

## Corn and Grain Sorghum Weekly Update – July 19, 2019

2019 Update

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

Fields received anywhere from 3.5” of rain to over 7.5” from the tropical storm. Needless to say, we didn’t need irrigation. We are using the growth stages from the fields that are nearing maturity and available soil moisture to see how much more water we will need to reach irrigation cutoff. With fields being fully saturated this past Tuesday from storm, we can subtract about 1.5” of water needed that I calculated Thursday (7/18) to finish out the crop. A couple of the younger fields are still using about 0.3 inches of water per day.

I am still getting some Southern rust questions especially on the later planted corn, so I have attached Extension Plant Pathologist, Dr. Travis Faske’s Disease Update for your information below the crop updates. Most fields are beyond where diseases can affect yield significantly. We will continue to scout younger fields were a fungicide might still be needed with disease presence and favorable conditions for development.

**Table 1.**

County	Heat Units	Crop Stage	Crop Notes
Arkansas	2160	R4	This field is about a week into R4, so we have about 25-28 days to maturity. This will require a little 5 inches of water needed to maturity.
Chicot	2229	50% of ear dented	We are 24-25 days or less to maturity on this field, so we will only need about 5 inches of water to finish the year out.
Clay	2260	R5- ear fully dented	Only about 3 weeks or so from maturity, so it will require about 4 more inches of water.
Desha	2172	30-40% of ear dented	Just a day or two behind Chicot County Field.
Jefferson	2136	20% of ear dented	Close to Desha County Field in maturity, so around 5” more of water needed.
Lawrence	2228	R5- ear fully dented	Like Clay County, we are about 3 weeks from irrigation cutoff.
Mississippi	1970	R3	Still no Southern rust, and just a few minor diseases present with very light disease pressure.
Monroe	1675	R1	We will continue to scout this field for diseases as well.
Prairie	2419	R5 and around 20% starch	Less than 2 weeks to R6, so we will only need around 2” of water to finish out.
White	1634	R2	This field was at blister this week and is doing well. Very light disease pressure.

## **Crop Updates**

### **Northeast – Stewart Runsick – Clay County Extension Agent/Staff Chair**

Clay County received 3-5 inches of rainfall this week. Most of the corn is in R5 or dent. Southern rust is in the area but I have not really seen any in the fields I have been in. It will probably be more visible next week. The late-planted corn will need to be monitored closely. The crop looks excellent.

### **River Valley – Kevin Lawson – Faulkner County Extension Agent/Staff Chair**

The River Valley received a slow 2 inches of rain from TS Barry. It was the perfect rain for July. Since it all soaked in over a couple of days, the fields are still wet and no irrigation has been necessary. We should get back to irrigation early next week. We are still all over the board with growth stages. Anywhere from V4 to R4.

### **Southeast – Kevin Norton – Ashley County Extension Agent**

Early corn is at irrigation termination. The 3 - 4 inches of rain from Barry finished it off. The rest is catching up fast. Found some banded sheath blight this week.

## **Corn Disease Update: Southern Rust**

T. R. Faske  
Extension Plant Pathologist  
July 11, 2019

Southern rust was detected earlier this week (July 9) in Woodruff Co. near Augusta. Disease incidence and severity was low (one leaf on two plants with 30-40 pustules/leaf) on corn at blister growth stage. The first or second week of July is when southern rust is typically detected in Arkansas, so this “first report of 2019” is on time. This announcement is a reminder to scout, and not a justification for widespread fungicide use. The current counties where southern rust has been detected can be monitored on the [NEW corn ipmPIPE website](#).

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.



## Timing

Morning low of 75F  
Daytime high of 93F  
+  
Min. 4 hr consecutive leaf  
wetness

Beginning Corn Growth Stage	Southern Rust in the Field	Weather Forecast Favors Southern Rust	Benefit from a Fungicide
R1 - Silk	Yes	Yes	Yes
R2 - Blister	Yes	Yes	Yes
R3 - Milk	Yes	Yes	Yes
R4 - Dough	Yes	Yes	Maybe
R5 - Dent	Yes	Yes	Unlikely
R6 - Maturity	Yes	Yes	No

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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.

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 following 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.