

2026 Rice Considerations

Sarah Marsh Janish
UCCE Rice Farming Systems Advisor – Colusa & Yolo

2026 Colusa Farm Show
February 3, 2026

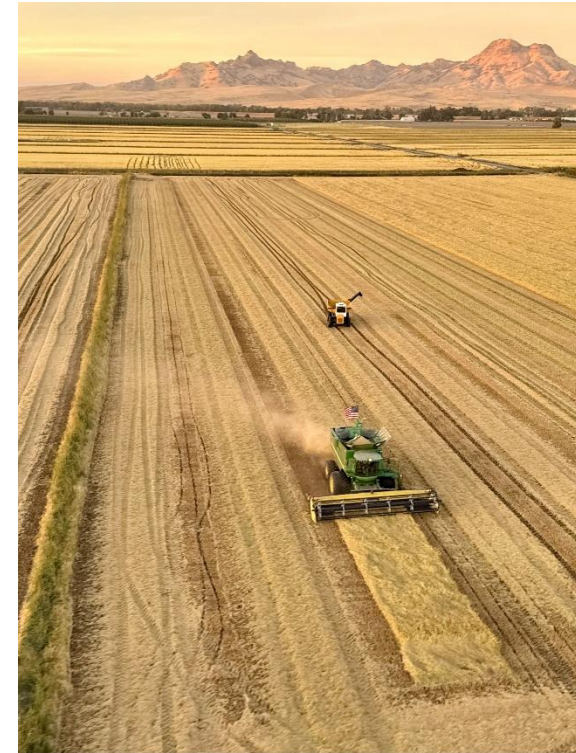
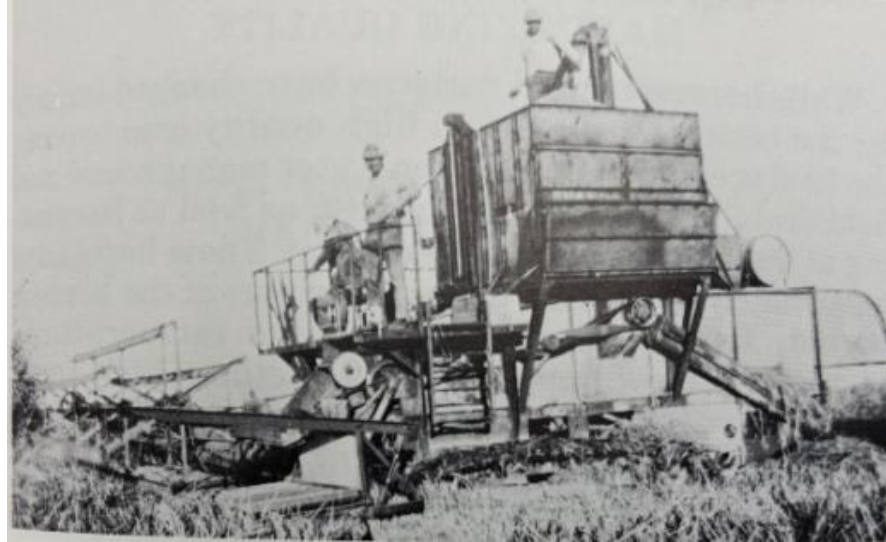
 **UNIVERSITY OF CALIFORNIA**
Agriculture and Natural Resources

Outline

- Brief history
- 2025 rice season in the rear view
- Considerations for 2026
 - Pest management
 - Weeds
 - Invertebrates
 - Diseases



Some things have changed...



Some things have changed...

- Calrose 76 – 1st semidwarf CA rice cultivar
- Phased out most rice field burning
- Yields routinely top 90-100 cwts – often higher



Some things stay the same

“At present the barnyard grass is the most serious pest with which the rice growers of California have to contend.”

– Report on Rice Growing in the Sacramento Valley for the Season of 1912

“The cost of production in California... is approximately forty percent more than in the rice growing sections of Louisiana and Texas.”

