



Arkansas Rice Update

Dr. Jarrod Hardke, Scott Stiles, & Dr. Tommy Butts

April 3, 2020 No. 2020-03

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Starting Slow, Very Slow

“Gonna be a long Monday, stuck like a tick of a clock that’s come unwound.” We’re now into April and still looking for that dry window to open up for a decent run at things. Unfortunately, the extended forecast doesn’t give too much reason to stay optimistic, but it is still early yet.

Despite the persistent rain systems moving through, some have managed to make small progress. Water-seeding efforts are still happening but only on a very limited basis. At least a few spots have missed a shower here and there to get a drill in the field. I’ll take that as a positive sign of things to come, hopefully sooner rather than later.

More rain for the next week, but total amounts appear lower than for the past few weeks. We still have most ground to work before planting, but now is definitely the time to make sure drills are ready to go as soon as we get the chance to use them after turning the ground over.

The USDA Prospective Plantings report was released earlier this week and indicated 1.395 million acres of rice for Arkansas (1,190,000 long-grain and 205,000 medium-grain). I still expect higher on the long-grain side if we get a chance to plant it, which could push the total over 1.5 million acres (or more?).

Fig. 1. Drilling rice on a few high spots.



Prepare in the Event of Illness

There is a chance that you, a neighbor, or one of your employees will contract COVID-19. Should this happen, you or your neighbor may need help with their farming operation.

The person that is affected could be you. Most growers are the lone operators who know how the whole thing works, the critical cog in making the machine go. How do things keep rolling if that person isn’t there?

Take an hour of your time to sit and write up a list of things that need to be done to manage your operation. Which seed dealers have your seed? Where do you purchase your fertilizer and chemical? What crops and varieties are to be planted in which fields? What are important details about irrigation systems and how to make them work the way they need to?

Give this list to your significant other and your best friend. Hope that they don’t need it. Just be proactive.

For more information on COVID-19, please visit: <https://uaex.edu/covid19>.

Water-Seeded Rice Information Sheet

With the continued wet weather as we move into April, several calls are coming in about water-seeding rice. To help address these questions, we’ve developed an information sheet focused on water seeding. Access the publication here: [2020 Managing Water-Seeded Rice for Arkansas](#).

Rice Market Update

“Madness! Madness!”

Maj. Clipton, *The Bridge on the River Kwai*

Plenty of madness this week as more stories circulate of panic buying and export bans. The last thing the world needs right now is unfounded fear and worry about global food supplies. As a

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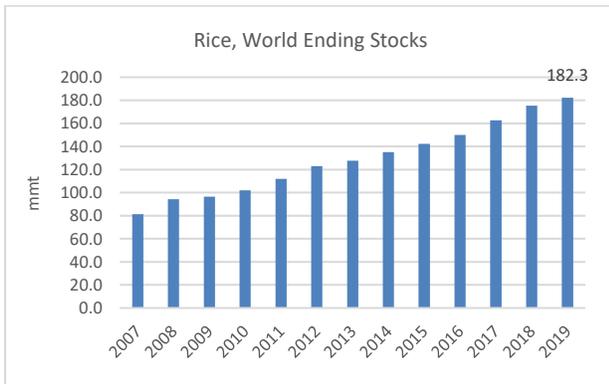
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public service, we remind everyone that global rice stocks have increased each year since 2007 and currently sit at a record high of 182 million metric tons (USDA).



Unfortunately, supplies are only abundant if they are available. In recent days Vietnam temporarily suspended new export sales to evaluate their supply situation. India, the largest rice exporter, is under a 21-day lockdown. This is an attempt to slow the spread of COVID-19. In a country of 1.3 billion people, an enormous challenge lies ahead. It appears likely the lockdown in India (and potentially other countries) will slow export activity for another month at least.

Old Crop (2019) rice prices are finding solid support on global supply-chain fears. Looking closely at rice futures prices, note the \$2.40/cwt. inverse spread from the May to September contracts. At this writing, the May contract is up 40 cents at \$14.65. That's the highest trade for a nearby contract since July 2014. The strength in old crop prices will likely continue until the world can "flatten the curve" on COVID-19.

The potential for more old crop export demand and a further drawdown in ending stocks is also providing a lift to new crop prices. The September contract is back at \$12.20 this week and very close to the February 10 high of \$12.29.



The next USDA Supply/Demand report is Thursday April 9th. It will be of particular interest to see if USDA adjusts its old crop long-grain export projection—which is currently 71 million cwt. Data from USDA's weekly Export Sales continue to point to a total closer to 75 million cwt. Exports of that magnitude would draw ending stocks down to 2003 levels, which were 10.3 million. Extremely bullish!

Another bullish driver for new crop prices is the USDA Prospective Plantings report, released earlier this week. It wasn't a surprise that every major long-grain producing state was projected to increase acreage this year. This surprise came in the fact the acreage increase wasn't considerably higher.

