

Southern rust found in 11 counties

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Nebraska corn growers should be scouting their fields for southern rust, especially those fields planted later this spring and in southern Nebraska counties.

Southern rust was confirmed in samples submitted to the University of Nebraska-Lincoln and private laboratories from 11 counties in south central and southeastern Nebraska with more expected, said Tamra Jackson-Ziems, UNL Extension plant pathologist.

“These samples were from fields that had low incidence of disease at this time,” she said. “Warm temperatures and high humidity may promote development and spread of the disease.”

Rust diseases produce large amounts of spores that can be easily moved by wind for long distances. Having a history of southern rust in corn does not have any impact on disease development now, because this pathogen does not overwinter in infected residue, Jackson-Ziems said.

“The spores must be carried into the area from southern or western locations by winds from diseased areas,” she said. “At this time, southern rust has not been confirmed in either Kansas or Missouri corn fields. If the disease continues to spread and worsen in Nebraska, those fields planted later are especially at higher risk for disease and potentially severe yield impacts.”

Jackson-Ziems said the best way to keep track of southern rust is to monitor reports from local university plant pathologists, diagnostic laboratories and county Extension offices. Crop disease information in Nebraska is updated on CropWatch, UNL Extension’s crop production newsletter at cropwatch.unl.edu.

The characteristics used for differentiating between common rust and southern rust are described and illustrated in the NebGuide, Rust Diseases of Corn in Nebraska, available from local UNL Extension offices and online at <http://www.ianrpubs.unl.edu/sendIt/g1680.pdf>.

The simplest and most reliable way to differentiate the diseases without a microscope is to

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examine both leaf surfaces for spore production. Southern rust spore production is mostly limited to the upper leaf surface and tends to be tan/orange in color.

The most reliable method for identifying corn rust diseases is based on examination of microscopic spore characteristics. Anyone needing assistance identifying diseases or other plant problems can submit samples to the UNL Plant & Pest Diagnostic Clinic, 448 Plant Science Hall, Lincoln, NE 68583-0722. For more information on how to submit a sample or for the submission form, call 402-472-2559 or visit <http://pdc.unl.edu/diagnosticclinics/plantandpest>.

Other diseases that have been identified across Nebraska include:

Common rust—This rust has been evident across Nebraska for several weeks. Common rust spores are usually brick-red to brown in color; however, the color difference is not a reliable method for identification when both are not available for comparison and because the spore type can change and turn black later in the season for both diseases.

Goss's bacterial wilt and blight—Goss's wilt continues to be confirmed in samples submitted from across the state. Be sure the disease has been identified before making a fungicide application since Goss's wilt and other diseases also are present right now and can't be directly managed with foliar fungicide applications. Goss's wilt will likely increase after the recent severe storms that have damaged crops.

Physoderma brown spot—Another disease that has begun to develop in Nebraska corn fields is physoderma brown spot. This disease is normally not a concern, except in rare cases, such as on susceptible hybrids exposed to wet conditions, but the lesions are sometimes mistaken for southern rust.