

# *LOUISIANA RICE NOTES*

Dr. Dustin Harrell

August 16, 2016

No. 2016-08



## **Unprecedented Flooding Causes Economic Losses to Louisiana Rice Crop**

Rain over the weekend in parts of southwest Louisiana, where approximately 75% of the state's rice crop is grown, has totaled over 24 inches in many places. This rainfall came in a very short window and has caused many low-lying areas, including many rice fields, to flood. Many of the initial flooded areas drained back by Monday morning; backwater flooding from nearby bayous and rivers has caused

other areas to become flooded. The backwater flooding is still rising in many rice production areas.

While rice is grown in flooded fields, water that overtops rice can cause yield losses just like it can in other crops. The damage can happen much faster when the grain is ripe and ready to be harvested. When harvest-ready rice is submerged, the grain can imbibe water and germinate (see picture). This causes the rice to sprout at the heads. Sprouted rice, if harvested soon after sprouting, can



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still be harvested. The quality of the milled grain is considerably lower though. Fortunately, there is a market for a limited amount of this type of rice. Mature rice that is submerged for several days can rot and become rancid. This rice would not be harvestable and would be considered a total loss.

Another problem that can happen with rice following storm events is lodging. Lodging is a term



that refers to crops that lean and, in the worst cases, fall over and lay on the ground. In most cases lodging is caused by strong winds, rain (which makes the panicles top heavy), wet soils, and weak stalks. Lodged rice that lays flat on the ground is slow and difficult to harvest, and much of the rice is lost in the attempt. Lodged rice frequently sprouts at the head and can also become rancid because it typically holds moisture even when fields are not currently flooded. This results in reduced grain



quality, reduced milling, reduced harvest efficiency, and significant economic losses to the producer.

Estimating the economic impact that the floods have had so far on the rice currently in the field is not an easy task. However, many have asked me this particular question over the past couple of days, so I tried to do my best to come up with a number. Remember, my estimate is highly speculative and will probably change considerably before all of this is over. I used the following information to make my estimate:

1) I polled extension agents in every affected parish to determine how much rice was left to be harvested in their parish and how much of that is under water or will, most likely, be lost due to submergence or other issues. For our three largest acreage parishes (Acadia, Jeff Davis, and Vermilion), approximately 20% was currently left in the field with approximately 20% that was estimated to be lost.

2) I coupled this with the most recent [FSA certified acres by parish report](#), which states that we have approximately 430,032 acres.



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3) I used an average yield value (by NASS Aug. 12) of 7,100 lb/A.

4) I estimated an average rice price of \$11 per cwt.

The estimated farm gate loss value to southwest Louisiana was approximately \$14.3

million (Table 1). Note that this does not include potential ratoon rice losses. It also does not include infrastructure and equipment losses that will be significant to rice producers in the area.

**Table 1. Preliminary estimation of the unharvested rice that was lost due to flooding in southwest Louisiana in September of 2016.**

