Southern Rust Situation In Alabama Corn

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Southern rust was noted with past week in a mid-April planted corn variety trial at the Brewton Agricultural Research Unit. Rust was particularly noticeable throughout the canopy of Obsession II sweet corn. Clusters of rust pustules were seen on scattered leaves of many of the field corn selections, many of which have reached GS R2 (kernel blister). With a combination of irrigation and periodic showers, southern rust could cause some yield loss at this location.

Southern rust was also found in several trials at the Gulf Coast Research and Extension Center in Fairhope. Rust as well as Southern corn leaf blight levels in the early April planted irrigated corn that has reached GS R4 (soft dough) was very light and neither disease is likely to cause appreciable damage. Rust was more noticeable in early May-planted irrigated corn and given favorable weather patterns, i.e. frequent showers, may cause significant yield losses.

On the plus side, southern rust was not found late last week in several irrigated corn trials at the Wiregrass Research and Extension Center in SE AL. However, rust was reported in corn in Coffee Co. this past week and at the Field Crop Research Unit outside of Montgomery, AL 2 weeks ago.

Southern rust often appears first in the lower to mid-canopy at the open end of a row or skip in the field rather than in the middle of this field. These ‘hot’ spots become more noticeable as the disease continues to develop. See Figure one for images of southern rust hot spots.

Current generally dry weather patterns do not favor southern rust development in corn, particularly in rainfed fields. With continued irrigation plus scattered showers, which have been heavy the past few days in a few locals, rapid disease development may occur in fields where rust is already established. It is critical that grower’s scout irrigated corn to monitor the development of southern rust and other foliar diseases.

Recommended fungicide recommendations and application guidelines can be found in the CORN IPM Publication http://www.aces.edu/pubs/docs/I/IPM-0428/IPM-0428.pdf.
A summary of 2014 southern rust fungicide screening can be found in https://sites.aces.edu/group/timelyinfo/Documents/2015%20Corn%20Fungicide%20TI.pdf. Last year, the registered fungicides Aproach, Aproach Prima, Evito T, Fortix, Headline, Headline AMP, Muscle, Priaxor, Quadris, Quilt Xcel, Stratego YLD, and Tilt were screened for rust control at two SW Alabama locations. Fungicides programs consisted of single GS V6 and VT applications as well as two application V6 fb VT and the recommended VT-R1 fb R2-R3 programs. Sizable differences in rust control and yield response were seen between the single and two application programs as well as among two application programs of the above fungicides. Most noticeably, the generic tebuconazole and propiconazole fungicides failed to provide effective rust control or boost kernel yield under severe disease pressure, while yield gains up to 80 bu/A were obtained with selected fungicides in irrigated corn.

Overall, corn that has reached GS R4 (soft dough) by this point in the season will escape significant rust damage and will not need fungicide protection. Later-planted May corn that’s under irrigation, which may have some issues with rust and possibly other diseases depending on location and rainfall patterns, may see a yield benefit from a protective fungicide treatment.

Figure 1. Southern rust often gets A) started at the end of the row and B) continues to intensify with a combination of irrigation and rainfall.