progress.
 - GLS may cycle and reproduce infection spores every 2 to 3 weeks.
- The decision regarding fungicide application to control GLS can be difficult; the best time to make the call is near tasseling when the foliar disease is present but not yet severe.

Factors to Consider for Foliar Fungicide Applications:

- Crop rotation and tillage
- Hybrid susceptibility
- Disease infection
- Weather
- Planting date

Fungicide Application Priority List:

Prioritize fungicide applications based on these criteria:

- Corn following corn
- Disease-susceptible hybrids
- High-residue, minimum-tillage situations
- White corn or premium-derived products
- Intensively managed fields
- Severe disease pressure
- Weather conditions favoring disease
- Late-planted corn at higher risk for GLS infection

Evaluating Hybrids for GLS Infection

- **Susceptible or Moderately Susceptible Hybrids:** Consider fungicide if disease is present on 3rd leaf below ear or higher on 50% of the plants prior to tassel.



- **Moderately Resistant Hybrid:** Consider fungicide if field has disease history; previous crop was corn with at least 35% residue; disease is present on 3rd leaf below ear or higher on 50% of plants prior to tassel; warm and humid weather predicted through July and August.



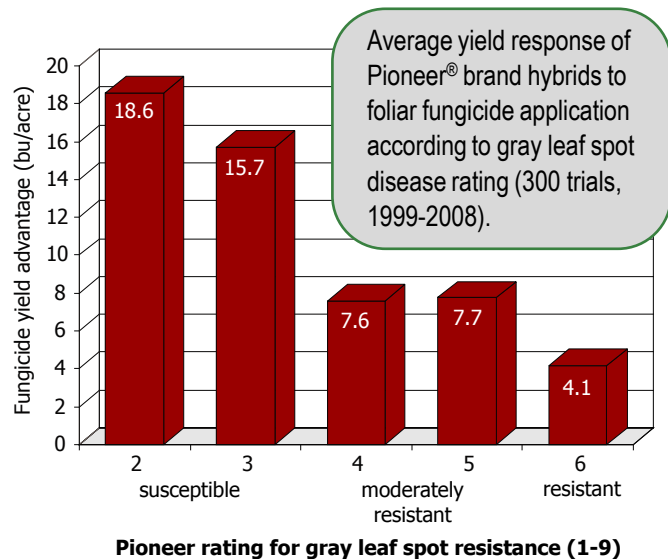
- **Resistant Hybrid:** Fungicide is generally not recommended, but field scouting is still important.



Pioneer Ratings for GLS Resistance

- Pioneer researchers have continually improved parent lines and hybrids for resistance to GLS over the past 25 years.
- Hybrids and parent lines are rated and screened in “disease nurseries” as well as locations with high levels of natural GLS.
- On the Pioneer 1 to 9 rating scale (9 is most resistant to GLS), hybrids are available with scores as high as “7”.

Response to Foliar Fungicide Application



GLS Ratings for Central Illinois Hybrids

PIONEER® brand Product	GLS Rating*	Rating
P0832AM1 **	4	Moderately Resistant
P1018AM1	6	Resistant
P1184AM1	5	Moderately Resistant
P1162AM1	5	Moderately Resistant
P1319AM1	5	Moderately Resistant
P1395AM1	6	Resistant

* Ratings are relative to other Pioneer hybrids. Individual results may vary depending on environmental, disease and pest pressures.

** AM1 = Optimum® AcreMax® Insect Protection System with an integrated corn rootworm refuge solution.



Herculex® insect protection technology by Dow AgroSciences and Pioneer Hi-Bred.

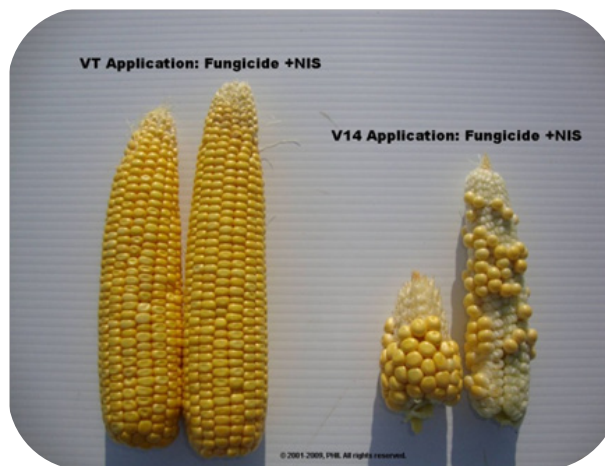
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Fungicide Application Timing

- Applications should be made from VT (Tassel) to R2 (blister).
- Applications made outside of this time may be less effective at controlling GLS.
- Damage to developing ears may occur when applications are made prior to VT with non-ionic surfactants.
- Evaluate fields with uneven stands to determine what percent of plants will have delayed tassel emergence. Adjust application timing accordingly.



Left: Normal Ears

Right: Damaged Ears

Fungicide Selection

- Numerous fungicides are registered for use on corn to control foliar diseases.
- Triazole and strobilurin fungicide classes have different levels of systemic action and some curative activity.

Common Fungicides Labeled for GLS Control

Common Name	Chemical Name	Rate for Corn VT (fl oz/acre)
Headline®	Pyraclostrobin	6.0-12.0
Quadris®	Azoxystrobin	6.0-15.5
Headline® AMP	Pyraclostrobin + Metconazole	10.0-14.4
Quilt®	Azoxystrobin + Propiconazole	10.5-14.0
Stratego®	Trifloxystrobin + Propiconazole	10.0-12.0
Stratego® YLD	Trifloxystrobin + Prothioconazole	4.0-5.0

Always read and follow the label.

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