

Arkansas Rice Update

Dr. Jarrod Hardke, Dr. Gus Lorenz, Dr. Yeshi Wamishe, & Scott Stiles

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Crop Progress

Difficult to believe, but we already need a rain again in many places. Between trying to get rice flooded and beans planted, moisture is running out quickly with the warm temperatures and breezy conditions. For much of the state there are moderate rain chances over the next several days that will hopefully help out. Western Arkansas is predicted to receive 5+ inches of rainfall over the next 5-7 days while the Delta is looking at around an inch or less.

According to DD50 enrollment, about 90% of the rice crop is scheduled to have gone to flood by now. Traveling around the state – we’re not there yet but we’re catching up quickly. Flying services are stretched as thin as can be and some suppliers are running short of urea.

Table 1. Percent of acres to reach ½” internode elongation by date.

Date to ½” IE	% of Acres
June 8-14	16%
June 15-21	23%
June 22-28	29%
June 29 - July 5	24%
July 6-12	7%
July 13-19	1%

The last week has finally brought virtually ideal conditions for rice growth and development. With lows around 70 and highs reaching 90, we’re very nearly maximizing daily development potential. Fields should really be taking off now, so keep a close on them in the coming days, and hope for more of this weather.

Picture 1. Herbicide application with a helicopter in an effort to prevent drift onto adjacent soybeans.



Seed Treatments: Water Weevils & Drift

We have just finished evaluating our first set of seed treatment plots for rice water weevil (RWW) for rice planted April 3rd. We’re averaging over 17 RWW per core sample – plenty to lead to yield loss at the end of the season. We’ll soon be evaluating additional planting dates, but based on the numbers from the first planting date, we should be on high alert for RWW infestations.

Too many fields this year did not receive an insecticide seed treatment. Be prepared to treat rice fields just going to flood with a foliar application by 7 days after flooding. For some fields that take a really long time to flood just aim for that timing and the portion of the field not flooded will receive a benefit of the application too. In some cases where rice has been in the ground for a long time without going to flood, RWW control may not be sufficient anymore. Scout for leaf scarring in those fields and treat if needed also.

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Added benefits of insecticide seed treatments: **Picture 2** shows a field of Roy J that had Beyond drift across it. A few passes at the bottom of the field looked a lot better than the rest of the field – to the point you can match it to the drill row. The better looking rice was borrowed after the drill ran out of seed – it had an insecticide seed treatment on it while the rest of the field did not. So, in addition to all the other benefits of insecticide seed treatments we talk about regularly, you also get some help when systemic herbicides such as Roundup and Newpath/Beyond drift on your rice.

Treat the Seed!

Picture 2. Field of Roy J with Beyond drift. Healthier rice to right of the line received insecticide seed treatment, to the left did not.



Autumn Decline

Do you need to drain once you establish permanent flood in your rice field?

The answer is “yes” if your field has a history of autumn decline or straighthead.

Autumn decline is largely caused by hydrogen sulfide toxicity. Autumn Decline,

Hydrogen Sulfide Toxicity, Akiochi – all names refer to the same disorder that results in the black discoloration of rice roots (**Picture 3**). The problem with Autumn Decline can start 2-3 weeks after permanent flood establishment.

Picture 3. Blackened roots from flooded bay (left) compared to healthy roots from levee.



We do not know exactly which factors play a role in the incidence and prevalence of this disorder. The problem generally appears as the result of high levels of sulfur and iron in the soil and irrigation water which leads to a reaction in the root zone. This reaction occurs in anaerobic conditions (no oxygen) and results in the formation of iron sulfide on the roots (blackening). Also, the anaerobic condition encourages hydrogen sulfide formation that in turn becomes toxic to roots to the extent of killing them. Draining the flood and re-introducing oxygen to the root zone reverses the reaction for new roots to grow and the plant to revive. If this correction is made early enough, complete or near-complete recovery is possible.

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Scouting early, detection, and timely action to drain the field are critical.

It is easier to scout for Autumn Decline where the problem usually starts – near irrigation inlets and bar ditches. Problematic fields may show a yellow cast similar to nitrogen deficiency, with untimely death of lower leaves and slowed plant growth. Substantial yield loss may have already occurred when you see these symptoms.

Tips to Reduce Autumn Decline Issues:

Preventative approach for fields with history:

1. Avoid the use of sulfur-containing nitrogen fertilizers such as ammonium sulfate.
2. Limit or avoid use of irrigation water with excess sulfur.
3. Start scouting 2-3 weeks after flooding and drain timely.
4. Use a straighthead drain timing based on the DD50 program.
5. Monitor for new root growth before re-flooding.

