Arkansas Rice Update

Dr. Jarrod Hardke & Scott Stiles

Sept. 2, 2016 No. 2016-25 www.uaex.edu/rice

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Crop Progress

"I thought it'd a been bigger than this." That's what Uncle Vercy Ledbetter said the first time he saw the ocean (his sons and Jerry Clower took him if you don't know the joke). I also thought the rice crop would've been bigger than this.

Yields so far have been underwhelming to lackluster depending on your spot in the world. We're now around 25% harvested and beginning to see a clear pattern of poor yields. Late season disease such as blast and bacterial panicle blight impacted a few fields but that seems to be on a minimal basis. The blank kernels have stolen the show.

The early NASS yield projection was just shy of 167 bu/acre. I thought it was initially more like 163-164 and started backing off of that as soon as the flooding and sprouting started. Now that we have some information in hand I think we can start by backing down to 160 bu/acre. I would be tempted to lower it further but we have only harvested 25% of the crop and things do still have time to straighten themselves out in later rice.

Low Rice Yields & the Weather That Brung Them

Table 1 shows the daily high and low temperatures from July 15 to August 15 at four sites ranging from top to bottom in the Delta.

July 18 to July 28 is the particular string of days that concerns me most and that seems to be playing out in the field. Rice that would've headed (and ultimately flowered) just before or during this time would certainly run the risk of having some sterility. Just a few days and we might not notice but that extended period has left too many fields with a high percentage of blank kernels.

To be fair, we usually only fill about 80% of kernels. If a small window of bad weather happens then we overcome it by filling more of the remaining kernels. But an extended window like this provides little opportunity for recovery.

Hot days can cause sterility. Hot nights can cause sterility. Get them both and add in high humidity and you've got yourself some serious sterility. Remember these were the days of the 100+ degree heat indexes.

Table 1. High & low temperatures for selected locations in AR, 7/15/16-8/15/16.

	Corning		Wynne		Stuttgart		Eudora	
	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo
15-Jul	90	91	88	68	93	71	98	70
16-Jul	89	67	89	71	90	71	94	72
17-Jul	89	67	92	73	93	76	95	76
18-Jul	94	75	94	77	93	73	96	75
19-Jul	95	76	94	75	92	78	97	76
20-Jul	95	77	96	75	93	78	98	77
21-Jul	94	76	98	73	95	79	98	78
22-Jul	97	78	97	78	95	80	101	75
23-Jul	99	75	99	79	95	76	99	75
24-Jul	95	76	94	74	91	76	95	74
25-Jul	93	76	88	76	98	76	96	74
26-Jul	89	76	94	77	93	78	97	74
27-Jul	95	74	96	74	94	78	97	74
28-Jul	93	73	94	75	85	75	97	75
29-Jul	91	71	89	75	86	72	95	73
30-Jul	89	70	88	72	90	72	93	73
31-Jul	89	70	91	71	88	71	95	71
1-Aug	90	71	87	73	91	71	90	73
2-Aug	91	72	94	77	94	77	94	74
3-Aug	94	76	96	77	96	77	99	78
4-Aug	89	74	95	78	96	79	100	78
5-Aug	94	74	96	76	96	79	99	77
6-Aug	94	75	95	74	87	73	99	76
7-Aug	85	73	86	75	89	73	98	73
8-Aug	87	71	88	71	97	73	95	73
9-Aug	87	71	89	71	86	75	91	72
10-Aug	91	73	93	72	92	77	96	75
11-Aug	92	74	96	74	94	76	95	72
12-Aug	92	76	95	77	94	78	96	72
13-Aug	93	76	93	77	85	72	93	73
14-Aug	82	73	86	75	77	75	84	72
15-Aug	77	70	83	72	92	72	85	73

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Table 2 helps to add to the story. Based on when your rice emerged after planting we know within a few days of when that rice will head and begin to flower. Some of the absolute earliest rice we cut had pretty good yields before the rain set in. The rice we're getting into now emerged a little later and fell right into the teeth of the heat and humidity.

Table 2. Expected date of 50% heading based on date of rice emergence.

Arkansas Co.		Craighead Co.	
Emergence	50% Hdg	Emergence	50% Hdg
1-Apr	5-Jul	1-Apr	8-Jul
15-Apr	10-Jul	15-Apr	11-Jul
1-May	18-Jul	1-May	19-Jul
15-May	27-Jul	15-May	26-Jul
1-Jun	8-Aug	1-Jun	7-Aug

For those keeping score at home, know that in our planting date studies at Stuttgart:

- Planted March 22 – emerged April 12.
- Planted April 5 – emerged April 19.
- Planted April 23 – emerged May 1.
- Planted May 6 – emerged May 14.

There are a couple more but you see the point. Even the earliest planted rice didn't emerge much different from rice planted later. We'll see how the cards play out from here, but it could be a tough draw for a little while.