| Parish        | Crop Type | Planted Acres  | Estimate of non-harvested rice <sup>†</sup> | Acres remaining in field | Estimate of crop lost | Estimate of yield loss <sup>‡</sup> | Value of lost crop <sup>§</sup> |
|---------------|-----------|----------------|---------------------------------------------|--------------------------|-----------------------|-------------------------------------|---------------------------------|
|               |           |                | %                                           | acres                    | %                     | Cwt.                                | \$                              |
| ACADIA        | Long      | 81,279         | 20                                          | 16,256                   | 20                    | 230,832                             | 2,539,151                       |
| ACADIA        | Medium    | 2,119          | 20                                          | 424                      | 20                    | 6,017                               | 66,183                          |
| CALCASIEU     | Long      | 9,480          | 30                                          | 2,844                    | 20                    | 40,387                              | 444,252                         |
| CAMERON       | Long      | 14,143         | 50                                          | 7,072                    | 20                    | 100,416                             | 1,104,576                       |
| CAMERON       | Medium    | 83             | 50                                          | 41                       | 20                    | 586                                 | 6,446                           |
| EVNGELINE     | Long      | 41,334         | 45                                          | 18,600                   | 20                    | 264,123                             | 2,905,353                       |
| EVNGELINE     | Medium    | 2,636          | 45                                          | 1,186                    | 20                    | 16,844                              | 185,287                         |
| IBERIA        | Long      | 850            | 20                                          | 170                      | 20                    | 2,414                               | 26,554                          |
| IBERIA        | Medium    | 9              | 20                                          | 2                        | 20                    | 24                                  | 269                             |
| IBERVILLE     | Long      | 113            | 20                                          | 23                       | 20                    | 321                                 | 3,533                           |
| JEFF DAVIS    | Long      | 75,444         | 20                                          | 15,089                   | 20                    | 214,261                             | 2,356,876                       |
| JEFF DAVIS    | Medium    | 5,368          | 20                                          | 1,074                    | 20                    | 15,246                              | 167,706                         |
| LAFAYETTE     | Long      | 638            | 20                                          | 128                      | 20                    | 1,812                               | 19,932                          |
| LAFAYETTE     | Medium    | 293            | 20                                          | 59                       | 20                    | 833                                 | 9,158                           |
| ST LANDRY     | Long      | 23,182         | 70                                          | 16,227                   | 20                    | 230,425                             | 2,534,670                       |
| ST LANDRY     | Medium    | 869            | 70                                          | 608                      | 20                    | 8,640                               | 95,036                          |
| ST MARTIN     | Long      | 4,041          | 50                                          | 2,020                    | 20                    | 28,689                              | 315,583                         |
| ST MARY       | Long      | 216            | 20                                          | 43                       | 20                    | 613                                 | 6,747                           |
| VERMILION     | Long      | 48,579         | 20                                          | 9,716                    | 20                    | 137,963                             | 1,517,594                       |
| VERMILION     | Medium    | 279            | 20                                          | 56                       | 20                    | 793                                 | 8,727                           |
| <b>TOTALS</b> |           | <b>310,954</b> | <b>20</b>                                   | <b>91,637</b>            | <b>20</b>             | <b>1,301,239</b>                    | <b>14,313,632</b>               |

<sup>†</sup>Remaining unharvested rice in the field was determined by polling extension agents in the respective parishes.

<sup>‡</sup> NASS estimates from Aug 12 was 7,100 lb/A.

<sup>§</sup> assumed \$11 per cwt

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## **Ratoon Rice Losses and Ratoon Regrowth Decline**

Significant ratoon rice acres will also be lost due to the flooding. Rice first crop yields are estimated to be 7,100 pounds per acre (NASS report Aug 12). While not a record, this would be better than the 2015 average yield in Louisiana. We would like to see yields in the 7,600 pound per acre range, which we observed a couple of years ago. Generally, when first crop yields are low in southwest Louisiana, we can make up some of those yield losses with the ratoon rice crop. We can boost ratoon rice yields by harvesting dry, manipulating the stubble by flail mowing or rolling, and by applying nitrogen fertilizer on dry ground followed by a very shallow flood of “clear” water.

Prior to the flooding, we were observing frequent afternoon showers in many parts of the southwest Louisiana rice production areas, which had slowed harvest and caused many fields to be harvested on wet soils. This caused rutting in the field, which reduces yield. The wet soils also made it impossible to post harvest mow, roll or flail mow fields, and nitrogen fertilizer was not applied on dry ground in many cases south of I-10. All of this was already reducing ratoon crop production potential for 2016.

Flooding of ratoon stubble can cause the ratoon stubble to die just like any other plant. If the ratoon regrowth is able to extend past the waterline, the ratoon crop should be OK. However, regrowth below the waterline for an extended period of time will be lost. Ratoon stubble not submerged but in high water can have problems, too. Typically, ratoon water becomes dark brown and low in oxygen as organic matter from the first crop harvest starts to decompose. In addition, the dark water prohibits sunlight from penetrating in the water and reaching rice regrowth from the lower nodes and the crown

node. This can cause any regrowth that has started to die back. There is not a common term for this, so for now we will call it Ratoon Regrowth Decline (RRD).

If you are noticing RRD, the best management practice is to drain the water to a level that will allow sunlight and oxygen to reach the regrowth at the lower nodes. As the green regrowth from the lower nodes gets taller, the flood can be increased.

### **Note from Donald Berkin (Tuesday Aug 16, 11 a.m.)**

I received a call from Todd Parker with Commissioner Strain's office this morning (Monday) asking about the crop conditions in my area and offering assistance if needed. I reported that most of the rice was still standing but in deep water with pumping off taking place where possible. Afterwards, I talked to one farmer who mentioned someone had commented that the locks were still closed. I called Todd back and expressed my concern that all the locks needed to be open because a lot of water was still coming down from the north and the levels to the south were already high. He reported back that the commissioner had contacted Congressman Boustany's office, and they were going to contact the colonel with the Army Corps of Engineers responsible for lock operations.

