



LOUISIANA RICE NOTES

Dr. Dustin Harrell

May 22, 2020

No. 2020-02

Virtual Field Day Scheduled for July 1

The LSU AgCenter H. Rouse Caffey Rice Research Station Field Day holds the largest field day in the state with attendance from 300 to over 500 people over the past decade. Due to the expected number of people and the uncertainty of the safety of gathering that many people together at one time due to the COVID-19 crisis, the LSU AgCenter has opted to have the first ever “virtual” rice field day on July 1. Field tour presentations, poster sessions, and guest speakers will be prerecorded and uploaded to the virtual rice field day web site ([link to field day website](#)) which will go live on July 1. More information about the field day can be found in the official press release written by Bruce Schultz ([link to press release](#)).



Louisiana Rice Still Has High Yield Potential

Most of the rice in southwest Louisiana which was drill-seeded in early March is at or near green ring this week. Earlier drill-seeded rice and water-seeded rice is at panicle differentiation (1/2-inch internode elongation) to early boot. Rice planting in northeast Louisiana was delayed in most areas this year due to wet conditions but planting wrapped up last week and most growers are reporting good stands.

Early planted rice in south Louisiana has faced very little diversity this year so far, save a few cold spells which slowed growth and caused some wind damage. We did see some more drastic stress symptoms in rice where herbicides and the permanent flood were applied just prior to the cold spells. Rice quickly recovered in most cases after a few days of warmer weather and good growing conditions. Other than that, this year's crop looks great and we have a higher yield potential this year than we have seen in the past several years at this point in the season.

Weather this year has been odd to say the least. The average daily high temperature during March in Crowley was approximately 10 degrees higher than the historical average (Figure 1). April was also higher than normal

LOUISIANA RICE NOTES

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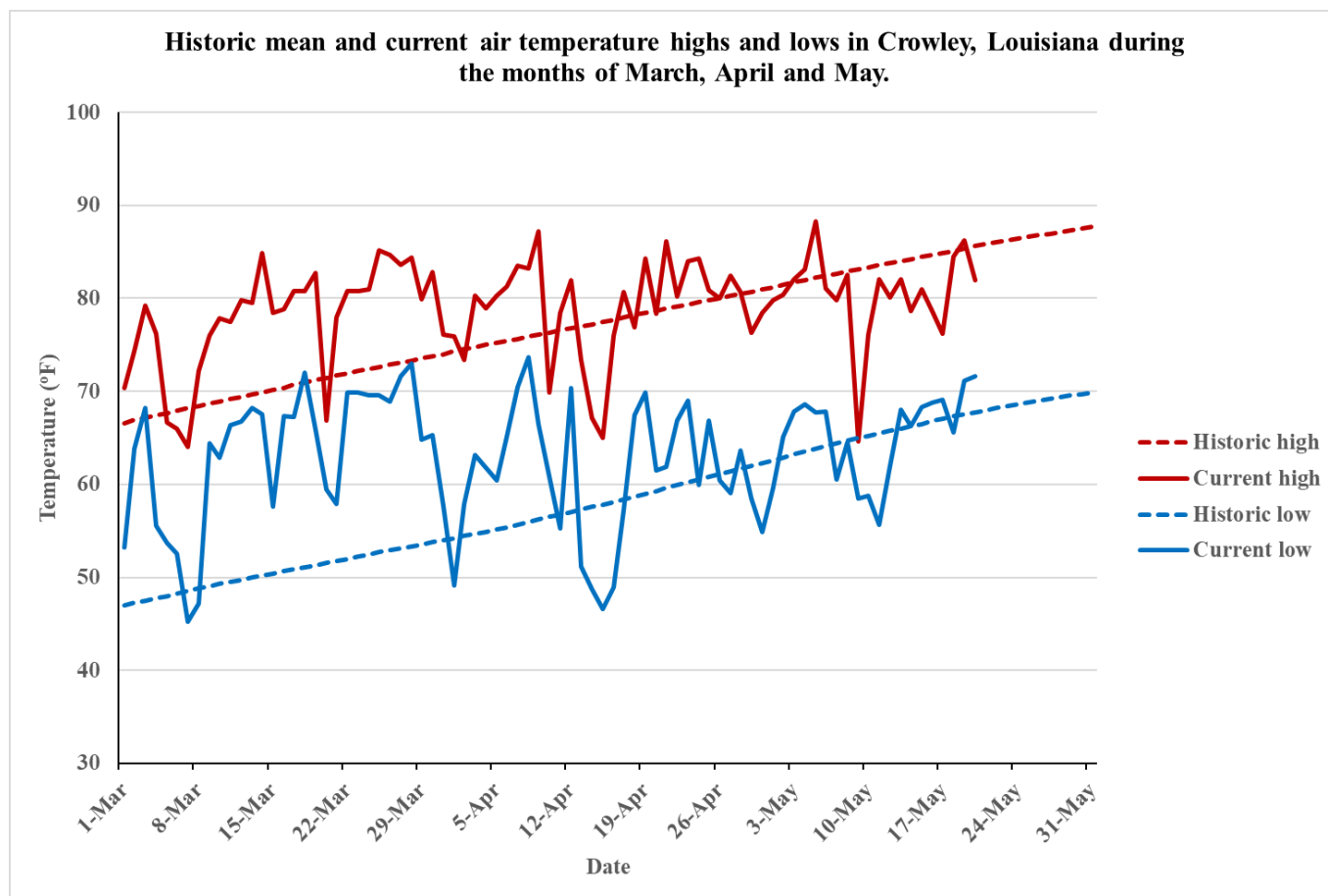
May 22, 2020

No. 2020-02

during the first week and a half. However, in mid- and late April we saw two separate cold fronts. If you were to average the April temperatures, you would see that they fall somewhat close to the historical average. May temperatures thus far are cooler than normal.