Probably another common question out there: difference between varieties and hybrids. When these down yields began it was predominately the varieties showing up with the biggest hits. There are multiple theories on why the hybrids may better handle the heat from it being a genetic adaptation to warmer temperatures to a difference in the way they head and flower with longer panicles providing a greater window of escape.

While the hybrids do seem to be handling it better, there have been more reports just in the last couple of days indicating the hot conditions did get to them to a certain degree as well. Ultimately I don't have enough information in hand to definitely draw where that line in the sand is in terms of how big a difference between varieties and hybrids. The yield losses sound different but are starting to sound more and more relatively down.

Fig. 1. Many fields are littered with a high number of blank kernels behind the combine.

Need to Know Info About Submerged Rice Fields (And Some Unknowns)

Heard yesterday that any harvestable rice grain that has been submerged is considered "adulterated" and should not be harvested and/or enter the food channel according the FDA. For those with crop insurance this is going to mean that if it's shown/proven the rice grains went underwater then that field will be zeroed out and will have to be destroyed. By our estimates this amounts to about half of the 40,000 rice acres affected by floodwater.

The big question that still remains (waiting on an answer) is what happens to fields like this that don't have crop insurance? I wish I had this answer right now but I don't. As soon as I have one I'll be passing it along.

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Calculating Harvest Losses

It's also that time of year for the questions about how to calculate harvest losses. They of course pick up more when there are a lot of unexpectedly lower yields.

All cultivars we grow differ somewhat in seed weight, but a general number to use across varieties and hybrids is 19,000 seed per pound. Based on 19,000 you can see in Table 3 how many seed you need to average per square foot and what the yield loss in bu/acre would be. Remember that you need to do this in different areas to account for differences in accumulation directly behind the combine and out to the sides.

Table 3. Converting field loss counts into bushels per acre.

No. of rice kernels uniformly spread over one square foot	Average Field Loss bushels/acre
25	1.3
50	2.5
75	3.7
100	5.1
200	10.2

Market Update

With a break from the heavy rains seen a few weeks ago the condition of the U.S. rice crop appears to be stabilizing. In Monday's *Crop Progress* report the National Ag Statistics Service (NASS) held the percentage of the U.S. crop rated "poor" to "very poor" unchanged from the previous week at 13 percent. The percentage of Arkansas and Louisiana's crop rated "poor" to "very poor" is currently 19% and 17% respectively—also unchanged from the prior week.

Table 4. USDA-NASS Crop Progress: Rice Condition (%).

Week ending August 28, 2016					
	Very poor	Poor	Fair	Good	Excellent
Arkansas	**7**	**12**	**31**	**36**	**14**
California	-	-	15	75	10
Louisiana	**6**	**11**	**30**	**50**	**3**
Mississippi	-	2	21	49	28
Missouri	1	3	24	51	21
Texas	3	4	25	55	13
6 states	5	8	27	47	13
Previous week	4	9	26	48	13
Previous year	2	4	28	48	18

Dry conditions allowed harvest to gain some momentum over the past week. As of August 28th, Arkansas' rice crop was 12% harvested—slightly ahead of the 5-year average. The U.S. harvest progress was estimated at 22% compared to the 5-year average of 21 percent.

Table 5. USDA-NASS Crop Progress: Rice Harvested (%).

Week ending August 28, 2016				
	8/28/2015	8/21/2016	8/28/2016	5-yr avg.
Arkansas	13	4	12	10
California	-	-	-	-
Louisiana	81	60	70	71
Mississippi	19	2	10	16
Missouri	-	-	2	2
Texas	69	70	82	72
6 states	24	15	22	21

USDA-FAS Long-Grain Export Sales:

- **Rough Rice**

Export sales for the week ending August 25 netted 7,945 metric tons (MT) of long-grain rough rice; down from the previous week's total of 16,451 metric tons. The largest sale last week was 30,000 MT to Venezuela for prompt shipment. Most of what would have been considered a great week of sales was offset by a cancellation of 29,467 MT by an unknown buyer. Total sales to Venezuela are now 90,000

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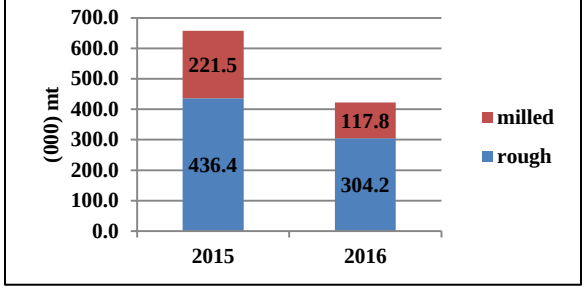
MT making it the top market for rough rice. As of August 25 rough rice export sales total 304,189 MT of which 93,076 MT have been shipped. Long-grain rough rice export sales are running 30% behind last year's pace at this time.

