



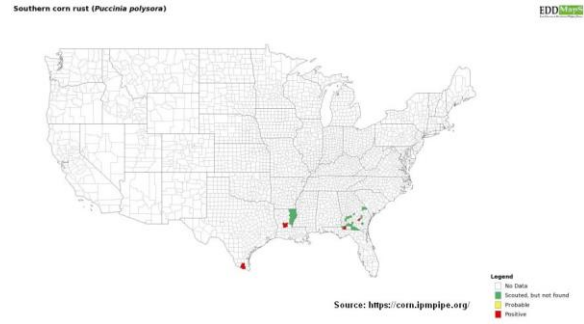
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## Will Southern Corn Rust be an issue in 2020?

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If you grow corn in the mid-South or Delta areas, you know all too well the devastation this fungal disease can cause. Even growers in the upper Corn Belt have had to deal with it in some years. This fungus does not overwinter in the Midwest, so determining where it might be a threat in any given year depends on the weather.

While much of the Corn belt dealt with planting delays in 2020, most of the extreme southern areas were planting as usual, so inoculum from those areas is already developing. Here is the current map of the progress of this disease on June 8, 2020. As is normal, the issue generally starts in the southern most corn growing areas and then spreads to other areas on storm fronts and other weather patterns from June to August.



Note that there are confirmed cases in South Texas, Central Louisiana, and Florida. The green areas in North Florida and Georgia show that a lot of scouting reports are coming in, but that no positive cases have been found... yet.

Southern Corn Rust can often be confused with Common Rust, but it is a far greater threat. A trained eye can generally tell the difference between the two in the field. As this illustration notes, two differences are the color of the pustules and where they appear on the plants. Southern Corn Rust will generally be a brighter orange and found mostly on the upper side of leaves, while Common Rust is generally found on both sides of the leaves but is a darker brown lesion.

Conditions that favor the development of this fungus are hot temperatures coupled with extremely high humidity and/or prolonged leaf wetness of 4 hours or more (heavy dews).

Table 1. Comparison of Southern and Common Rust

| Pustule Characteristics:       | Common Rust                   | Southern Rust                |
|--------------------------------|-------------------------------|------------------------------|
| Location                       | upper and lower leaf surfaces | primarily upper leaf surface |
| Color                          | brownish, red                 | orange to light brown        |
| Shape                          | elongated                     | round                        |
| Distribution                   | scattered                     | densely packed               |
| Other differences:             |                               |                              |
| Optimal Temperature            | 61-77 °F                      | 77-82 °F                     |
| Probability of Effecting Yield | low                           | moderate                     |



Image 3. Southern rust on upper side of corn leaf



Image 4. Common rust on corn

Data from the 2014 Regional Corn Fungicide Summary data generated by the Corn Disease Working Group (CDWG), compiled by Dr. Kiersten Wise from Purdue University, illustrates how yield response is highly influenced by the amount of disease. Fungicide

## Managing Southern Rust in 2020

LG Seeds works hard to provide you the best ratings for our hybrids against this fungus. These scores can be found in our product publications and online or by contacting your local STAR Partner or LG Seeds team. Hybrids with lower scores should be on your watch list, but even high scores do not guarantee complete resistance.

Today's corn growers have a host of fungicide products that can aid in control of this fungus, but obtaining 100% suppression is rare. Multiple modes of action fungicides should give the most complete protection, so talk to your ag chem provider to get local recommendations for fungicide products.

- Listen/watch for reports from more Southern growing areas.
- Watch current and forecasted weather patterns
- Have a plan for applying fungicides including what growth stage(s) to apply
- Know your corn hybrids' Southern Corn Rust tolerance scores
- **Treat your fields BEFORE a major infection**

At LG Seeds, we truly hope that none of this information is needed in this year and wish you the best of luck with your 2020 crop!

### Sources:

1. farmdoc Dept of Agriculture and Consumer Economics, University of Illinois
2. 2014 Corn Disease Working Group – Dr. Kiersten Wise Purdue University

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