

Arkansas Rice Research & Outlook Report

USA Rice Outlook
Dec. 7-8, 2023

Jarrold T. Hardke

Professor / Rice Extension Agronomist

UofA

**DIVISION OF AGRICULTURE
RESEARCH & EXTENSION**

University of Arkansas System



ARKANSAS
R  **CE**
CHECK-OFF

Agronomy

- **Cultivar Testing**
- **DD50 Rice Management Program**
- **Planting Dates**
- **Variety/Hybrid Nitrogen Response**
- **Seeding Rates**
- **Rice Research Verification Program**
- **Various agronomic trials**
 - Seed treatments, herbicide tolerance, new products, etc.

Breeding



Dr. Xueyan Sha



Dr. Christian de Guzman

• Recent Releases:

- Ozark – conventional long-grain
- CLL18 – Clearfield long-grain
- PVL04 – Provisia long-grain
- Taurus – conventional medium-grain
- CLM05 – Clearfield medium-grain
- ARoma22 – long-grain aromatic

• Programs

- Long-grain (conventional, Clearfield, Provisia)
- Medium-grain (conventional, Clearfield, Provisia)
- Aromatic (conventional, Clearfield)
- Hybrid (conventional, Clearfield, Provisia)

Weed Science



Dr. Tom Barber



Dr. Tommy Butts



Dr. Jason Norsworthy

- Barnyardgrass resistance screening
- Row rice weed control programs
- ALS resistant sedge control options
- Application technology (nozzles, spray volume, adjuvants)
- Seed Destructor for weed seed bank reduction
- Prevention & control of Newpath/Preface-resistant and Provisia/Highcard-resistant weedy rice
- New herbicide technologies

(e.g. tetflupyrolimet, fluoridone, oxyfluorfen, etc.)

Soil Fertility



Dr. Trent Roberts



Dr. Gerson Drescher

- Nutrient uptake differences between pureline and hybrid
- In-season tissue sampling for potassium
- N-STaR recommendations
- Novel sensing platforms for N mgmt.
- Post-season N tissue analysis
- Late-season N applications



Dr. Nick Bateman



Dr. Camila Nicolli

- **Entomology:**
 - Defoliation thresholds
 - Rice stink bug resistance to pyrethroids
 - Rice billbug in row rice
- **Pathology**
 - Sheath blight threshold
 - Monitoring for fungicide resistance in sheath blight
 - Cercospora in the Mid-South

Irrigation



Dr. Chris Henry

- **Furrow-Irrigated Rice Automation**
- **Fertigation and Planter Applied N**
- **Nitrogen and Water Interaction in FIR**
- **Irrigation Contest**
- **Climate Smart FIR**

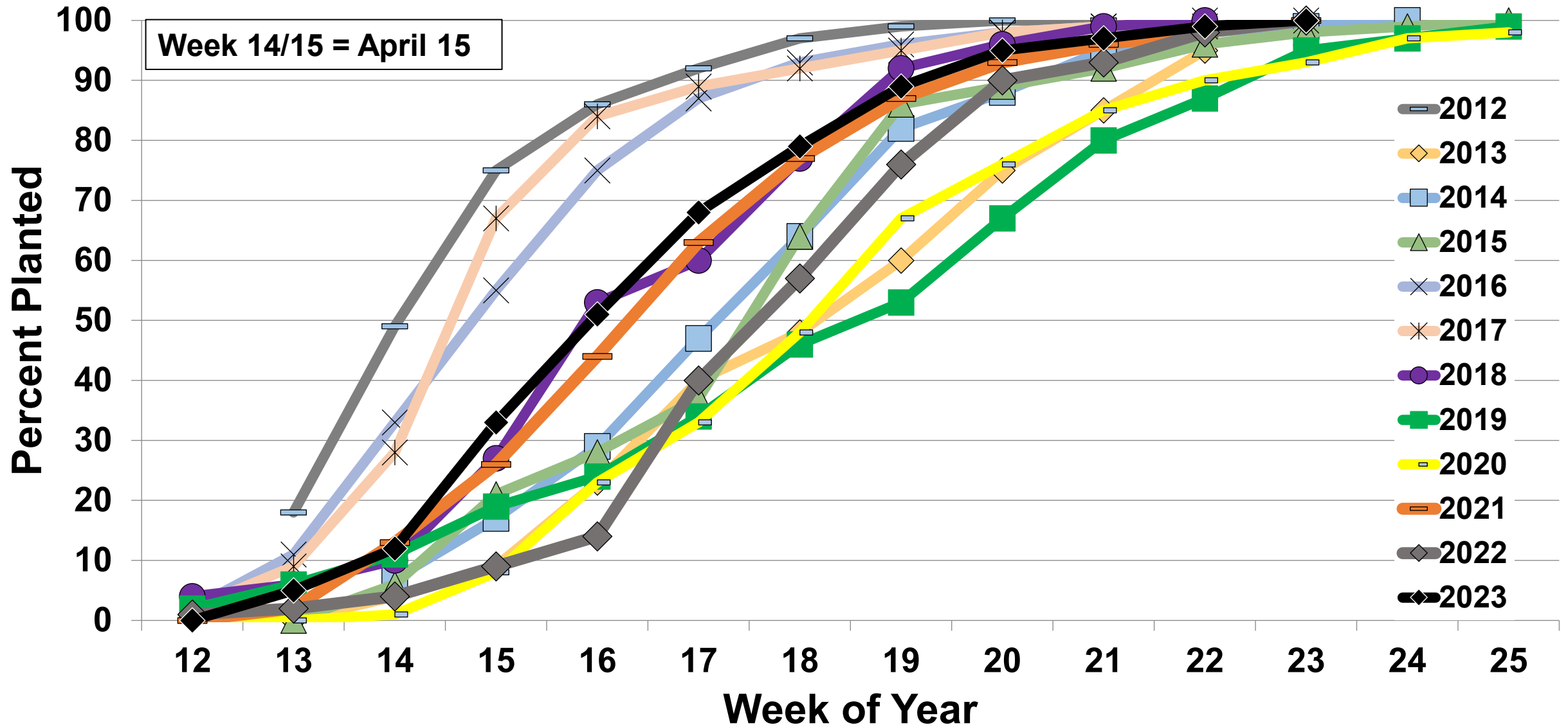
- **Unexpected early start**
 - Record rainfall through March
 - Gave way to early planting windows
- **May / early June brought fears of another drought**
 - Instead of drought compared to 2022
 - Extended season of injury, drift
- **July – cool**
 - Helped with irrigation and lower temps
 - Hurt with increased disease pressure
- **Harvest**
 - Rapid and dry
 - Too dry + humid = over-drying and low milling
 - Lodging “event”