I received a call earlier this evening from an aid to Congressman Boustany. She stated that the contact with the Corps assured her that all of the locks in the basin are under constant monitoring but can't remain open continuously due to tidal activity. I'm sure today's south wind didn't help any. As the water rises they will probably be opened for longer periods of time, if not continuously. I'm sending this notice to assure all concerned that what can be done concerning the locks is being done. Feel free to forward this info to anyone affected by the rising waters.

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My area went through a similar event in May of 1980. This appears to be as bad, if not worse due to more widespread rain. I've gotten reports that some protection levees to the south are close to capacity and that some farmers in different areas already have rice and soybeans under water. A big change in a short period of time. Good luck everyone.

our soybean acreage is still flooded, again much worse than they look from the highway. We are all praying for some dry weather.

## 8/16 p.m. Vermilion Parish

Submerged rice. 20% of remaining rice. Canal not flowing yet. 70% of remaining crop still standing. Mermentau is standing better than cl111.

## 8/13 - p.m. - Acadia Parish

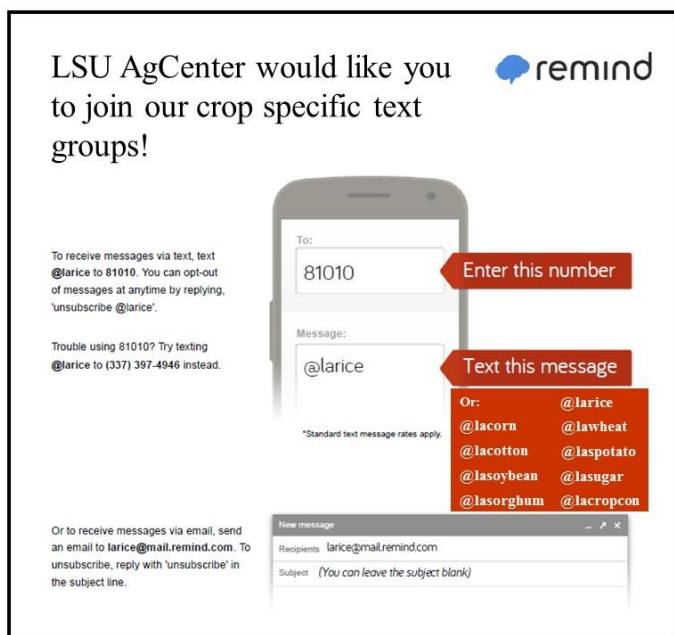
Our prayers go out to everyone that endured this hellacious amount of rain the last 24 hrs. My brother Bill had to evacuate his home. Candee and I filled sand bags this morning. Water was a couple of inches from making my day much worse. My estimate is 18-20 inches at my home. We have about 15-20% of crop left in field. Couldn't see beans this afternoon on some farms and second crop looked like big lake.

## 8/14 a.m. - South Jeff Davis Parish

Water came up overnight. Not going to crest until tues/wed, if not later. Not good! (See pics).

## 8/14 p.m. - Acadia Parish

Water is still high in the countryside but receding north of Crowley. Some closed roads are now passable. Some roads are open even though still listed as closed on DOTD website. Driving around today the rice not harvested has a lot of water in the fields. Some fields have very little down and some have almost 100% down. All the down rice looks to be only leaning but that is because the deep water is holding it up. Our fields have very little down. A neighbor who has a history of over fertilizing has a lot down. When looking closely you can see the rice heads floating in the water. That water has to go down and then the heads dry before harvest can begin. There will be quality loss for sure. How much is of course unknown. When combining it all gets



## Comments and Pictures from Producers (Producer names were kept anonymous)

### 8/16 p.m. Acadia Parish

We are fortunate not to have water in our homes or bins. Some of our fields are much worse than they look from the highway. Others I think will be ok. We are not able to let water down on some of our second crop trying to keep unharvested rice above water. We are draining in some areas and rising in others. We have 1557 acres left to cut. 1 good week. 442 of 111. 419 of 745. 696 of 753. The majority of



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mixed up. So my take on the situation is that we were having average yield, some high some low, with good quality. Now we will have less than average yield because of down conditions and lower quality because of sprouted rice. There are some reports that water has risen on some farms into the bins stored with rice. I have not heard much and that was even minimal wetting.

## 8/14 a.m. - Central Jeff Davis Parish.

About 10 inches of rain that was accompanied by 15 mph winds. However no rice was blown down because the deep water in the rice made it buoyant. He has no rice under water and he thinks his 2nd crop will be okay. However, because he will be rutting the rest of his rice when he harvest, he will not be able to ratoon it. He will lose some soybeans, but not many.

