



Southern corn rust

Overview

Southern corn rust, a fungus caused by *Puccinia polysora*, is a threat to corn crops across the southern United States. The disease damages crops in the Corn Belt only about once every five years, but when it does, yields may be cut by more than 40%.

What you should know

- Southern rust thrives in temperatures above 80°F with high humidity, especially if corn has been planted late.
- In the Corn Belt, southern rust develops later in the season when humidity is high with overnight dew and urediniospores are abundant. Rain can spread fungus development.
- Younger leaf tissue is most susceptible to fungal infection. In regions where southern rust is a consistent problem, some growers minimize damage by planting earlier or using shorter-season hybrids.
- Southern rust starts with clusters of small circular lesions up to 2 millimeters. As lesions mature, fungus erupts through the leaf surface and lesions become elongated with a yellow halo, eventually becoming rust-colored oblong pustules. Southern rust pustules are usually found on the upper leaf surface, although fungi also can attack stalks and husks. Wind-blown from the south, urediniospores cyclically infect the plant every 7-14 days.

Action steps

1. **Select hybrids for your region:** Hybrids with southern rust-resistant characteristics are more common in the Southeast than the Midwest, since southern rust rarely overwinters in the Corn Belt. Yield potential of adapted hybrids can be less than non-resistant hybrids, which are better adapted.
2. **Evaluate fungicide cost before using:** Fungicide application typically costs \$20-\$25 per acre. Only consider fungicides if more than 10% of the leaf area is affected. Before applying fungicides, monitor weather forecasts to determine if high humidity and hot temperatures will persist.



Southern corn rust pustules brought on by extended periods of heat and humidity are primarily found on the upper leaf surface.



30-Second Summary

- Southern corn rust fungus threatens crops in the Southeast and Midwest Corn Belt.
- It may not damage crops each year; but when it does, yields could decrease 40%.
- Southern corn rust develops under hot, humid conditions.
- Selecting region-specific hybrids and using fungicides, if warranted, can help manage the issue and avoid yield loss.

NOTES:

For more information, contact:



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