- **Milled Rice**

Long-grain milled sales for the week ending August 25 totaled 31,875 metric tons (MT) which is the highest weekly sales total seen in the first four weeks of the 2016 marketing year. The largest sale last week was 28,000 MT to Haiti. Total sales to Haiti are now 70,025 MT which accounts for just over 59% of total long-grain milled sales to date. As of August 25, milled export sales total 117,835 MT of which 34,662 MT have been shipped. Milled export sales are running 47% behind last year's pace at this time.

Fig. 2. U.S. Long Grain Export Sales (week ending August 25)

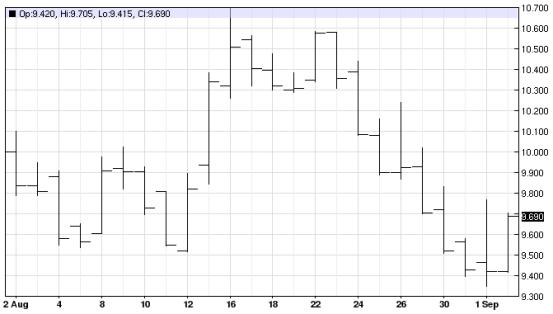


Source: USDA-FAS.

Market Commentary:

November rice futures closed 27 cents higher Friday to settle at $9.69 per hundredweight (cwt.). Traders short the market for most of the last two weeks banked profits ahead of the long Labor Day weekend. November futures have closed lower 7 of the last 9 trading days and touched 10-year lows this week. Since August 22nd rice futures have been in a steep downtrend. Today's trading range stalled right against down-trending resistance from the August 23rd high.

Fig. 3. CBOT November 2016 Rice Futures.



Rough Rice Futures Quotes

As mentioned earlier, crop condition ratings appear to have stabilized and the near term weather forecast appears favorable for harvest progress with low rain chances and temperatures trending into the lows 90s by Sunday/Monday. This may keep futures prices under pressure next week. November futures have found price support the last three days around $9.40. This price level may serve as near term support if yields continue to be reported as widely variable.

With harvest still in the early stages in Arkansas it may be too early for the USDA to make any significant adjustments to rice production in the upcoming September 12 *Crop Production* report. However, with crop losses in Louisiana and Arkansas it is becoming likely that production estimates will start to decline if not in September, subsequent monthly reports. If export demand picks up in conjunction with decade low prices and lower production estimates, ending stocks will be more manageable--but likely still heavy.

Rough rice basis around eastern Arkansas this week is running on average 50 cents per cwt. under November futures for September/October delivery at mill points. Basis for delivery to dryers is in the range of 65 to 85 cents per cwt under November futures.

2015 Rice PLC Payments:

Regarding 2015 PLC payments, USDA is expected to announce the marketing year prices for long grain and medium grain rice on October 31st. Any payments would then be made in early November.

Projected 2015 PLC payment rates are provided and updated monthly on the Farm Service Agency's ARC/PLC website at this link: ARC/PLC Program Data

Look under the heading "**Program Year 2015 Data**" for "**Projected and Final 2015 PLC Payment Rates**".

As of August 12, FSA is projecting a 2015 marketing year average price for long grain of $11/cwt. or $4.95/bu. A projected PLC Payment Rate can be determined by subtracting the $4.95/bu. marketing year average price from the PLC Reference Price of $6.30/bu. This equals a projected PLC Payment Rate of $1.35 per bushel.

Table 6. 2015 Projected Rice PLC Payment Rates (as of August 12, 2016).

	A	B	C	(A – higher of B or C)
Unit: $/bu.	**Reference Price**	**Loan Rate**	**Marketing Year Avg. Price**	**Projected PLC Payment Rate**
Long-Grain	$6.30	$2.925	$4.95	$1.35
Medium-Grain	$6.30	$2.925	$5.09	$1.22

The same method can be used to calculate the payment rate for medium grain, which is projected at $1.22 per bushel. Though not announced at this time, it is likely that PLC and ARC payments for the 2015 marketing year will be reduced by 6.8% (sequestration) as was the case for the 2014 marketing year payments.

Table 7. USDA Report Calendar.

Date	Report
9-5	Labor Day Holiday (markets closed)
9-6	Crop Progress (3:00 p.m.)
9-9	Export Sales (7:30 a.m.)
9-12	Crop Production (11:00 a.m.)
9-12	WASDE (supply/demand, 11:00 a.m.)
9-12	Crop Progress (3:00 p.m.)

Additional Information

Arkansas Rice Updates are published periodically to provide timely information and recommendations for rice production in Arkansas. If you would like to be added to this email list, please send your request to rice@uaex.edu.

This information will also be posted to the Arkansas Row Crops blog (http://www.arkansas-crops.com/) where additional information from Extension specialists can be found.

More information on rice production, including access to all publications and reports, can be found at http://www.uaex.edu/rice.

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