## Vermilion Parish (Sunday 1:20)

Vermillion Parish. We are lucky enough to be on high ground so the water is draining out but it will take a while.

## Avoyelles near Marksville (Sunday 1 p.m.)

6 to 12 inches. Rice still standing, lots of water in fields, but rice is OK for now.

## Cameron/Jeff Davis Parishes (Sunday 12:15 p.m.)

360 acres to go water just below the heads. The ripest rice is sprouting on the heads. My neighbor has just over 1,000 acres ready with water levels about the same as mine. Lots of rice either

underwater are about to go underwater in the Welsh Thornwell Lake Arthur area. Also second crop is completely under and will be for a while. Water levels will continue to rise until at least Tuesday.

## Evangeline Parish near Mamou (Sunday 12:15 p.m.)

Won't know true damage until we get back into the fields.

## Evangeline near Eunice (Sunday 11:30 a.m.)

Rice on the ground and under water.

## Evangeline (Sunday 11:10 a.m.)

Some additional lodging. What is lodged is in or under water and still rising in some areas. There are areas with standing rice under water.

## Jeff Davis (Sunday 10:40 a.m.)

99% still standing. I think 10+ in. Rain kept it standing.

## Jeff Davis (Sunday 10:30)

Not throwing in the towel yet

## Southwest Acadia (Sunday 9:30 a.m.)

Water over rice where down fields along Mermentau River impossible to get to Water over 2nd crop in bottom cuts.

## Jeff Davis (9:00 a.m.)

62 acres Jennings along I-10 – see picture.

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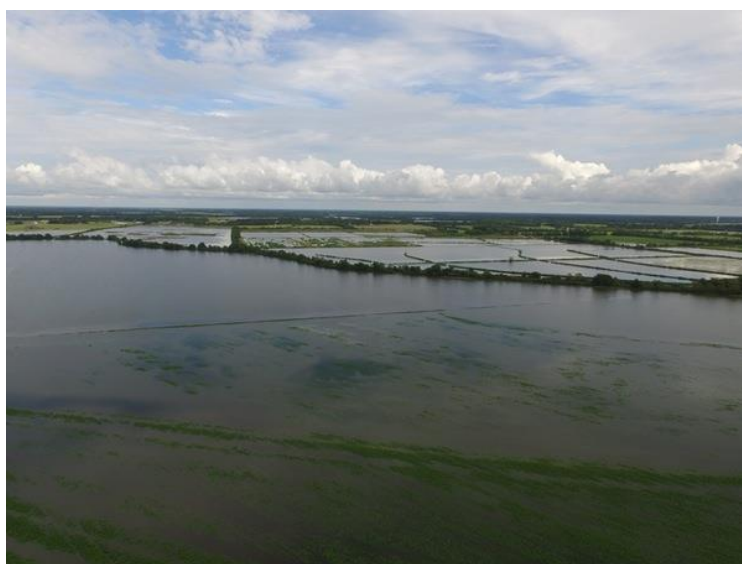


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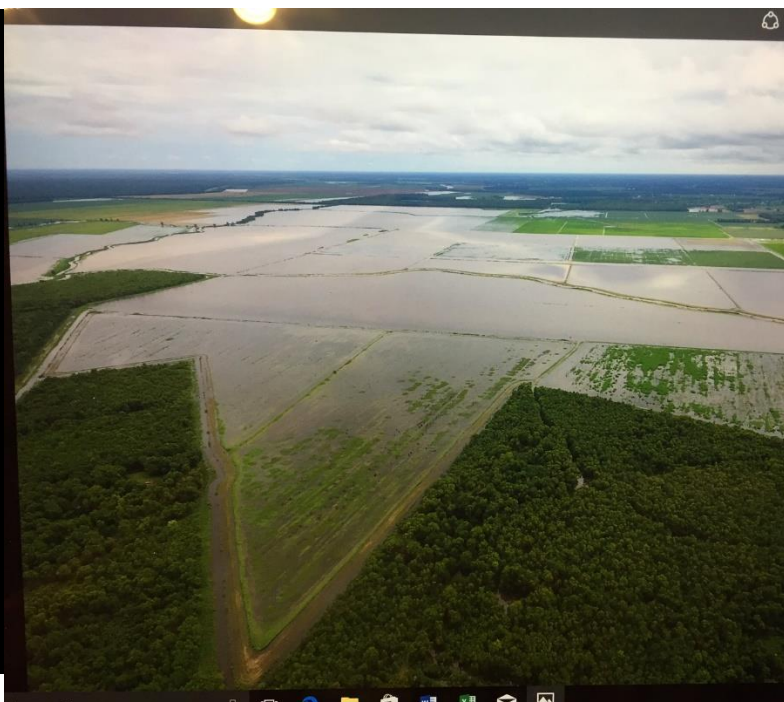


