



Gray leaf spot

Overview

Gray leaf spot, caused by the fungus *Cercospora zeaе-maydis*, leads to leaf tissue loss, a decrease in plant sugars and decreased grain production. It is considered the world's most yield-limiting disease in corn, causing yield losses from 5-40%. All corn hybrids have some susceptibility to the disease.

What you should know

- Gray leaf spot overwinters in residue on the soil surface. Spores develop on residue in late spring when temperatures and humidity increase. Rain and wind transport spores onto the corn plant, where they mature and move up the plant.
- Gray leaf spot infection occurs when relative humidity is more than 90 percent and the leaf surface remains wet for more than 11 hours.
- Soon after tasseling, orange-red lesions with narrow yellow halos appear. As lesions mature, they appear tan or brown in color and rectangular in shape. The release of gray fungal spores in mature lesions give the disease its name. Lesions are ½ to 4 inches long and vein-limited, giving them a straight-edge appearance.
- Increased use of reduced tillage and no-till production practices has increased the incidence of gray leaf spot. Weedy fields trap humidity and prevent leaf drying by blocking air movement through the canopy.

Action steps

1. **Manage residue:** Crop rotation and clean plowing are effective methods to control fungus levels. A two-year crop rotation away from corn is effective under reduced tillage. A one-year rotation is sufficient with clean plowing.
2. **Apply fungicides early:** Fungicides are recommended when susceptible hybrids are planted in fields with a history of gray leaf spot. Apply fungicides early in the season before significant leaf damage occurs.
3. **Select tolerant hybrids:** Using tolerant hybrids provides an earlier, more extensive source of inoculums for gray leaf spot development.



Gray leaf spot is one of the most yield-limiting diseases in corn.



30-Second Summary

- All corn hybrids are susceptible to gray leaf spot.
- With careful crop planning, gray leaf spot can be managed in no-till or limited tillage situations.
- Crop rotation and clean plowing can help control the fungus.
- Where environmental conditions are conducive to fungus development, fungicide use can be helpful.

NOTES:

For more information, contact:



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