– Cost of Rice Production in 1914



2025 in the rear-view mirror

Recap of 2025

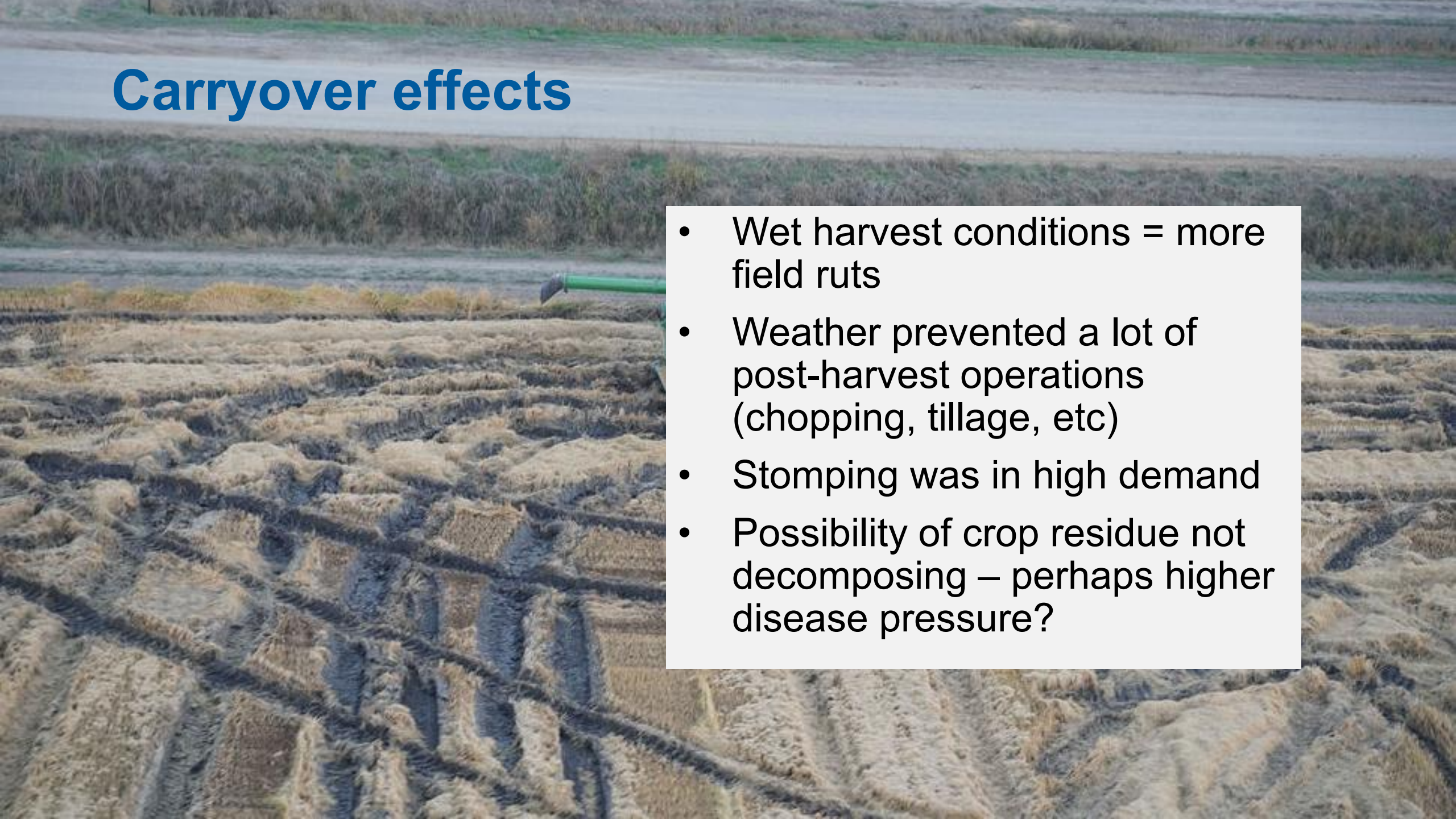
- 533,000 acres of CA rice
- LATE harvests
- Unexpected yields
- Uneven quality results



What happened?

- Dry spring allowed some early plantings... but planting slowed through early May
 - 50% plant date was May 19
- Mild summer raised hopes for a high yielding year
 - However, grain fill and drying period (late Sep through mid-Nov) received higher than average rainfall and, in-between rains, high temperatures
 - Statewide average was 84.5 cwt/ac (lower than 2024).
- Early harvested fields tended to have higher yields and higher quality than later harvests.

Carryover effects

The background image shows a wide, flat agricultural field after harvest. The ground is covered with a thick layer of golden-brown crop residue, likely corn stalks. Dark, muddy tracks from heavy machinery are visible, crisscrossing the field. In the distance, a green combine harvester is partially visible, working in the field. The horizon is flat, and the sky is overcast.

