7-2-2007

Soybean rust update and outlook - July 2, 2007

Xiao-Bing Yang
Iowa State University, xbyang@iastate.edu

Follow this and additional works at: http://lib.dr.iastate.edu/cropnews

Part of the Agricultural Science Commons, Agriculture Commons, and the Plant Pathology Commons

Recommended Citation
http://lib.dr.iastate.edu/cropnews/1043

This Article is brought to you for free and open access by the Agriculture and Natural Resources at Digital Repository @ Iowa State University. It has been accepted for inclusion in Integrated Crop Management News by an authorized administrator of Digital Repository @ Iowa State University. For more information, please contact digirep@iastate.edu.
Soybean rust update and outlook - July 2, 2007

by X. B. Yang, Department of Plant Pathology, and Zaitao Pan

Since May, Louisiana and southern Texas are considered important source areas of soybean rust spores to northern soybean production. In Louisiana, the disease was found in kudzu plants near New Orleans earlier in the spring. Latest reports indicate that the disease is developing locally with increased severity. Because the wind in June was not suitable to northward movement, limited northward spore movement occurred as indicated by modeling results. On June 20, the disease was found in central Louisiana in sentinel soybean plots and a production field. The finding in central Louisiana is about 10 days earlier than the detection last year. So far, the reported infested areas in central Louisiana are relatively small with a limited amount of spore production.

Comparing this year with the last two years, Texas has had conditions favorable for the occurrence for soybean rust. There was more rainfall in June, and disease was detected north of Houston. The Great Plains had a lot of rainfall in June, which is good for soybean rust occurrence. Fortunately, June is too early for soybean rust to establish itself since soybeans were just emerging or in the seedling stages. Spores were likely dead after been transported there by storms because unavailability of advanced soybean plants.

July outlook

Computer models with the latest climate data predict that there is a good chance for soybean rust spores to move as far north as Oklahoma from Texas. From Louisiana, the model predicts spore movement as far north as central Missouri and Kentucky. Rainfall in these areas is moderately low in favor of the establishment of these northward soybean rust spores. Analysis of computer calculations and current soybean rust monitoring results suggest that the risk of having a damaging outbreak in Iowa or neighboring states is not high, but this season's weather conditions (recorded and predicted) are much more favorable than the previous two seasons.

During the last two seasons, which were dry, we already declared the "risk is over" after June. In this season, July rainfall is predicted to be normal. Because the disease was found to be active in the Gulf Coast (Louisiana and Texas) and because there will be normal precipitation for the rest of season in main soybean production regions, we still need to watch the development of disease in the South. It is good to be cautious. After soybean rust was first found in Louisiana in fall 2004, this season is the first one to have normal precipitation (if the prediction is correct) in the Soybean Belt. The previous two
Summer scouting in soybean: Top dieback and other diseases  
August 6, 2007  
Soybean rust update and outlook  
July 23, 2007  
Another fungicide approved for soybean rust in Iowa  
June 25, 2007  
Iowa State plant pathologists detect crop diseases from satellites  
June 25, 2007  
Soybean rust update and outlook, June 2007  
June 11, 2007  
Monitoring soybean rust  
June 11, 2007  
Iowa officials find no additional evidence of Asian soybean rust  
May 21, 2007

seasons were dry.

Other foliar diseases

While we are watching soybean rust in the South, we should not forget the endemic soybean diseases in Iowa. Cool summer temperatures and good moisture are ideal for foliar diseases, and this year's weather in Iowa so far has been good for the development of foliar diseases. White mold can be a concern to some growers in eastern Iowa, especially northeastern Iowa. In a season with high risk, soybean flowering time is time to control white mold with fungicides or Cobra®. In Iowa, the disease has been a problem in even years. In an odd year like this with later planting, most soybean fields in Iowa will not have a dense and closed canopy during the flowering time, a condition needed for white mold infection. Therefore, these fields are likely to escape the disease. However, for soybean fields that had problems in odd years and where the soybean canopy is already closed, the risk could be high if the fields are wet or saturated with moisture.

X. B. Yang is a professor of plant pathology with research and extension responsibilities in soybean diseases at Iowa State University. Zaitao Pan is a climatologist at St. Louis University.

This article originally appeared on page 209 of the IC-498(17) -- July 2, 2007 issue.

Updated 07/27/2007 - 10:27am