Shifting Gears

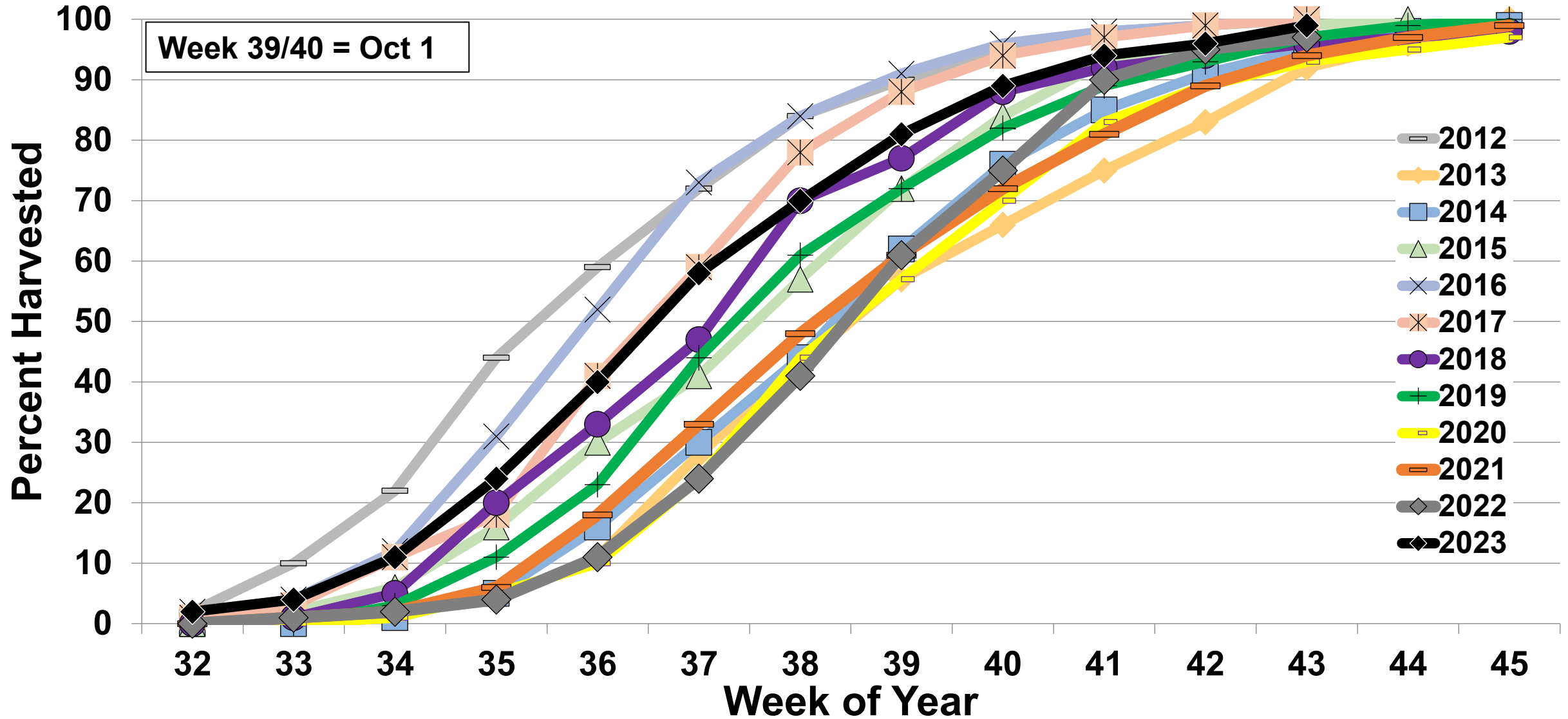
Milling Yields the topic of greatest concern

- **Planted faster than we can harvest**
 - Warm early planting period followed by April cooldown bunched crop maturity even more
- **Sporadic periods of HNT in July and August**
- **AUGUST**
 - Daytime highs remained elevated throughout the month
 - Humidity elevated – saturating dews each morning
 - Led to rapid drying
 - Overdrying
 - Excessive rewetting and drying cycles
 - Large amount of green rice harvested below 16% moisture
 - Earlier effects of HNT, wet/dry cycles lower MY
 - Addition of low harvest moisture = critically low MY