U.S. Long-Grain Planted Acreage.

million acres	2019	2020*	change
Arkansas	.950	1.190	0.240
California	.010	.010	0.000
Louisiana	.370	.390	0.020
Mississippi	.115	.150	0.035
Missouri	.180	.190	0.010
Texas	.153	.170	0.017
U.S.	1.778	2.100	0.322

* source: USDA-NASS Prospective Plantings.

Recall in February, USDA's Ag Outlook Forum projections pointed to 2.35 million acres of long-grain this year—a 32% increase! What happened? The March intentions indicated only

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an 18% increase. However, Arkansas' long-grain acres were projected to increase 25% or 240,000 acres.

The longer one ponders the March 31 Prospective Plantings, more and more questions come to mind. For instance, go back in time one year. In March of 2019, Arkansas' intended long-grain acres were 1.2 million. The U.S. long-grain intentions were 2.151 million. Given the current supply situation and rice's price relationship to all the major grains and cotton, why would growers intend to plant less rice in 2020?

A host of other questions come to mind. In 2019, Arkansas alone had over 1 million acres of prevented planting. Just over half of that was for rice. The Prospective Plantings pointed to an increase of 240,000 rice acres and 250,000 soybeans acres. Corn was up 30,000 and cotton was down 30,000 acres. Net change on the major crops was 490,000 acres.

To make the discussion even more interesting, look at how commodity prices have changed over the past year. Using crop insurance as a benchmark, the long-grain projected price for 2020 is \$12.10/cwt. compared to \$10.80 last year. The soybean price guarantee is 24 cents less than a year ago at \$9.31. Corn and cotton price guarantees are lower this year as well. Of this group, rice is the only commodity to see price improvement.

Crop Insurance Projected Prices.		
	2019	2020
Long-grain	\$10.80	\$12.10
Soybeans	\$9.55	\$9.31
Corn	\$4.01	\$3.95
Cotton	.74	.70
* source: USDA-RMA.		

Input costs have not worked against rice economics. Diesel prices have fallen \$1 per

gallon this quarter. Fertilizer prices are softer compared to last year with many growers reporting Urea bookings under \$300 per ton. Potash has been on a consistent decline over the past year.

The comparative returns of rice to soybeans (which currently trade at \$8.60) also points to a stronger increase in rice acres. As mentioned earlier this week here [2020 planned rice acreage increases year-over-year, but falls short of analysts' expectations](#) --weather permitting, expect to see a higher acreage total in USDA's June Acreage report.

In the meantime, the market will have to accept the Prospective Plantings as an accurate reflection of grower's intentions. Remember, the March intentions will be used as the foundation for the first new crop (2020) balance sheet released in May. Compared to the acreage expectation USDA used in February's Ag Outlook Forum, the March intended acres represent a "game-changer" for new crop long-grain ending stocks as shown in the table below.

U.S. Long-Grain

	2019 March USDA	2020 USDA Outlook Forum	2020 UAEX Projected
Plant Acres		2.35	2.10
Harv. Acres	1.73	2.32	2.07
Yield (#/ac.)	7,261	7,503	7,503
Beg. Stocks	32.6	14.2	14.2
Production	125.6	174.0	156
Total Supply	184.2	214.2	196
Dom. Use	99	110	110
Exports	71	73	73
Total Use	170	183	183
End. Stocks	14.2	31.2	12.7
Stocks/Use	8.4%	17%	6.9%
Avg. Price	\$12.00	\$10.80	

The middle column of the table is the new crop balance sheet USDA released in its February Outlook. By plugging in the planted acreage

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from the March Intentions, production is lowered by 18 million cwt. to 156 million! By itself, this is very bullish. Generally, lower production leads to lower demand and that will be a key focal point in USDA's first new crop balance sheet due out May 12th. Without any changes to the projected 183 million cwt in demand, ending stocks would fall to a very tight 12.7 million. Bottom line, the production outlook put forth here is very real and one that the market will have to stare at until July when the June Acreage report is used. Demand is the big variable going forward while the world wrestles with COVID-19.

The U.S. rice market is also focused on Midsouth weather. Right now, that alone leans supportive to rice prices. Another wet week is ahead. Keep in mind too, the Prospective Plantings may be providing a second chance and an opportunity to catch up on new crop sales. Watch for a retest of \$12.29 in the September contract. View it as an opportunity. With soybean prices in the \$8s, rice will be the preferred crop if it takes till June to get it planted.

Arkansas Spray Water Quality Testing

Spray water quality, specifically pH and hardness, can impact the efficacy of numerous pesticides. It has been shown that as water pH increases into more alkaline or basic conditions (pH greater than 7), pesticide active ingredients become less stable and therefore, less effective.

