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# Anthracnose Leaf Blight, Common Rust, Gray Leaf Spot and Goss's Wilt Found in Iowa

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# Anthracnose Leaf Blight, Common Rust, Gray Leaf Spot and Goss's Wilt Found in Iowa

## **Abstract**

I have had a few emails, tweets and phone calls from folks who are starting to find disease in corn in Iowa.

It is very common to find anthracnose leaf blight on the lower leaves of young corn plants, particularly in corn-on-corn fields. If you know the disease cycle of this pathogen, this should be no surprise given all the spring rain we have had. *Colletotrichum graminicola* survives in surface corn residue. In moist conditions in the spring, it produces spores on the residue that are splash-dispersed onto these lower leaves. Infection and colonization of the leaf tissue occurs, and we see the dark irregular-shaped lesions on the bottom four to five leaves. Once canopy closure occurs, it is rare to see anthracnose leaf blight and, because it occurs so early in the growth of the plant, it does not affect yield. Furthermore, data from both Iowa and Wisconsin found no relationship between the incidence of anthracnose leaf blight and anthracnose stalk rot.

## **Keywords**

Plant Pathology and Microbiology

## **Disciplines**

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## Anthracnose Leaf Blight, Common Rust, Gray Leaf Spot and Goss's Wilt Found in Iowa

By Alison Robertson, Department of Plant Pathology and Microbiology

I have had a few emails, tweets and phone calls from folks who are starting to find disease in corn in Iowa.

It is very common to find anthracnose leaf blight on the lower leaves of young corn plants, particularly in corn-on-corn fields. If you know the disease cycle of this pathogen, this should be no surprise given all the spring rain we have had. *Colletotrichum graminicola* survives in surface corn residue. In moist conditions in the spring, it produces spores on the residue that are splash-dispersed onto these lower leaves. Infection and colonization of the leaf tissue occurs, and we see the dark irregular-shaped lesions on the bottom four to five leaves. Once canopy closure occurs, it is rare to see anthracnose leaf blight and, because it occurs so early in the growth of the plant, it does not affect yield. Furthermore, data from both Iowa and Wisconsin found no relationship between the incidence of anthracnose leaf blight and anthracnose stalk rot.

Common rust has also been reported at very low incidence. Again, this is not too much of a surprise because we often see common rust toward the end of June. What is different this season is that we are seeing it on very young plants because so much of the crop was planted late. Last year I [compared common and southern rust](#). This morning, gray leaf spot was reported in southwest Iowa.

I have also had one report of Goss's wilt from west central Iowa. To distinguish this disease from some other look alike problems (for example, burn associated with ammonium nitrate side dressing), remember to look for [freckles](#) in the edge of the lesion. I expect to hear of more reports of this disease if this stormy weather continues. Look for Goss's wilt in corn-on-corn fields that are planted to hybrids that are rated susceptible to Goss's first.

### Management

Although some products are marketed for Goss's wilt management, there are still few data on their effectiveness. In 2012 we evaluated several products (Procidic, 42-Phi Cu, EcoAgra and Elixor), but we were unable to detect a treatment effect because we had very low incidence of the disease at all our locations.

While an application of a fungicide at V5/V6 would likely reduce common rust and anthracnose leaf blight, these diseases rarely cause yield loss on corn in Iowa. Most hybrids have good resistance to common rust, plus as the season progresses it usually gets too hot (>80F) for the disease to continue to develop.

## Looking ahead

Warm weather with frequent precipitation favors gray leaf spot and northern leaf blight, both of which both reduce yield. Moreover, the earlier in grain fill that these diseases occur, the greater the yield loss. Because much of the corn was planted late this season, tasselling will likely occur towards the end of July, so we could be at risk for yield loss due to disease. While you are out scouting, check for disease development in the lower canopy, particularly gray leaf spot and northern leaf blight. This is a good indication that conditions are favorable for disease development and a fungicide application between tasseling and 'brown silk' (blister stage) should be considered, particularly if the hybrid is susceptible to disease. Moreover, there is a greater chance of a return on investment with a fungicide application when disease risk is high.

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