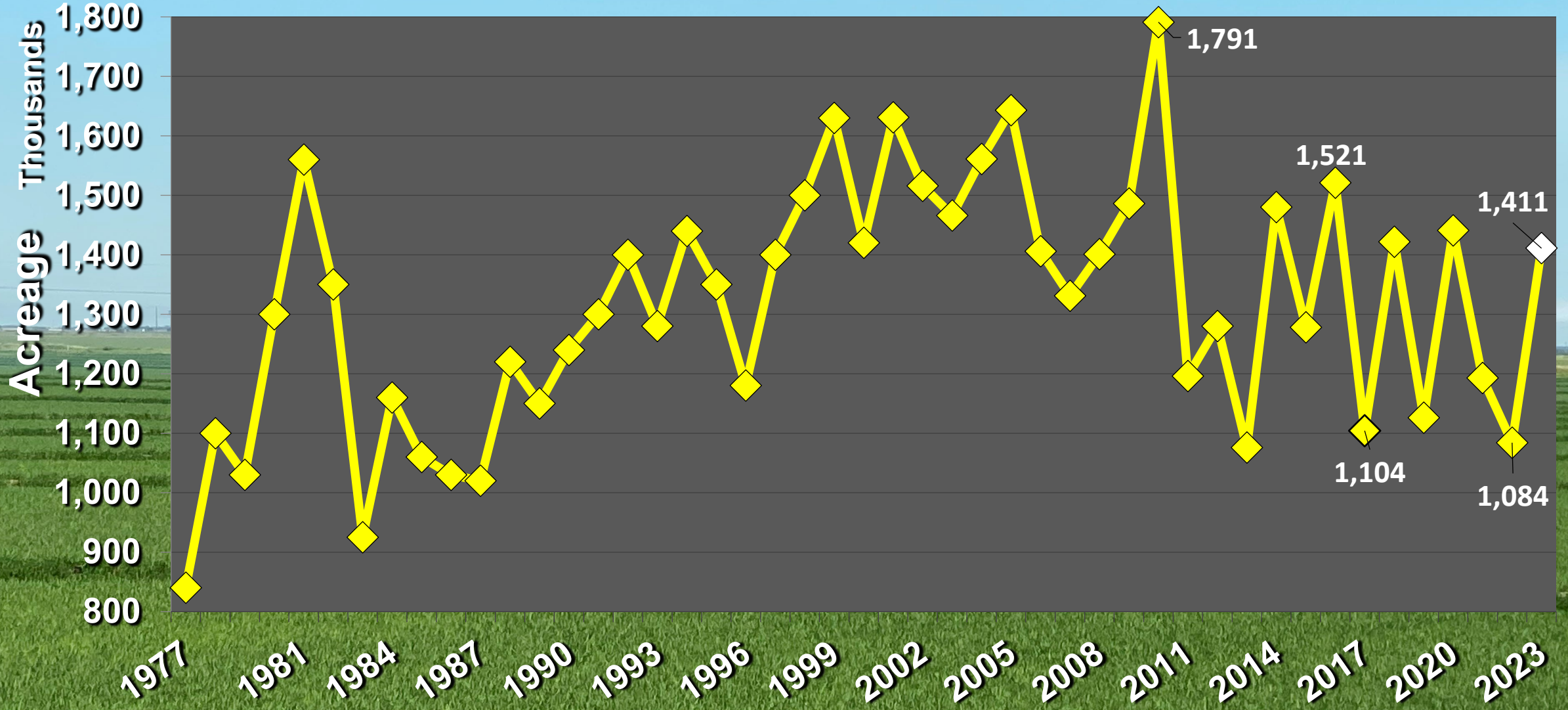
2012-2023 AR Rice Planting Progress



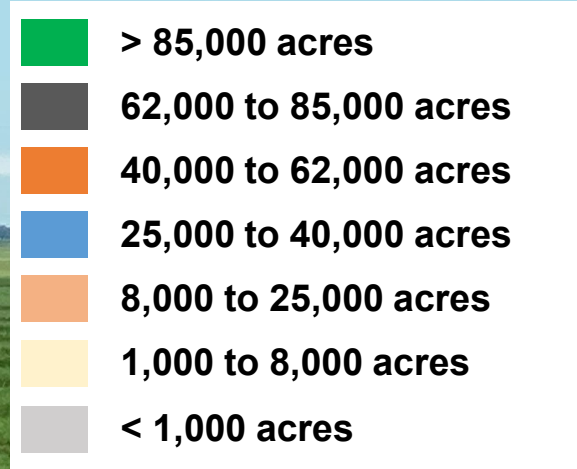
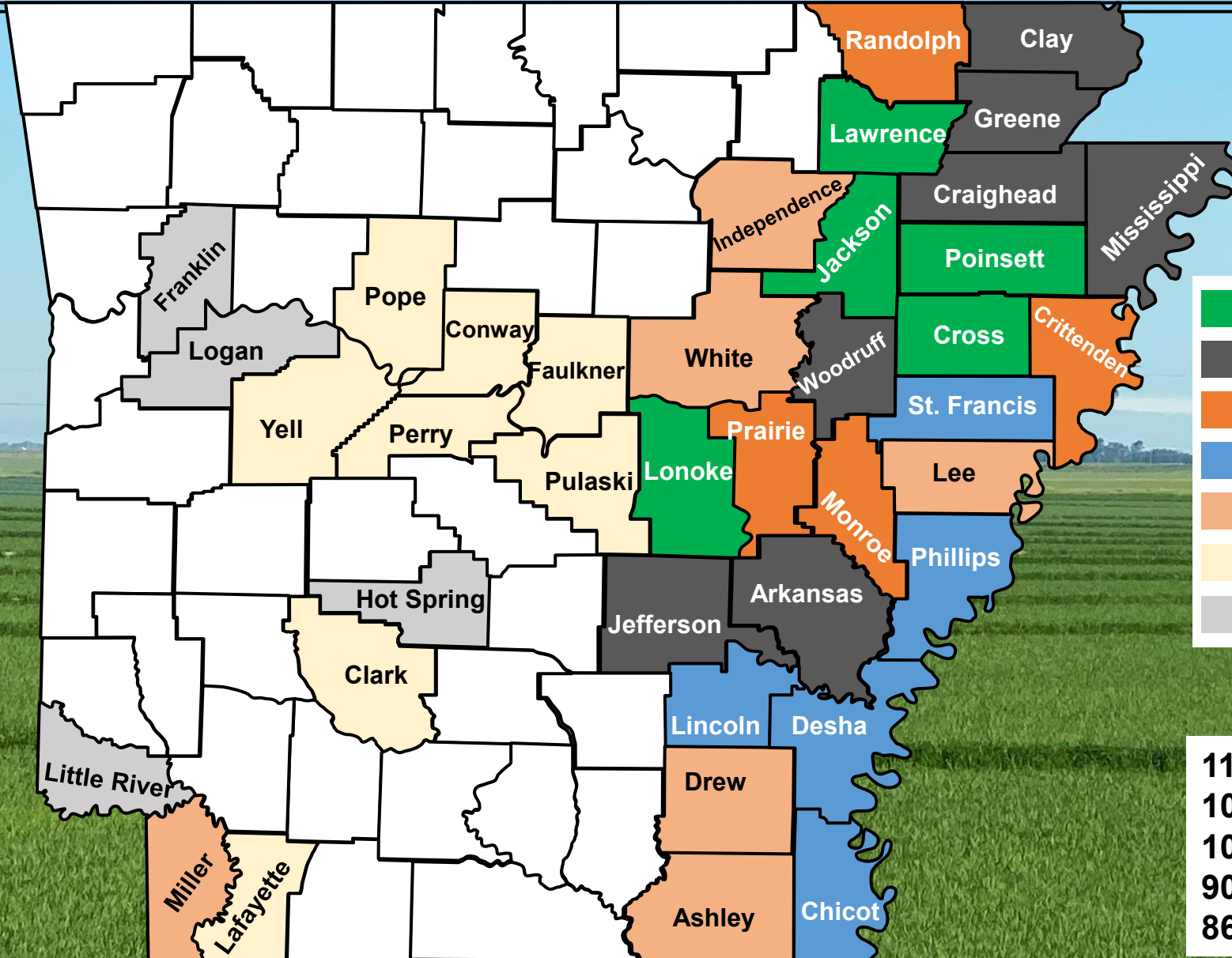
2012-2023 AR Rice Harvest Progress



