



**Pioneer, University of Tennessee Research Shows Foliar Fungicides
Can Boost Corn Yields :
Timely applications help growers battle gray leaf spot**

For corn growers facing gray leaf spot disease pressure, a foliar fungicide application can boost yields in corn. Pioneer Hi-Bred, a DuPont business, and the University of Tennessee joined forces in a three-year study to show the impact of foliar fungicide applications on susceptible, moderately susceptible and tolerant gray leaf spot [corn](#) hybrids.

Gray leaf spot, a common foliar disease on fields planted to corn after corn where high residue and ample moisture or irrigation is present, has the potential to greatly reduce yields.

The study showed increased yields with a foliar fungicide application for all three types of hybrids tested in the study, with the largest boost being 24 bushels per acre with the susceptible hybrid.

"The data speaks for itself," says Melvin Newman, field crops plant pathology specialist at the University of Tennessee. "We anticipated an increase in yields, but seeing the bushel difference confirmed the significant value in timely application of foliar fungicide in high disease pressure areas."

The study used Headline[®] and Quadris[®] fungicides for the application. The corn was sprayed once following tassel. When compared to unsprayed fields of the same hybrids, the susceptible hybrids had the largest increase, adding 23.5 bushels per acre on average. The moderately susceptible hybrids averaged 12.5 bushels per acre and the tolerant hybrids averaged a boost of 7 bushels per acre.

"This study shows that Pioneer gray leaf spot ratings are effective," says Greg Luce, agronomy services manager for Pioneer. "While there were increases in yields for all hybrids, including tolerant, those increases were much less than the susceptible or moderately susceptible hybrids. Hybrids with gray leaf spot tolerance provide a very effective avenue for growers in areas where the disease is a concern.

"Depending on commodity prices, the data from this study suggests spraying tolerant hybrids in a very heavy disease environment can be a viable practice for growers," Luce adds.

Application timing is key when using a foliar fungicide. Applications should occur at full tassel. Research has shown applications prior to tasseling can have negative effects, potentially reducing yields. Weather also plays a vital role in application timing. If moisture continues following tassel, a grower should consider spraying. If there is minimal moisture following tassel, often disease development is slowed significantly and a foliar fungicide application may not be needed.

"Growers should evaluate three things when looking to use a foliar fungicide application during the growing season," says Newman. "These are 1) knowing the susceptibility rating of the hybrid, 2) factors that can increase potential for the disease, such as, corn-after-corn, no-till or minimum-till fields and 3) the weather environment - ample rainfall and humidity or irrigation."

[Pioneer® brand hybrids](#) are characterized for gray leaf spot and other [foliar diseases](#). To learn more about gray leaf spot tolerance ratings, contact a local Pioneer sales professional.

"Pioneer works a great deal with growers to get the [right product on the right acre](#)," says Luce. "Reviewing hybrid disease and insect characterization ratings with a Pioneer agronomist or sales professional will aid in getting growers the right defensive package for their field environment."

[Pioneer Hi-Bred](#), a DuPont business, is the world's leading source of customized solutions for farmers, livestock producers and grain and oilseed processors. With headquarters in Des Moines, Iowa, Pioneer provides access to advanced plant genetics in nearly 70 countries.

DuPont is a science-based products and services company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products and services for markets including agriculture and food; building and construction; communications; and transportation.

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