

Corn and Grain Sorghum Weekly Update – Final Update

2016 Update No 20

Corn and Grain Sorghum Update – Dr. Jason Kelley (Wheat and Feed Grains Specialist)

2016 was a challenging year in much ways for Arkansas corn and grain sorghum producers. The state average corn yield is estimated by the Arkansas Agriculture Statistics Service at 184 bu/acre; lower than earlier yield estimates. It is estimated that 750,000 acres of corn was planted, an increase of 290,000 from the previous year. Record rainfall in March delayed corn planting until late March and also caused many acres of early March planted corn to be replanted, especially in the southern portion of the state. There were few windows to plant corn, with a bulk of the acres planted at the end of March and Mid-late April. Overall, corn producers were able to get all their acreage planted in these small windows. Rains caused soil crusting and corn emergence issues in many fields. Lower than desired plant populations and poor emergence uniformity ultimately was a contributing factor for lower corn yields in many areas this year. Suboptimal stands will almost always give suboptimal yields.

In Little Rock, the summer of 2016 had the warmest average high temperatures and warmest low temperatures since 2010 according to the Little Rock National Weather Service; both are not conducive for record corn yields. The average low temperature in Little Rock was the second highest on record for much of the growing season. The Memphis National Weather Service indicated that Memphis had the 4th highest average temperature this summer, with 90 days of high temperatures of 90 degrees or more. While we did not have extreme heat this year (only 5 days over 100 degrees in Little Rock), heat was constant and was ultimately a yield limiting factor for corn. Rainfall was above average across much of the corn growing areas of Arkansas, which is often good, but with periods of dry weather followed by heavy rains, rainfall totals were deceptive and not as beneficial as it might seem. Seasonal rainfall totals in Little Rock were the highest since 2009 and was the 9th wettest summer on record. Rainfall after corn maturity in Mid-August was detrimental to quality with some sprouting of the grain and was likely a contributing factor to stalk rots that were more common this year. Lodging problems associated with high winds in July and late season lodging due to stalk rots were issues for many corn growers this year and were yield limiting factors.

Overall corn yields were lower on many farms this year than in previous years. A combination of several factors including low plant populations, non-uniform emergence, heat (especially on later plantings), too much rainfall (early and later in season) and lodging were limiting yields. The highest yielding corn in 2016 tended to be planted in March or early April with good plant stands on well-drained soil.

Grain sorghum acreage was much lower this year than in 2015, primarily due to lower grain prices and the threat of sugarcane aphids. An estimated 40,000 acres were planted in 2016, compared to 450,000 acres in 2015. Grain sorghum also suffered with the wet weather early in the growing season, resulting in poor/variable stands and poor early-season growth in some fields. Sugarcane aphids and headworms were problematic for producers statewide, with most fields being treated at least once for both pests during the season. With the warm and generally wet summer, foliar diseases such as anthracnose were more a problem than normal in susceptible hybrids. The biggest struggle this year for grain sorghum producers occurred in August just prior to harvest. A week long weather event that brought several inches of rain across the state caused widespread sprouting of grain in the head that was mature. Grain sorghum planted during April through early May (recommended time) was the most impacted and this comprised approximately 80% of the state acreage. Sprout damage levels were very high, resulting in a majority of the grain being sold at a considerable discount. Late planted grain sorghum (after Mid-May) was not mature enough to sprout with August rains and the quality of grain from later plantings was good. However yields from late planting in general were not any higher or lower than early planted fields. Overall grain sorghum yields were down considerably from last year, with the sprouting and subsequent shattering of grain. The state average grain sorghum yield is estimated at 78 bu/acre, down 10 bu/acre from 2015.

Corn and Grain Sorghum Research Verification – Kevin Lawson (Corn & GS Verification Coordinator)

Corn Research Verification Program (CRVP) – There were six CRVP fields in 2016. Five were harvested for grain and one was harvested for silage. The five CRVP fields that were harvested for grain averaged 192 bushels per acre. The average planting date was April 5, with an average emergence date of April 16. The average harvest date for the five fields that were harvested for grain was September 4. A warm early spring encouraged early planting this year. The April 5 average planting date is the second earliest planting date in the last 10 years of verification. After fields were planted, cool and rainy weather brought less than ideal conditions. The Clay County field was replanted due to heavy rains, and the Lincoln County field saw some rootless corn syndrome. Sidedress and herbicide applications were applied without too much problem. Once irrigation started many of the field's experienced hot conditions. Not much rain fell during the majority of the summer, but near maturity the rains came back. From maturity to harvest an average of 5 inches of rain fell. This caused a delay in harvest. Rain soaked fields wouldn't dry down and the moisture seemed to just stay in the lower 20's. Lodging in some fields started showing up and became a concern. Harvest started by the end of August and yields were lower than what was expected earlier in the year.