AR Rice Acreage, 1977-2023

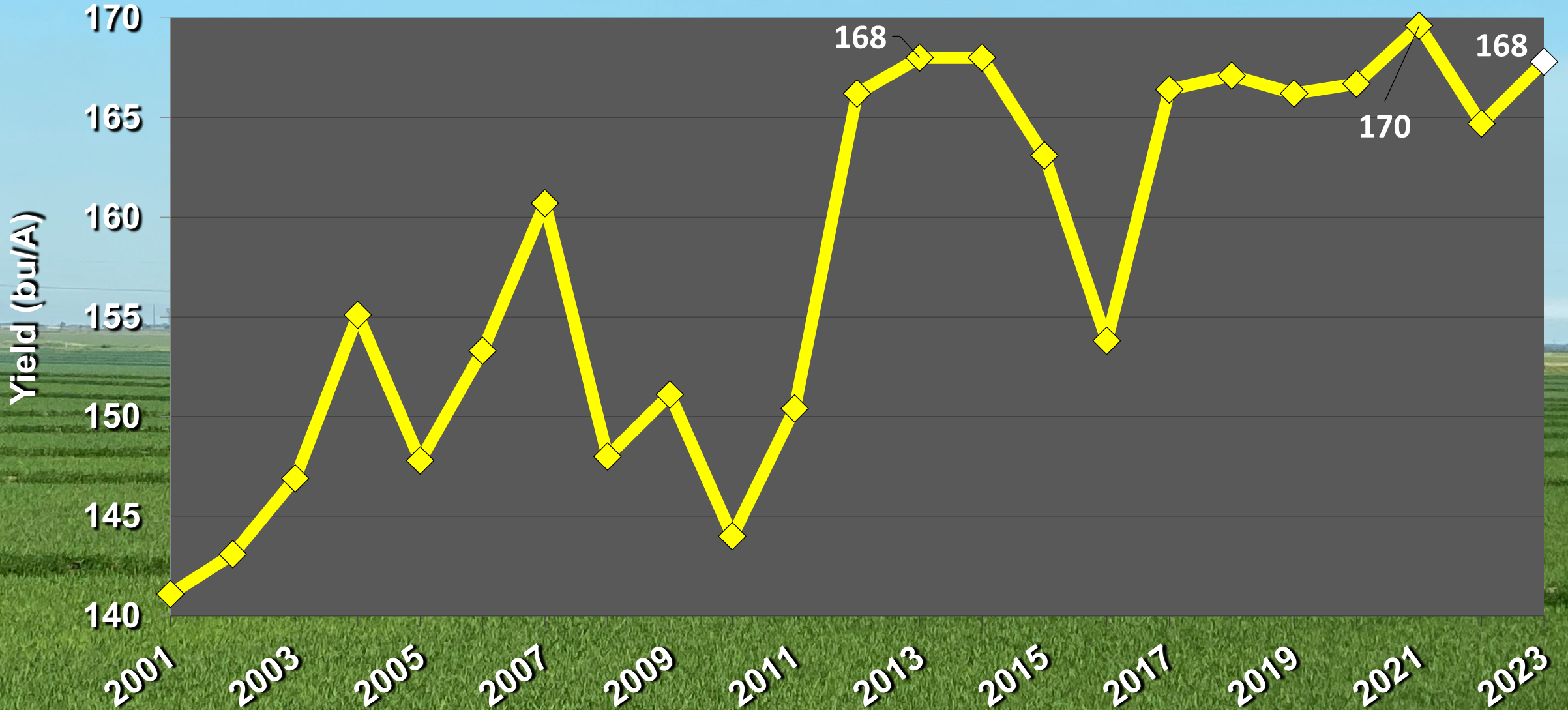


AR Rice Acreage, 2023



112,566 ac	– Jackson	+28k
107,481 ac	– Poinsett	+26k
104,302 ac	– Lawrence	+28k
90,053 ac	– Cross	+35k
86,562 ac	– Lonoke	+2k

