

# Rice Experiment Station Update

Dustin Harrell

[dharrell@crrf.org](mailto:dharrell@crrf.org)

(530) 868-5481 (office)

(530) 774-3874





**Education:**  
**Texas A&M**  
**SFASU**  
**LSU**

**Career:**

- 1. 2006 Rice Fertility and Agronomist – LSU AgCenter Rice Research Station**
- 2. 2014 Louisiana Extension Rice Specialist (plus above)**
- 3. 2017 Director of Research – Rice Research Station (plus above)**
- 4. 2021 Director (Resident Coordinator) – Rice Research Station**





# Awards and Honors

Louisiana Rice Research Board Chair for Excellence in Rice Research, 2021

Distinguished Rice Research and Education Team – Rice Technical Working Group (2012, 2016, and 2018)

American Society of Agronomy, Extension Educational Materials Program. Winner Newsletters category - Louisiana Rice Notes, 2017

Louisiana Agriculture Distinguished Service Award, 2015

Rice Researcher of the year 2015

G & H Seed Research and Excellence Award 2015

Mosaic Endowed Professorship 2009

Rebecca & T.J. “Jack” Stanly Award. SFASU Alumni Association. May 2002

AgCenter Internal Leadership Program

Louisiana Agriculture Leadership Program

**Rice Leadership Development Program (2015-2017)**



# Rice Experiment Station

## 2021 Challenges:

- Water
- Lost 9 of 16 employees (56% of staff)
  - Director
  - 2 Plant breeders
  - Director of genetics lab
  - Administrative assistant
  - 2 plant breeder assistants
  - 2 farm crew members
- All positions have been filled!





# Rice Experiment Station Team



Dustin Harrell  
Director

Emily Schaff  
Executive Asst.

Teresa De Leon  
Medium Grain

Nirmal Sharma  
Long Grain

Frank Maulana  
Short Grain

Gretchen  
Zaunbrecher  
Dir. Genetics Lab



Far West rice



LSU  
UC / RES 4



Univ. Illinois  
Noble Research Inst.



K State  
Noble/LSU



ULL / TTU / TAMU  
13 years LSU

# Available Foundation Seed

Long grain: No seed available

Medium grain:

- M-211, M-105, M-206, M-209,  
M-210, M-401

Short grain:

- S-102
- Calmochi: CM-101, CM-203
- Calhikari: CH-203, CH-202



# Rice Experiment Station Update

Dustin Harrell

[dharrell@crrf.org](mailto:dharrell@crrf.org)

(530) 868-5481 (office)

(530) 774-3874







# ROXY® Rice Production System

*A "Strategic Partnership" to bring a new herbicide tolerant rice to California Growers*



1. The ROXY® Rice Production System (RPS) is a new rice weed control tool that uses a non-GMO rice trait that provides rice tolerance to the post patent herbicide ALB2023 and
  2. Seven years of research involving multiple locations show that ALB2023 applied pre-plant in a water-seeded system provides excellent weed control in rice. The ROXY® RPS can also be an effective weed control tool in drill seeded rice with a post-plant pre-flood application and may have potential in other rice growing regions.
  3. The ROXY® RPS offers a new rice production system with activity on Group 1 and Group 2 resistant weed biotypes:
    - ROXY® RPS provides early season weed control to help maximize weed control and yields
    - ROXY® RPS uses ALB2023 and ALB024 herbicides and provides growers with a Group 14 herbicide mode of action and CA currently has no rice weed resistance to PPO herbicides.
    - ROXY® RPS will be used as part of a best management practice to address weedy red rice
- 1. ROXY® RPS is Driven by:**
    - ✓ Patented Grower Owned Trait
    - ✓ Albaugh Branded Herbicides
    - ✓ Elite Germplasm
    - ✓ Industry Stewardship
  - 2. EPA Registration Submission Completed – Anticipating a 2022 4<sup>th</sup> Qtr EPA registration**
  - 3. CA DPR Concurrent Review Request Completed**
  - 4. Launch of the ROXY® RPS for CA** rice growers is targeting the 2023 crop year

ALB2023 and ALB024 herbicides are not registered for use on rice and not for sale in the US.

**ROXY® RPS**





# 2021 Milestones for **ROXYRPS**



1. Expanded locations and larger field plots with 19Y4000
2. Concurrent submission for herbicide registration with EPA and California Department of Pesticide Registration July 2021
3. Granting of the ROXY trait Patent No. 11,180,771 B2 November 23, 2021
4. Filing for Plant Novel Trait Approval from Canada September 2021
5. ROXY RPS Innovation Field Days July 27-28, 2021.
6. ROXY RPS Introduction and Presentation at Rice Field Day August 25, 2021
7. Seed increase of 19Y4000







# ROXYRPS®

## 2021 Off-Station Research



### Albaugh Contracted ROXY® RPS Research

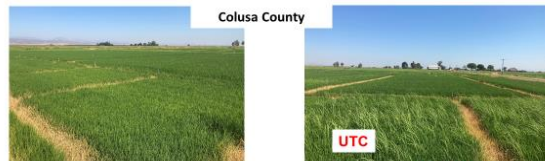
- Focus on additional regions and soils
- Shift from small plot to large basin field studies
- Focus on selected rates and grower standard herbicides
- Experimental design developed with cooperating contractors
- All test conducted with 19Y4000 water seeded by air



### Cooperators

Colusa County Farm Supply – Glenn & Colusa  
 Butte County Rice Growers – Butte  
 GrowWest – Yolo & Sutter  
 Wilbur-Ellis – Butte  
 UCD- -Hamilton Rd.

