

Corn and Grain Sorghum Weekly Update – July 17, 2020

2020 Update

Corn and Grain Sorghum Research Verification – Chuck Capps (Corn & GS Verification Coordinator)

Southern rust has been found in most of our Corn Verification fields but levels are low as of this week. We will continue to scout closely. Make sure to scout your corn for presence of disease and severity. I have included some information below Table 1 for you to consider regarding southern rust.

Table 1 below lists the projected irrigation date from the Arkansas Online Irrigation Scheduler Program. We are also using soil moisture sensors with telemetry units to implement best management practices for irrigation. We are entering the soil moisture sensor readings, crop stage, soil type, effective rooting depth, and irrigation set time into the AR Soil Calculator app to get projected irrigation date based on soil depletion percentages. We are trying to use 40- 50% depletion depending on irrigation set times and if the well will have to be shared in another crop.

Table 1.

County	Irrigation Scheduler	Soil Calc App	Heat Units	Crop Stage	Field Notes
Ashley	7/20	7/22	2104	R3	Field is very close to R4. We found southern rust at a little higher level than any of the other fields.
Chicot	7/13	7/16	2393	R5 50% Starch	This field has reached 50% starch and only needed to receive 1.5" of irrigation to finish out the year and received it 7/16. We found southern rust but treating is not being considered with the low amount of rust and stage of the crop.
Drew	7/21	7/23	1829	R3	This field was irrigated on 7/13, and southern rust was found but very light.
Lawrence	7/15	7/19	1941	R3	We did not find southern rust Monday, but it has been found in surrounding counties.
Lonoke	7/17	7/21	1812	R3	Southern was found but low incidence.
Miss	7/17	7/20	2037	R4	Field was irrigated 7/9.
Miss 2	7/17	7/20	2053	R4	Field was irrigated 7/10.
Poinsett	7/18	7/19	1985	R3	Southern rust was found but low incidence.

White	7/16	7/20	1946	R3	Southern rust was found but low incidence.
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Dry conditions will suppress the spread of southern rust as free moisture (dew or light rain) is necessary for spore germination and infection. When conditions favor disease, symptoms appear about 3 to 6 days after infection and by 7 to 10 days the pustules rupture to release rust spores. Conditions that favor disease: warm/hot temperatures (morning low of 75°F and daytime high of 93°F + 4 hr of consecutive leaf wetness) and extended periods of light rain or heavy dew. When these conditions are not met disease development will be much slower.

Fungicides are effective at protecting corn yield potential, but given the price of corn many are considering the benefit of yield protection before applying a fungicide. The timing table is a guideline on the benefit of a corn fungicide to protect yield potential at various growth stages with the assumption that southern rust is detected in the field and conditions favor disease development (Figure 1). See [MP 154](#) for fungicides efficacy to control southern rust in Arkansas.

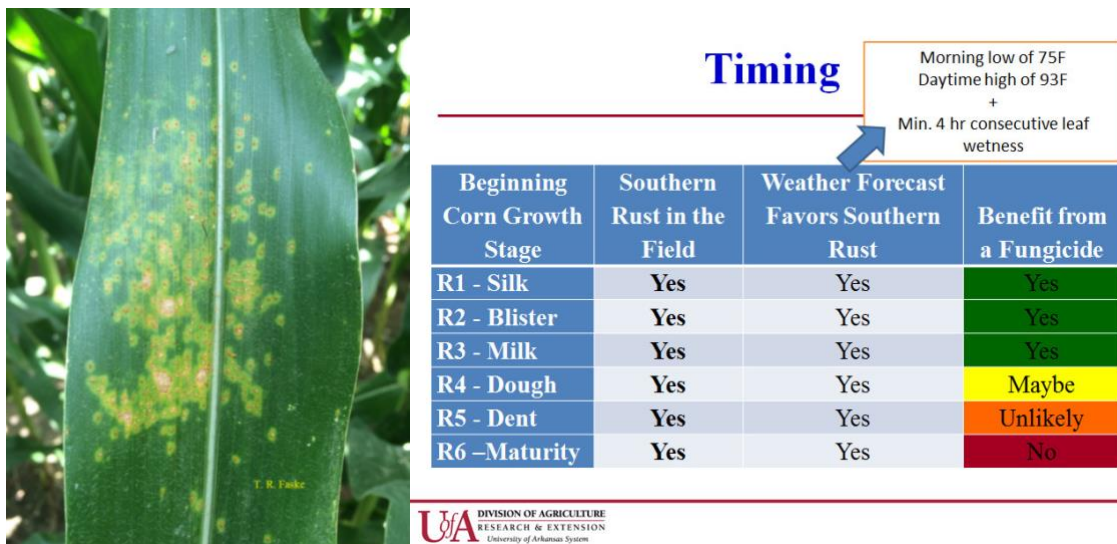


Figure 1. Southern rust pustules on upper corn leaf surface and benefit of a fungicide to protect corn yield potential in fields where southern rust is detected.