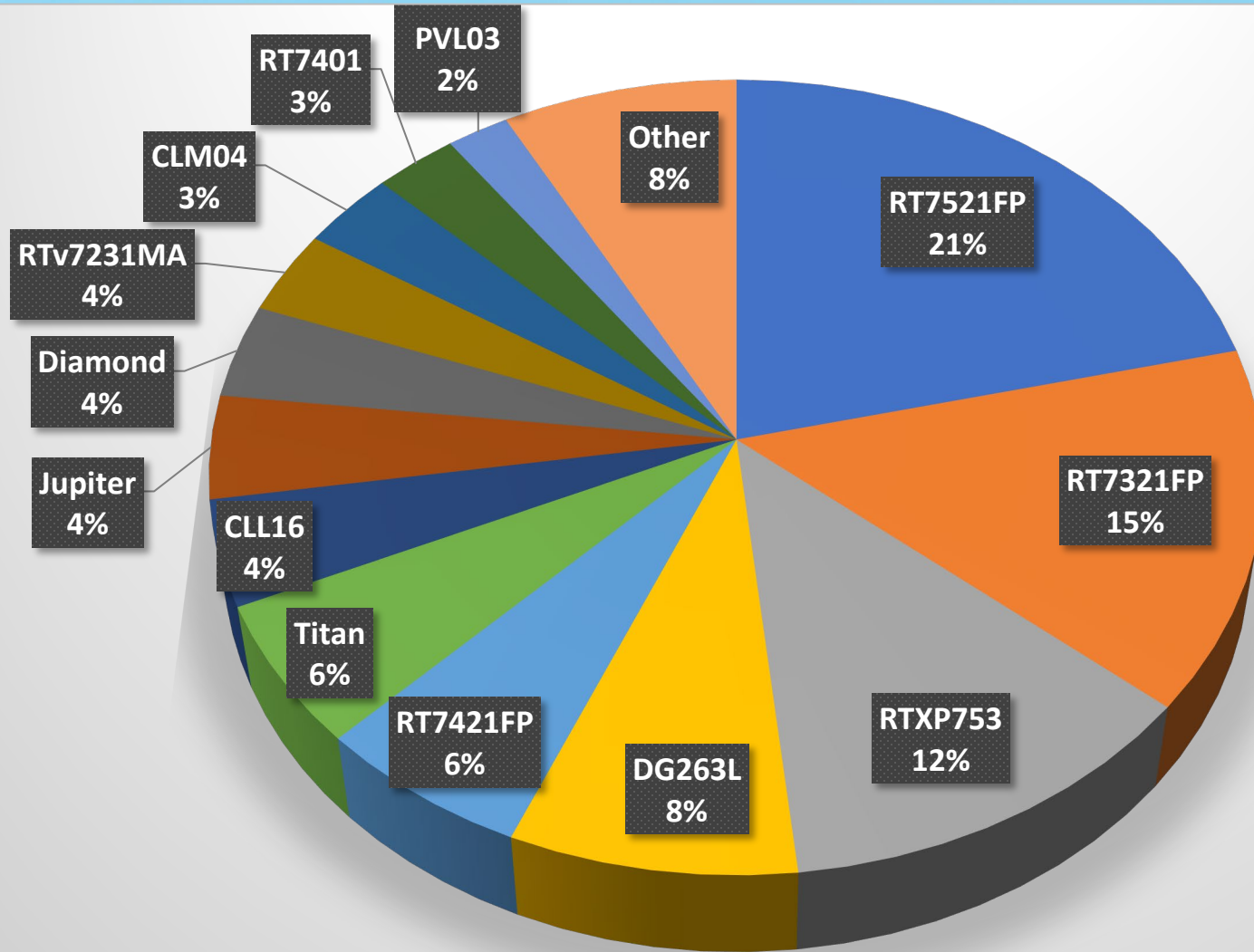
AR Avg. Rice Yield, 2001-2023



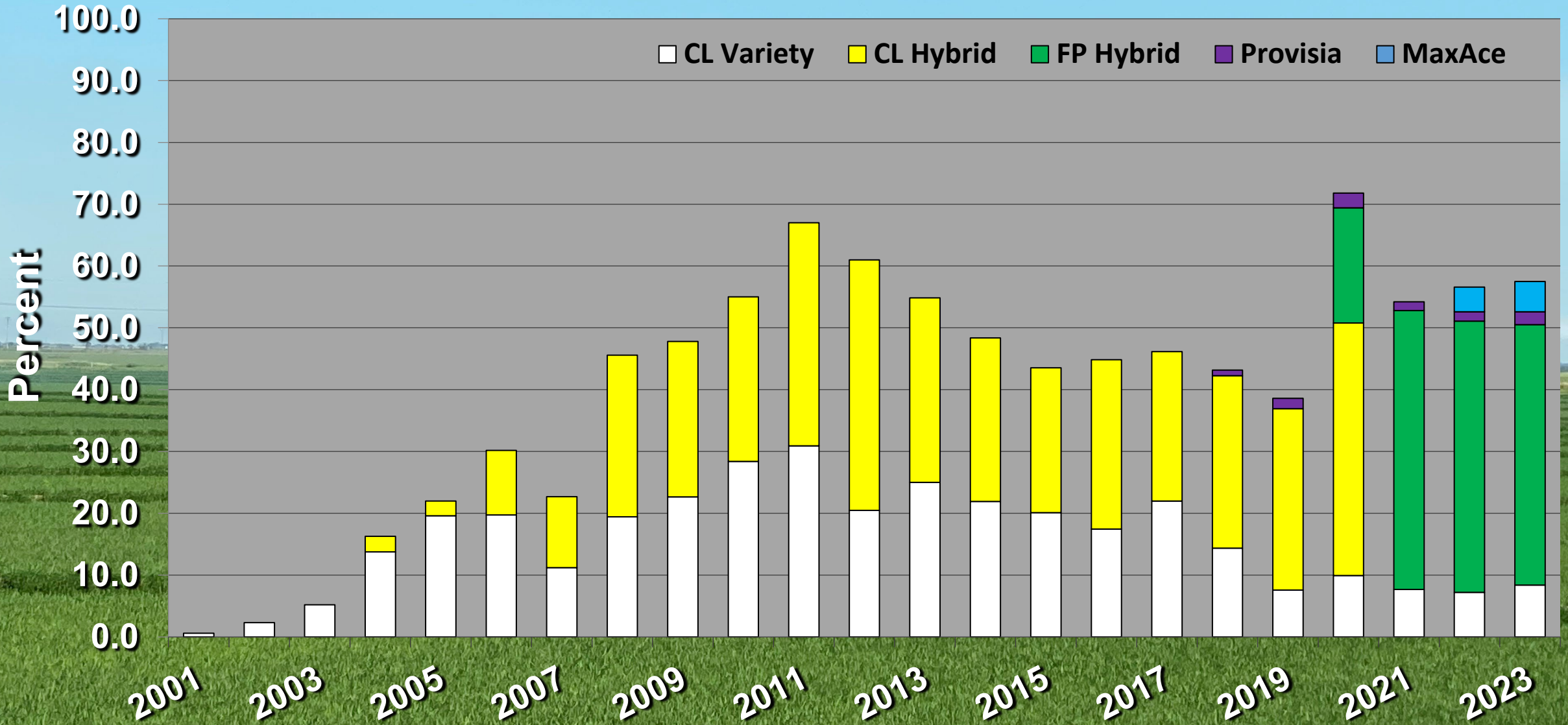
2018-2023 Rice Cultivar Distribution

Cultivar	2023*	2022	2021	2020	2019	2018
	% of Acres					
RT 7521 FP	21.3	29.8	21.2	13.3	--	--
RT 7321 FP	14.7	14.6	25.2	5.4	--	--
RT XP753	12.3	17.8	21.2	19.2	25.6	22.2
DG263L	8.1	10.9	3.3	--	--	--
RT 7421 FP	6.1	--	--	--	--	--
Titan	5.8	2.7	2.7	2.5	6.5	4.7
CLL16	4.3	4.9	2.5	0.1	--	--
Jupiter	4.2	4.5	6.0	5.2	9.5	5.7
Diamond	3.8	5.5	6.0	10.1	10.9	20.0
RTv7231 MA	3.4	**	--	--	--	--
CLM04	3.2	0.9	1.4	0.7	--	--
RT 7401	2.8	1.0	0.2	--	--	--
PVL03 (02/01)	2.1	1.5	1.4	2.4	1.4	0.9