County	Hybrid	Harvest Date	Final Yield adjusted to 15.5% moisture
Clay	Pioneer 1637YHR	September 13	175 bu/ac
Lincoln	DKC 66-87 VT2P	August 25	226 bu/ac
Pope	Pioneer 1319HR	July 25	36 tons/ac
Prairie	Armor 1555PRO2	September 3	192 bu/ac
River Valley	Terral REV 23BHR55	September 14	192 bu/ac
St Francis	Pioneer 2089YHR	August 31	172 bu/ac

	Average CRVP Planting Date	Average CRVP Emergence Date	Average CRVP Harvest Date	Average CRVP Yield (bu/ac)	Average State Yield (bu/ac)
2016	April 5	April 16	September 4	192	184
2015	April 16	April 24	August 30	191	181
5 Year Average	April 9	April 19	September 5	213	183
10 Year Average	April 10	April 19	September 5	203	168

Grain Sorghum Research Verification Program (GSRVP) – The two GSRVP fields were planted in Jefferson and White Counties. The two fields averaged 61.7 bushels per acre. Each of the fields had unique problems. The Jefferson County field had emergence problems. The final plant population was 37,000 plants per acre but was uniform enough to keep. The White County field was a dryland field that missed timely rains and also experienced herbicide drift early in the year that limited yield potential. The biggest issue came later in the season after the fields were mature. Mid-August rains caused high levels of grain sprouting in the head, which resulted in poor grain quality and yield loss due to shattering. Sugarcane aphids were present in both fields, but after sprouting of the grain, they were not treated.

County	Hybrid	Harvest Date	Final Yield adjusted to 14% moisture
Jefferson	Armor Maverick	September 15	75.2 bu/ac
White	Pioneer 83P99	September 6	48.1 bu/ac

Southeast Arkansas Update – Kevin Norton (Ashley County)

We had a lot of highs and low with this year's corn crop. Overall, corn yields were down 30 - 40 bushels per acre. Yields ranged from 235 - 150 bushels per acre. Low stand counts, down corn and replants suffered the worse. Weather issues at planting and prolonged rains in August took a heavy toll on yield.

We had a limited amount of grain sorghum in Ashley County, what was harvested before the August rains yielded 120 - 130 bushels per acre. Yields dropped off at least 40 bushels after the rains.

Central Arkansas Update – Brett Gordon (White County)

Corn and grain sorghum harvest is almost complete in White County. Overall, the corn crop was average for most producers. Yields in the county ranged from 170 to 200 bushels per acre. Grain sorghum was hit hard by late season rainfall. Luckily, very little grain sorghum was planted in the county. The grain sorghum sprouted on the head causing significant yield loss (at least 30% if not more). Sugarcane aphids were at treatment threshold, but producers were reluctant to make insecticide investments after the sprouting occurred.

Northeast Arkansas Update – Stewart Runsick (Clay County)

Corn and grain sorghum harvest is nearing completion. There are still a few fields out there left to harvest. Yields have been mediocre to average for corn and poor for grain sorghum. I have heard a lot of 175 to 200 bushel corn. The highest yields reported were around 230 bushels per acre. Stand was the difference for most fields. We experienced a lot of uneven emergence and skippy stands due to wet cold conditions early. Even the replant corn struggled. Fields with even emergence and stands above 30,000 plants per acre were better. The rainfall really affected the grain sorghum yields. The earliest sorghum sprouted on the head and fell off resulting in 30% to 50% yield loss. In the later planted sorghum grain quality was better, but the yields were still low. A few fields lodged. Most of it was sprayed for sugarcane aphids and head worms.

River Valley Update – Kevin VanPelt (Conway County)

The corn harvest was finally completed last week. Producers got off to a good start and had a really good growing season in the River Valley, but by late July the weather started causing problems. Storms with high winds laid corn down in some areas and southern rust started showing up, but didn't get bad enough that anyone had to treat. Then just as the majority of the corn acreage was reaching black layer in August, continual rains started followed by a week or two of humid conditions which prevented drying down still further. There was some sprouting in the ears that occurred as of this, but not a significant amount. The overall averages reported by producers have fallen in the 170-180 bushels per acre range.

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University of Arkansas Systems Division of Agriculture Cooperative Extension Service Web Pages

Extension Corn Webpage – www.uaex.edu/corn

Extension Grain Sorghum Webpage – www.uaex.edu/grain-sorghum

Row Crop Verification Webpage – www.uaex.edu/verification

Corn & Grain Sorghum Verification Webpage – www.uaex.edu/cgsrvp