Rescue approach for new problem fields:

1. Based on field knowledge and management ability, drain the field according to rice developmental stage.
2. If before midseason, drain and dry like a straighthead field.
3. Wait until new roots start to grow before you re-flood.
4. If after midseason, be careful not to stress the crop due to lack of water. Drought stress can be equally damaging.
5. Lower flood to add oxygen to the soil ('muddy' ok). Re-flood once new roots start to show.

Picture 4. Scout for early symptoms of Autumn Decline by evaluating roots near the main stem close to the crown in areas near irrigation inlets and/or bar ditches.



Rice Fundamentals

Monday: U.S. rice condition ratings were reported unchanged week-to-week in the good-to-excellent category at 68%. That compares to 69% good-to-excellent for the same week last year.

Wednesday: June USDA Supply & Demand.

In Wednesday's monthly USDA supply/demand report, increases were made in both the old crop (2014) and new crop (2015) long-grain ending stocks.

Old crop stocks were increased by 500,000 hundredweight (cwt) to 28.6 million cwt on higher imports.

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U.S. 2014/15 Ending Stocks (million cwt) / Season Average Price

	USDA May 2015	USDA June 2015
Ending Stocks - Long Grain	28.1	28.6
Marketing Yr. Avg. Price – Long Grain	\$11.80 - \$12.20	\$11.90 - \$12.10
Ending Stocks - Medium/Short Grain	12.5	14.5
Marketing Yr. Avg. Price – Medium/Short Grain*	\$14.80 - \$15.20	\$14.80 - \$15.00

U.S. 2015/16 Ending Stocks (million cwt) / Season Average Price

	USDA May 2015	USDA June 2015
Ending Stocks - Long Grain	34.1	35.1
Marketing Yr. Avg. Price – Long Grain	\$10.00 - \$11.00	\$10.00 - \$11.00
Ending Stocks - Medium/Short Grain	11.0	11.0
Marketing Yr. Avg. Price – Medium/Short Grain*	\$14.50 - \$15.50	\$14.50 - \$15.50

*Price range for “Other States” excluding CA.

New crop stocks were increased by 1 million to 35.1 million cwt. Of the 1 million cwt increase in 2015 long-grain stocks, 500,000 came from an increase in beginning stocks and 500,000 came from an increase in new crop imports. No changes were made this month to long-grain production or demand.

In the medium/short-grain balance sheet, old crop stocks were increased by 2 million cwt on ideas that some export sales will be deferred into the new crop marketing year. The increase in

new crop beginning stocks was offset by an equal increase in exports.

USDA tightened its’ 2014 long-grain season-average farm price range by 10 cents on both ends. The mid-point of the price range is unchanged month-to-month at \$12/cwt. This would equate to a PLC payment rate of \$2/cwt or 2 cents per pound (\$14/cwt Reference Price - \$12/cwt Marketing Year Average Price = \$2/cwt Payment Rate).

The midpoint of the new crop (2015) long-grain price range is currently estimated at \$10.50/cwt -- \$1.50/cwt lower than 2014.

The new crop “Other States” medium and short-grain price range was unchanged from last month. The upper end of the price range for old crop was reduced by 20 cents/cwt.

Thursday: Export Sales.

The weekly export sales report for long-grain rough rice showed shipments last week of 47,994 metric tons (1,058,068 cwt). That was the best weekly shipment total since February 19 of this year. Shipments were to Mexico, Colombia, and Honduras. Rough rice net sales were up 56% from last week, with buyers in five (5) markets. Panama, Mexico, and Colombia accounted for almost 95% of weekly sales.

Long-grain milled rice shipments were also strong last week and the highest since April 23. However, Net Sales were down 21% from last week at 16,396 metric tons. Haiti and Colombia were the top two shipment destinations. These are also the top two countries in terms of sales for the 2014/15 marketing year. The two countries account for 53% of net sales of long-grain milled rice.

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Rice Futures and Cash:

Both the July and the September futures contracts have turned lower following Wednesday's USDA supply/demand report. The July contract finished the week at \$9.68 – down 12.5 cents on the week. The September contract closed today at \$9.945 – down 13 on the week. In the cash market, old crop basis is getting weaker at some locations, widening out as much as 20 cents over the past week. New crop basis is holding steady; 60 under at mills and 80 under at dryers is common around eastern Arkansas.

Wednesday's supply/demand numbers were a reminder of the heavy ending stocks the long-grain balance sheet is carrying. New crop long-grain stocks are projected to be the highest since 2010 at 35.1 million cwt. Planting delays and the questions about final acreage have offered some price support in recent weeks. The June 30 *Acreage* report will hopefully provide some answers on the rice acreage debate.



The DD50 program can be accessed at <http://DD50.uaex.edu>. It has now been improved for use on both your computer and your **mobile devices**.

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 jhardke@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>.

Figure 1. Daily rough rice price chart.



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