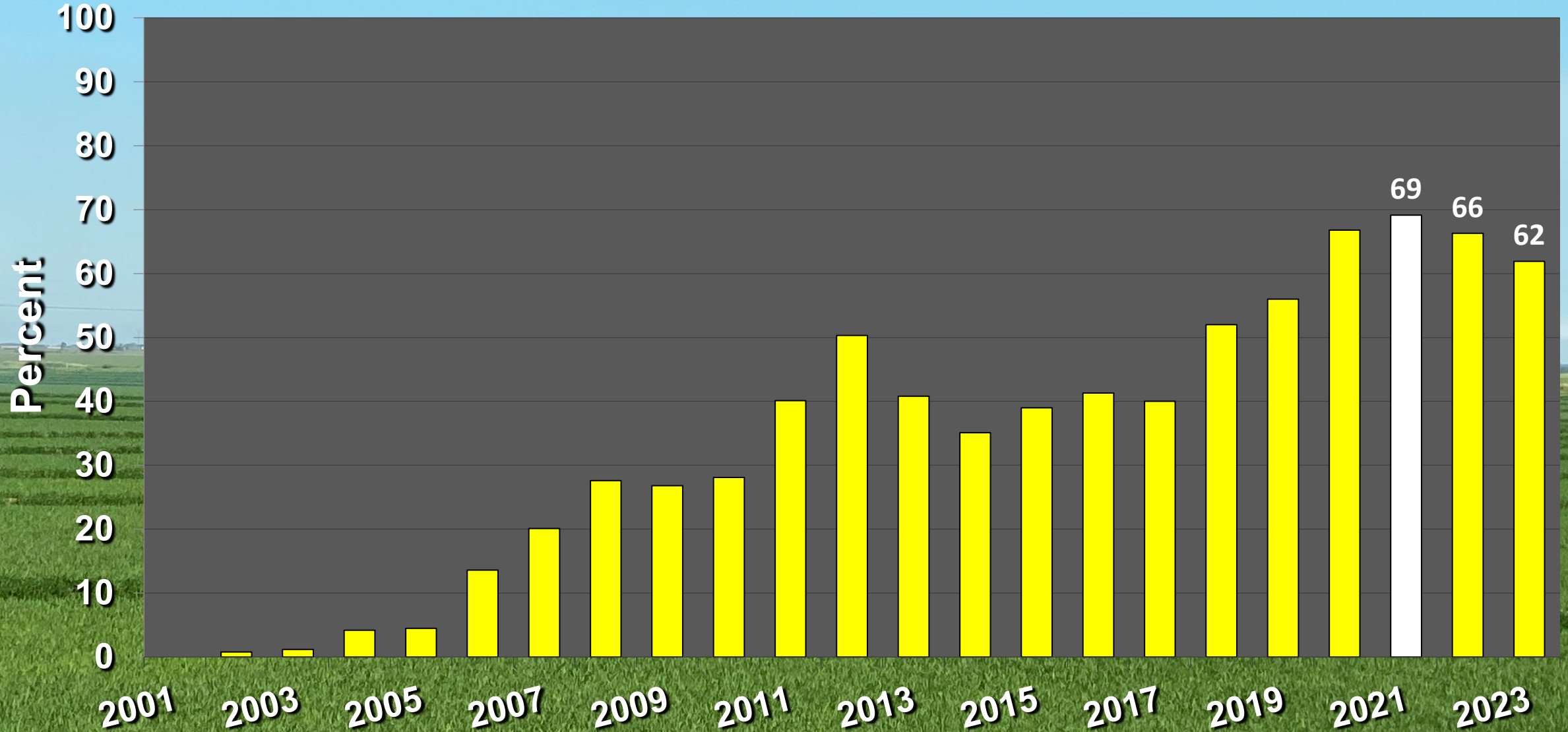
2023 Rice Cultivar Distribution



Clearfield / FullPage / Provisia / MaxAce Rice Technologies in AR



% Hybrid Rice Acres by Year



Arkansas: 2024 Outlook

- **Input costs moderating while price outlook remains high**
 - **Fuel & fertilizer key pieces**
- **Variable costs project lower than 2022-23, approaching 2021 levels?**
 - **Similar profitability as 2021?**
- **Current fall 2023 rice bids are near \$6.80 per bu compared to \$5.22 in 2021, a difference of \$1.58 per bu**
- **With fall 2024 soybean bids near \$12.50, rice is more profitable at 100% share (full ownership). However, profitability shifts in favor of soybeans in common share lease arrangements.**

Arkansas: 2023 Outlook

- **Current input cost projections (and price) point to rice holding more acres in rotation next spring**
- **New crop rice prices are adjusting to provide the same relative profitability as soybeans**
- **Corn acres likely to drop**
 - **Primary move to soybean?**
 - **How much to rice?**
- **Prices for the remainder of the 23/24 marketing year are filled with uncertainty**
 - **Can U.S. LG rice markets sustain current prices long-term????**
 - **What happens to medium-grain market given sharp production increase in '23????**
 - **International impact...**

Arkansas: 2024 Outlook

(\$954/ACRE RICE COST) – (\$482/ACRE SOYBEAN COST)

	Price	Yield	Producer Share / Returns Over Variable Costs		
Unit	\$/bu.	Bu/acre	100%	80%	75%
Rice	\$6.80	190	\$338	\$80	\$15
Soybean	\$12.35	55	\$197	\$61	\$27
Difference (\$/acre)			\$141	\$18	-\$11

Arkansas: 2024 Crop Comparison

2024 Crop Costs & Returns	Corn	Cotton	Rice FP Hybrid	Rice Hybrid	Rice Variety	Rice CL Variety	Soybean
Expected Yield	190	1200	190	190	170	170	55
Producer Share	75%	75%	75%	75%	75%	75%	75%
Cash Price	5.07	0.77	6.80	6.80	6.80	6.80	12.35
Total Variable Costs	757.47	734.87	959.11	953.84	831.08	855.77	481.87
Return over Variable	-26.45	-41.87	12.74	18.01	38.47	13.78	30.87

Arkansas: 2024 Crop Comparison Input Costs

	Rice 2021	Rice 2022	Rice 2023	Rice 2024	Soy 2021	Soy 2022	Soy 2023	Soy 2024	Corn 2021	Corn 2022	Corn 2023	Corn 2024
Nitrogen (urea)	53.63	140.25	132.00	86.63	--	--	--	--	70.69	184.88	174.00	114.19
Phosphate	15.44	38.06	38.72	33.06	15.98	39.38	40.05	34.20	31.06	56.88	57.85	49.40
Potash	14.75	41.25	41.00	29.25	14.75	41.25	41.50	29.30	19.18	72.19	71.75	51.28
Diesel Fuel, Field	6.98	10.24	17.73	13.91	5.53	11.29	18.94	15.36	6.70	10.89	18.85	13.87
Diesel Fuel, Harvest	3.24	5.27	9.12	7.40	3.24	5.27	9.12	7.40	3.24	5.27	9.12	7.40
Irrigation Energy Cost	56.69	92.13	159.45	129.33	22.68	36.85	63.78	51.73	26.46	42.99	74.41	60.36
	150.73	327.20	398.02	299.58	62.18	134.04	173.39	137.99	157.33	373.10	405.98	296.50