One question that has come up a lot lately is if this year's crop is ahead or behind this year as far as growth and development

goes. Well, one way we can look at this is by looking at the accumulated DD50 heat units. The number of heat units accumulated each day above 50°F (assuming adequate soil moisture and no other limiting factors) can be used to estimate rice growth and development. These heat units are often referred to DD50 heat units which is the backbone of the DD50 program. DD50 heat units can be calculated by



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May 22, 2020

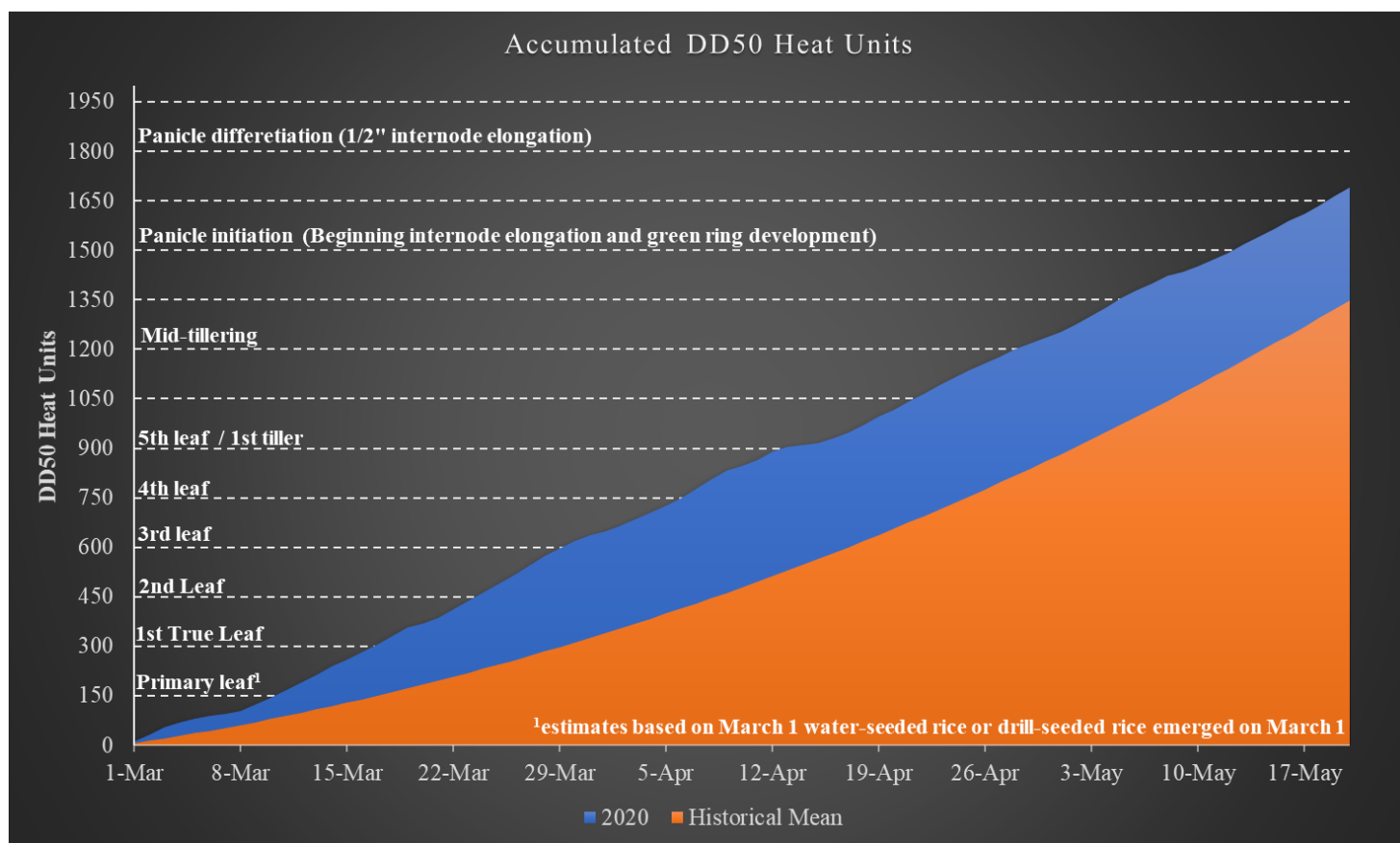
No. 2020-02

getting the average daily temperature and subtracting 50.

$$DD50 = \left[\frac{(\text{daily high temperature} - \text{daily low temperature})}{2} \right] - 50$$

In general, it takes between 75 to 175 heat units for each leaf to emerge during the seedling stages of rice development. Of course, the actual number of DD50 units needed for each stage of rice development can vary

depending the variety being grown. However, 150 DD50 units per rice leaf is a good estimate for most of our semi-dwarf varieties that we are currently growing. Using this criterion and our currently accumulated DD50 heat units for rice water seeded on March 1 (Fig. 2), we would expect rice to be past green ring and somewhere around panicle differentiation at this time. We can also see that we accumulated enough early heat units in March to put us approximately 2 weeks ahead of normal.