Colusa County Farm Supply- 2021



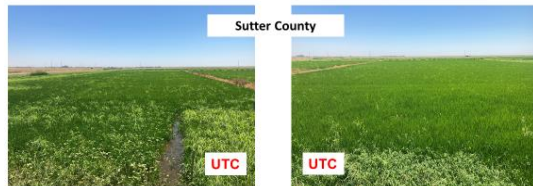
ROXYRPS

Colusa County Farm Supply- 2021



ROXYRPS

GROWWEST- 2021



ROXYRPS

Wilbur-Ellis 2021  
 Butte County (Red Soil)



ROXYRPS

BUCRA Demo Nursery 6-19-21



Untreated Abolish 1.5 pts. ALB 2023 +21:0:0 +Regiment +Stam +GraniteGR

UCD Hamilton Road





# Wilbur Ellis ROXY Test RES Drone Fly-by







## Multiple Treatments

Preplant

ALB 2023 (1.5, 2.0, 2.5 pt./a)

Abolish® 8EC (2 qt./a)

Post

ALB 2024

SuperWham!®

Seeding rate (145, 175, 200 lbs./a)

Lines

19Y4000

19Y4000 + 20% Koshihikari  
(weedy rice mimic)

TRT	Yield
<b>ALB 2023 (1.5)</b>	<b>10146</b>
& 2024	9815
& SuperWham	9965
<b>ALB 2023 (2.0)</b>	<b>10442</b>
& 2024	9546
& SuperWham	10415
<b>ALB 2023 (2.5)</b>	<b>10002</b>
& 2024	9461
& SuperWham	9936
<b>Abolish (DPS)</b>	<b>8316</b>
& 2024	8117
& SuperWham	8199

#/acre seeding	Yield
145	10309
175	9763
200	9991

1. ALB 2023&19Y4000 provided weed control at all rates
2. No Koshihikari plants found in ALB treated plots

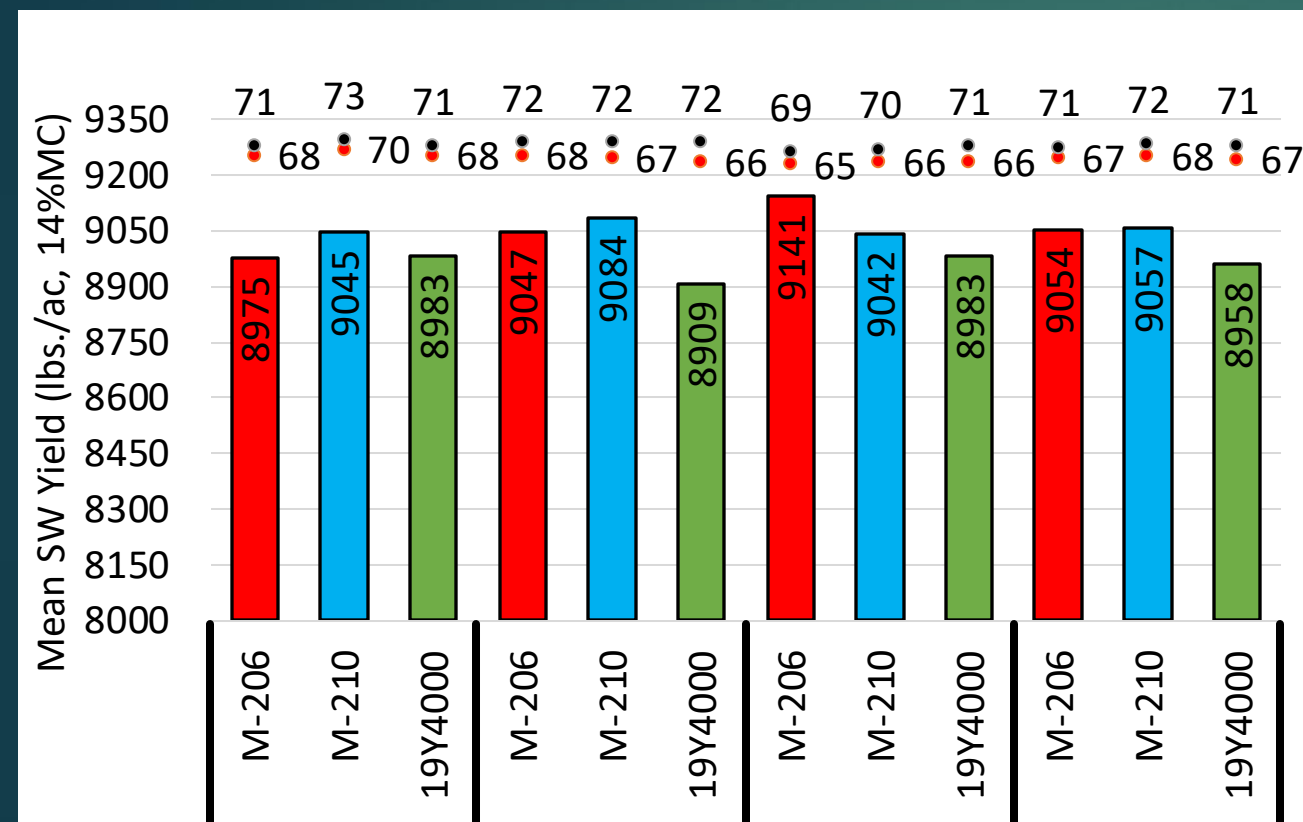






# 19Y4000-Blast Resistant & ALB 2023-tolerant Calrose Medium Grain

UCCE Statewide Yield Tests 2019-2021



All ~ within 100 lbs./ac



Quality is the same



Conventional herbicide program