Sept. Rough Rice Futures 10-year monthly continuation

ZR - Rough Rice - Monthly Continuation OHLC Chart

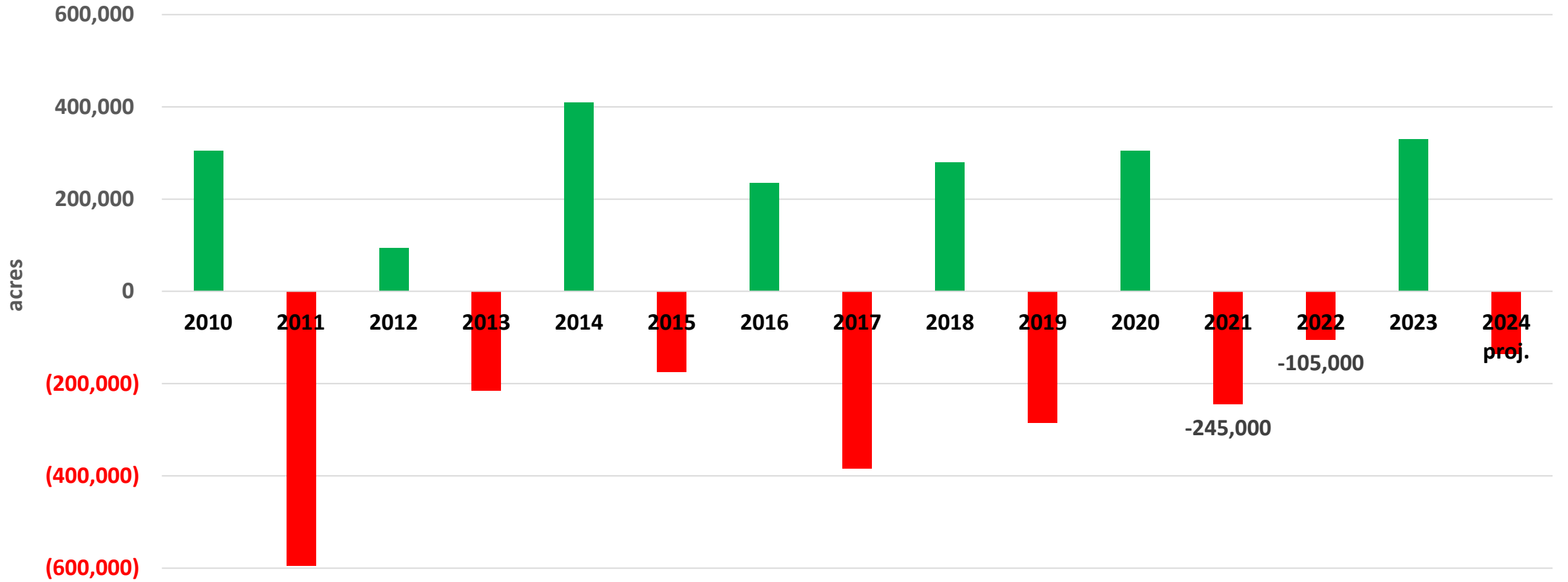


Nov. Soybean Futures 10-year monthly continuation

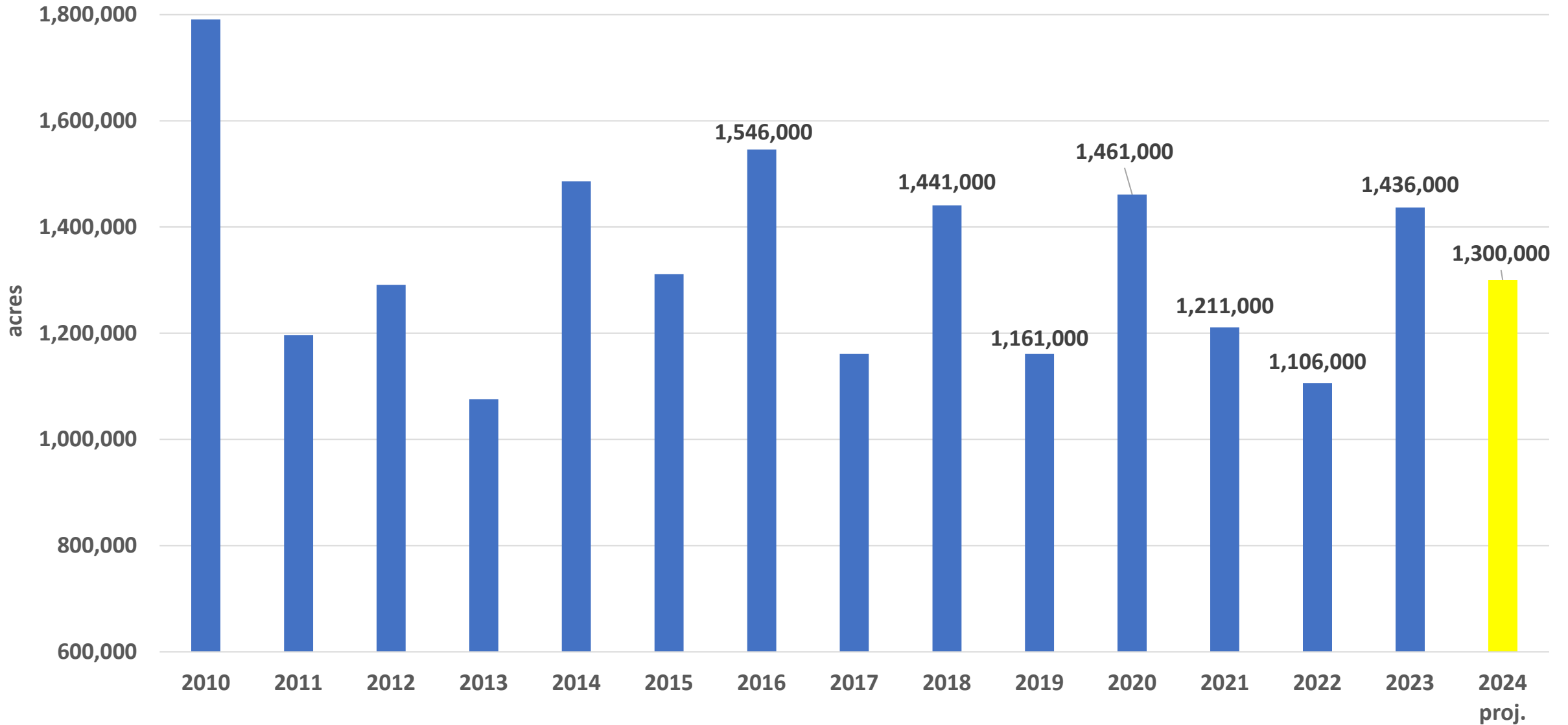
ZS - Soybean - Monthly Continuation OHLC Chart



Year-to-Year Change in Rice Acres Arkansas



Year-to-Year Change in Rice Acres Arkansas



Arkansas Rice Acreage Outlook for 2024

	2023	2024	Change	% Change
Long-grain	1,220,000	1,150,000	70,000	
Medium-grain	216,000	150,000	66,000	
Total	1,436,000	1,300,000	136,000	10%

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