LOUISIANA RICE NOTES

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No. 2020-02

However, after our recent cool spells it looks like we are currently only 1 week earlier than normal. If cooler-than-normal conditions continue this month and into June, we will be on track for an average maturing year with harvest beginning in late July to early August.



Figure 3. Rice plant showing the accumulation of chlorophyll often referred to as "green ring." Green ring can be used to estimate the panicle initiation (PI) growth stage and beginning internode elongation (BIE).

Identifying Panicle Initiation and Differentiation in Rice

Most drill-seeded rice is at or near panicle initiation in south Louisiana so, I

thought it would be a good time to review identifying these growth stages so that our mid-season N can be applied on time.

We determine when to apply our midseason fertilizer N based on the physiological development stage of the rice plant. Mid-season N should be applied during the time period between rice panicle initiation (PI) and panicle differentiation (PD). Panicle initiation (PI) occurs at approximately the



Figure 4. Rice plant at the panicle differentiation (PD) growth stage of rice development. PD generally occurs when the first internode elongates approximately $\frac{1}{2}$ inch.

LOUISIANA RICE NOTES

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May 22, 2020

No. 2020-02

same time as beginning internode elongation (BIE), or jointing, and signifies the change from vegetative to reproductive growth. The rice panicle at PI cannot be seen by the naked eye and can only be seen with a microscope. However, we can look for what we often call “green ring.” Before an internode can elongate (jointing) chlorophyll accumulates above the node and forms a distinct green ring (Figure 3). We can visually see this green ring only for a couple of days. Therefore, we have to be diligent in splitting stems to look for the “green ring.” This is how we know when to call the flying service to apply our mid-season fertilizer N. The optimal mid-season N application window closes when the rice reaches PD. At PD, the panicle is approximately 2 mm in length, can be seen with the naked eye, and generally occurs when the internode (or joint) is approximately $\frac{1}{2}$ inch long (Figure 4). Research has shown that mid-season N application are equally efficient when applied anytime during the recommended application window between PI and PD.

Fungicide Application Needed Soon to Help Prevent Smuts

During the 2019 rice growing season we saw kernel and false smuts at epidemic levels. Remember this video? ([link to false smut video](#)).

As our water seeded rice nears the boot stage, I just wanted to remind growers and consultants that to help control the smuts you must apply a propiconazole or difenoconazole fungicide during the boot stage. Once the boot has split and the panicle has begun to emerge from the boot fungicide applications will not be beneficial for the smuts. The 2- to 4-inch



Figure 5. kernel smut.

LOUISIANA RICE NOTES

Dr. Dustin Harrell

May 22, 2020

No. 2020-02

panicle in the boot is the target time for the application of the fungicide.

Chinch and Bill Bug Pressure Higher than Normal This Year

While most growing conditions have been good this year, with the exception of the handful of cold weather we have seen, an uptick in both chinch and bill bug pressure in south Louisiana was observed. Typically, these are minor pests and flooding will generally alleviate the pest. In some severe cases a pyrethroid insecticide may need to be applied.

Join the Louisiana Rice Text Group List



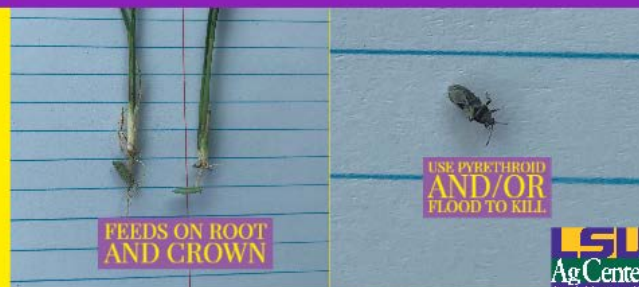
If you would like to join the Louisiana Rice Text Group, simply text **@larice** to **81010**. To unsubscribe to the group, simply text back “unsubscribe@larice” to

the group.

If you would like to get the text messages by email, send an email to larice@mail.remind.com. If you would like to unsubscribe to the email messages, simply



CHINCH BUGS SHOWING UP IN SOUTHWEST LOUISIANA RICE



email larice@mail.remind.com with “unsubscribe” in the subject line.



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No. 2020-02

Additional Information

Louisiana Rice Notes is published periodically to provide timely information and recommendations for rice production in Louisiana. If you would like to be added to this email list, please send your request to

dharrell@agcenter.lsu.edu.

This information will also be posted to the LSU AgCenter website where additional rice information can be found. Please visit www.LSUAgCenter.com.



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