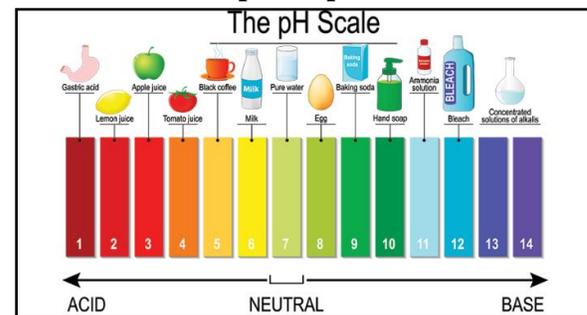
Most fungicides are better suited to be applied in spray water that is less than a pH of 8. Several insecticides, including Heligen (virus), pyrethroids (Lambda-cy), and organophosphates, lose effectiveness in alkaline solutions, especially when the pH begins reaching values of 9.

Herbicides can also be severely affected by spray pH and water hardness. Previous research has shown losses in weed control from graminicides (Ricestar, Clincher, Provisia, Select

Max, etc.), mesotrione (Callisto), glufosinate (Liberty), 2,4-D, dicamba, and glyphosate when spray water pH increased above 7 and/or water hardness was greater than 200 ppm.

Additionally, the pH scale (Fig. 2) is logarithmic, meaning that even small changes in water pH can result in significant changes in the overall stability and effectiveness of pesticides. For example, a pH of 8 doesn't seem like a big deal when compared to a neutral solution at a pH of 7. However, the solution with a pH of 8 is actually 10x more basic/alkaline than the solution with a pH of 7. If we have a solution with a pH of 9, that solution is 100x more basic/alkaline than the neutral solution with a pH of 7.

Fig. 2. The pH scale represented with example solutions at each specific pH level.



So, what does all of this mean for Arkansas pesticide applications? In general, regardless of pesticide (herbicide, insecticide, or fungicide), active ingredients tend to be more efficacious in neutral or slightly acidic spray water and with low water hardness (i.e. soft water). But how can we know what our spray water quality actually is?

This is where we come in. The weed science program as a part of the University of Arkansas System Division of Agriculture is collecting spray water samples and conducting a pH and water hardness analysis. If you have water that is used for pesticide applications that you would like tested for pH and water hardness, please

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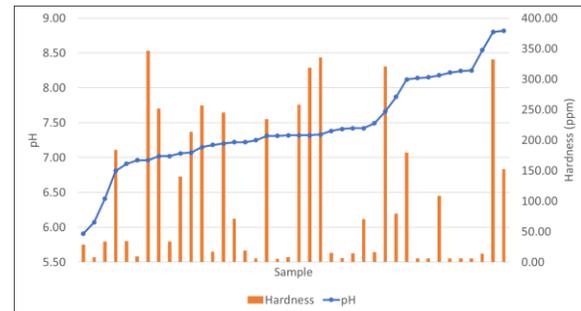
collect a 1 L sample (approximately). Also, please record the GPS coordinates of where the water sample was taken and a short description of the sample (location, city water, rural water, surface water, etc.).

Once collected, either ship the samples directly to me (Tommy Butts) in Lonoke (2001 Hwy 70 E, Lonoke, AR 72086), or contact your local county Extension agent to drop it off with them, and we will coordinate a pickup. Primarily we are looking at water that is used for pesticide spray applications, but this can include row crops, pastures, or anything else where this water is being used for pest control. We'll analyze the samples this fall and share the results with participants this winter.

The goal of this research is to build a database of spray water quality used for pesticide applications across the entire state of Arkansas. Once we have an idea of the range of pH and hardness across the state, we will be conducting greenhouse and field studies to evaluate how water quality is affecting our pesticide applications, and if there are any adjustments (acidifiers, AMS, other adjuvants) that we can make to improve the efficacy of our pesticides.

We began this spray water sampling in 2019, and we had ~40 samples submitted. Results from these initial samplings (**Fig. 3**) revealed a couple of interesting things. First, there were a wide range of spray water pH and hardness values across Arkansas. Spray water pH ranged from 5.9 to 8.9, and water hardness ranged from 10 to 350 ppm (very soft to extremely hard). Second, **in Fig. 3**, there seems to be no correlation between spray water pH and water hardness values; meaning you may have a neutral pH but very hard water or maybe you have very soft water and a high pH. This further complicates the interactions between spray water and our pesticides.

Fig. 3. Spray water quality (pH and hardness) results from 40 Arkansas spray water samples collected in 2019.



As a final note, with the threat of COVID-19, please be safe when collecting or dropping off samples to any Extension personnel and remember to maintain the appropriate social distancing practices. Let's all stay safe out there.

If you have any questions, please contact your local county Extension agent or contact me directly at tbutts@uaex.edu or (501) 804-7314. Thank you!

DD50 Program is Live

While planting progress has only just begun, we do have rice emerged. With that in mind, the DD50 Rice Management Program is live and ready for fields to be enrolled for the 2020 season. All log-in and producer information has been retained from the 2019 season, so if you used the program last year you can log-in just as you did last year. Only field data from 2019 has been removed. Log-in and enroll fields here: <https://dd50.uaex.edu/>.

Here's a recent article on the DD50 program: [Use the DD50 Rice Management Program to Say Ahead in 2020](#).

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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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