



Arkansas Rice Update

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Table 2. Arkansas rice acreage 2014.

Final Acreage Numbers

In **Table 1** is a summary of the most widely grown rice cultivars for Arkansas in 2014 based on DD50 enrollment information. Since 2011, RiceTec CL XL745 has been the most commonly planted cultivar. Jupiter and CL151 have also been near the top over that time. The remaining cultivars on the list are all relatively new in recent years and Roy J and RiceTec XL753 have made the largest gains in the last two years.

Table 1. Most widely grown cultivars in 2014.

County	Acres	%
RT CL XL745	326,016	22.1%
Jupiter	191,915	13.0%
CL151	186,518	12.6%
Roy J	186,022	12.6%
RT XL753	174,626	11.8%
CL111	73,412	5.0%
Mermentau	72,426	4.9%
RT CL XL729	62,445	4.2%
CL152	48,648	3.3%
Wells	42,156	2.9%
TOTAL	1,364,184	92.5%

In **Table 2** is the breakdown of Arkansas rice acreage by county for 2014. Acreage is listed by long-grain, medium-grain, and total for each county. In 2014, Poinsett and Jackson Counties planted over 100,000 acres of rice, followed closely by Lawrence, Arkansas, Lonoke, Cross, and Clay Counties. This is the first year Arkansas has planted greater than 200,000 acres of medium-grain since 2011.

County	Long	Medium	Total
Arkansas	81,458	9,697	91,155
Ashley	10,326	855	11,182
Chicot	34,303	536	34,839
Clay	72,833	8,673	81,506
Craighead	58,391	13,118	71,509
Crittenden	41,718	9,318	51,036
Cross	70,836	17,200	88,036
Desha	19,232	6,033	25,266
Drew	10,998	314	11,312
Faulkner	2,582	0	2,582
Greene	71,691	6,714	78,405
Independ.	10,598	2,148	12,747
Jackson	71,581	32,613	104,194
Jefferson	70,571	1,892	72,463
Lafayette	4,434	0	4,434
Lawrence	84,397	15,525	99,922
Lee	27,914	2,006	29,920
Lincoln	21,123	393	21,516
Lonoke	85,192	4,539	89,732
Mississippi	52,178	1,362	53,540
Monroe	52,099	7,393	59,492
Phillips	31,837	806	32,643
Poinsett	81,080	40,489	121,569
Pope	2,205	0	2,205
Prairie	55,121	8,519	63,640
Pulaski	4,040	128	4,168
Randolph	26,705	8,952	35,657
St. Francis	32,359	6,084	38,443
White	11,302	1,890	13,192
Woodruff	57,218	4,707	61,925
Others	6,989	0	6,989
TOTAL	1,263,313	211,905	1,475,219

Rice acreage projections for 2015 are currently flat compared to 2014. However, opinions differ widely among individuals with some increasing acreage and others decreasing depending on the situation.

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Upcoming Meetings

Feb. 25: Arkansas Irrigation Expo

The state's first-ever irrigation expo is scheduled for Feb. 25 at the Grand Prairie Center in Stuttgart, AR. The Expo will focus on cost-saving measures through better water conservation. Agenda covers pumping, remote sensing, cover crops, and more.

The program begins at 9 a.m. and concludes at 4:15 p.m. with lunch provided. Registration deadline is Feb. 22. Register by emailing Debbie Moreland at debbiepinreal@aol.com.

March 9: 2015 Barnyardgrass Workshop

A barnyardgrass management workshop will be held at the Grand Prairie Center in Stuttgart, AR on March 9 beginning at 9:30 a.m. and concludes at 3:00 p.m. Speakers from UofA and surrounding state universities will present information on barnyardgrass management.

Cost is free and includes lunch – please email attendance to cljamies@uark.edu.

March 12: 2015 Cover Crops Workshop

A cover crop workshop will be held at the UofA Rice Research and Extension Center near Stuttgart, AR on March 12 beginning at 9 a.m. Topics include establishment, termination, fertility, pest management, and water considerations for cover crops.

Cost is free and includes lunch – please email attendance plans by March 6th to cljamies@uark.edu.

Autumn Decline Caused by Hydrogen Sulfide Toxicity

What's the name? Autumn Decline, Hydrogen Sulfide Toxicity, Akiochi – all names refer to the same disorder noted when rice roots display a black discoloration (**Picture 1**). The name Autumn Decline refers to the general timing when foliar symptoms appear with this problem – in the fall around boot stage. However, in recent years, active scouting has discovered the problem much earlier in the growing season, at times just 2-3 weeks after permanent flood establishment.

Picture 1. Rice roots beginning to show symptoms of Autumn Decline.



What's the cause? Generally speaking, the disorder is 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 on the roots (the blackening you see). Hydrogen sulfide if formed due to anaerobic conditions becomes toxic to roots and can kill them. Re-introducing

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oxygen to the root zone (draining) reverses the reaction and symptoms disappear. If this correction is made early enough, complete or near-complete recovery is possible. If not, opportunistic fungi can enter the root crown and their growth clogs the crown – once this happens, complete recovery is very unlikely.

What can I do about it? In fields with a history of this problem, the use of fertilizers containing sulfur (ammonium sulfate) should be avoided. Also, water sources containing high levels of iron should be avoided or limited if possible. Routine scouting of fields should always include the examination of root systems on plants throughout the field. Healthy roots = happy plants and vice versa.

Early detection is the key – symptoms start near water inlets and fade further away. This disorder is observed under flooded conditions, so if you find blackened roots on plants in the paddy, check roots from plants on the levees – these should not be blackened. Want extra confirmation? Toss affected plants in the truck bed and within an hour most, if not all, of the discoloration should disappear as oxygen reverses the reaction (**Picture 2**).

If you discover this problem during reproductive stages, the sooner action is taken to correct it the better off you'll be. The only real solution we have so far is a “drain and dry” approach. This does not mean drying to drought stress – pull the water back to a level where the soil is muddy but upper roots are exposed to air. Once new white roots begin to appear, re-establish the flood. In fields where the problem is discovered early after flooding or in fields with a history of this problem, the best approach

is to follow a straighthead drain timing based on the DD50 program. Draining at that time can be accomplished no yield loss.

Picture 2. Rice shoots showing symptoms of Autumn Decline – symptoms fade over time after exposure to oxygen.



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Estimating Nutrient Removal Fact Sheet

Making fertilizer decisions for the upcoming season? Before you go skimping on fertilizer to save money – consider that to make big yields it takes big nutrients – some of which leave the field at harvest. To learn more about nutrient removal for various crops, see a new UofA fact sheet here:

<http://www.uaex.edu/publications/pdf/FSA-2176.pdf>.

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 where additional information from Extension specialists can be found. Please visit the blog at <http://www.arkansas-crops.com/>.

More information on rice production, including access to all publications and reports, can be found at <http://www.uaex.edu/farm-ranch/crops-commercial-horticulture/rice/>.

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