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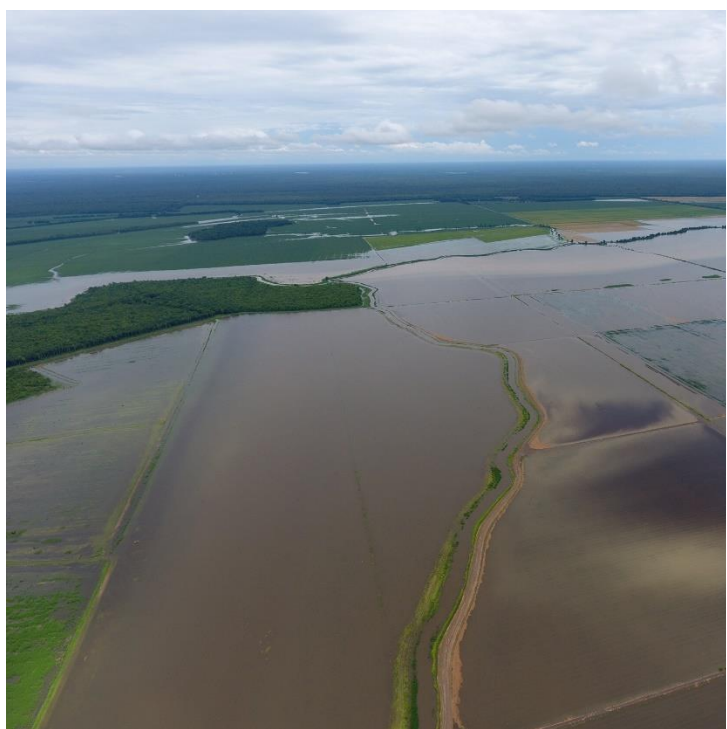


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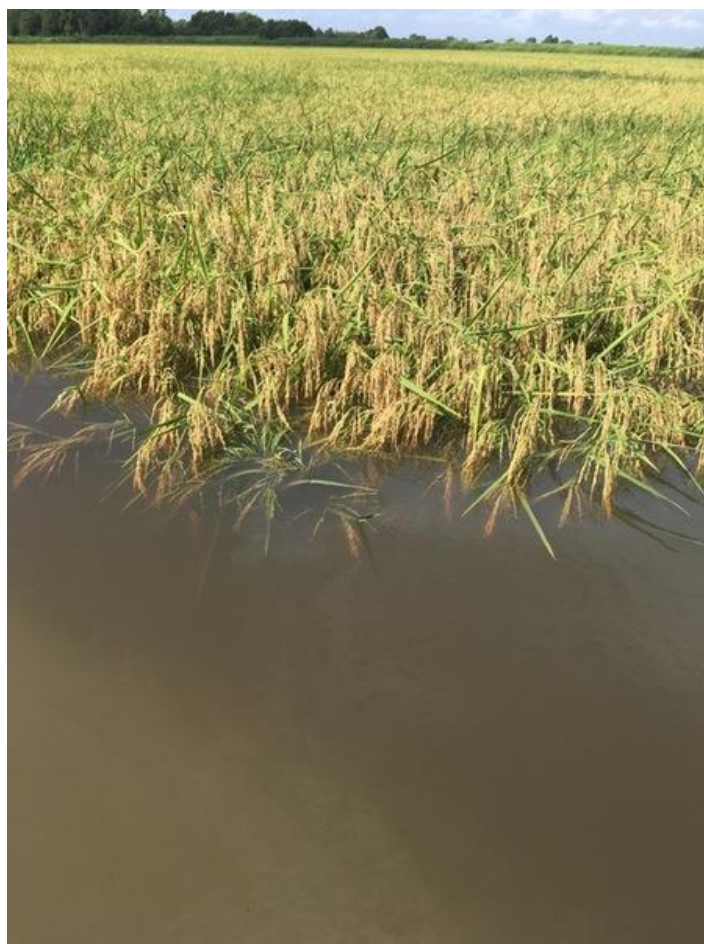
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## **Contact Information**

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