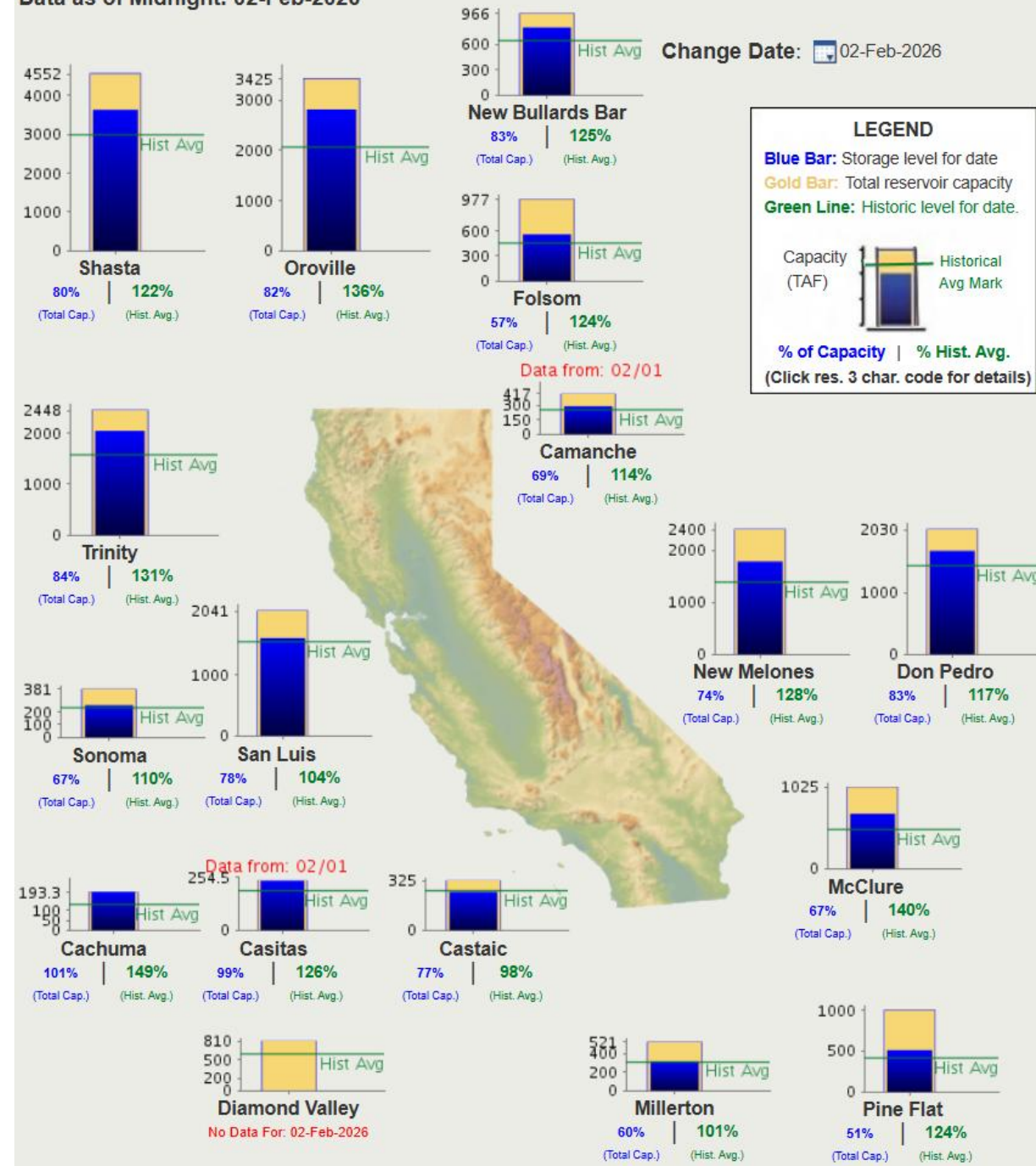
- Wet harvest conditions = more field ruts
- Weather prevented a lot of post-harvest operations (chopping, tillage, etc)
- Stomping was in high demand
- Possibility of crop residue not decomposing – perhaps higher disease pressure?

Data as of Midnight: 02-Feb-2026

Looking ahead to 2026 – water supply

- Reservoirs are above average levels – thanks to atmospheric rivers this winter
- However, Sierras snowpack is drying up
- Tentative projections are of a drier, warmer spring

But who knows?



Weeds

A note on weeds in rice

- Rice is grown under flooded conditions primarily as a cultural weed control option
- Weeds have coevolved with rice to “escape” water and proliferate
- Not a lot of options for control methods other than chemicals
 - Crop rotation – depends on soil, irrigation source, etc.
 - Mechanical methods are difficult in-season

Grass weeds – Watergrass complex and sprangletop

Bearded sprangletop



Walter's barnyardgrass



Late watergrass (l), barnyardgrass (c), and early watergrass (r)



		Grasses				
		Barryadgrass	Early watergrass	Late watergrass	Sprangletop	
TSA = Triazopyrimidine sulfonamide POB = pyrimidinyl oxbenzate SU = sulfonurea	SU	Londax® (bensulfuron)				
		Sandea® (halosulfuron)				
		Strada® CA (orthosulfamuron)	R	R	R	
	POB	Regiment® CA (bispyribac)	R	R	R	
		TSA	Granite® GR Granite® SC (penoxsulam)	R	R	R
	Lipid synthesis inhibitor + ALS inhibitor (SU)		League® MVP	R	R	R
		HPPD inhibitor + ALS inhibitor (SU)	Butte® Herbicide			
	HPPD inhibitor		Cliffhanger® SC (benzobicyclon)			

Control

Partial control / Suppression

No control

- Clincher
- Cerano
- Bolero
- Abolish
- propanil
- Regiment
- Granite
- League
- MVP

Control or suppression options

- Zembu (S)
- Loyant (S)
- Butte (S/C)
- Cliffhanger (S/C)

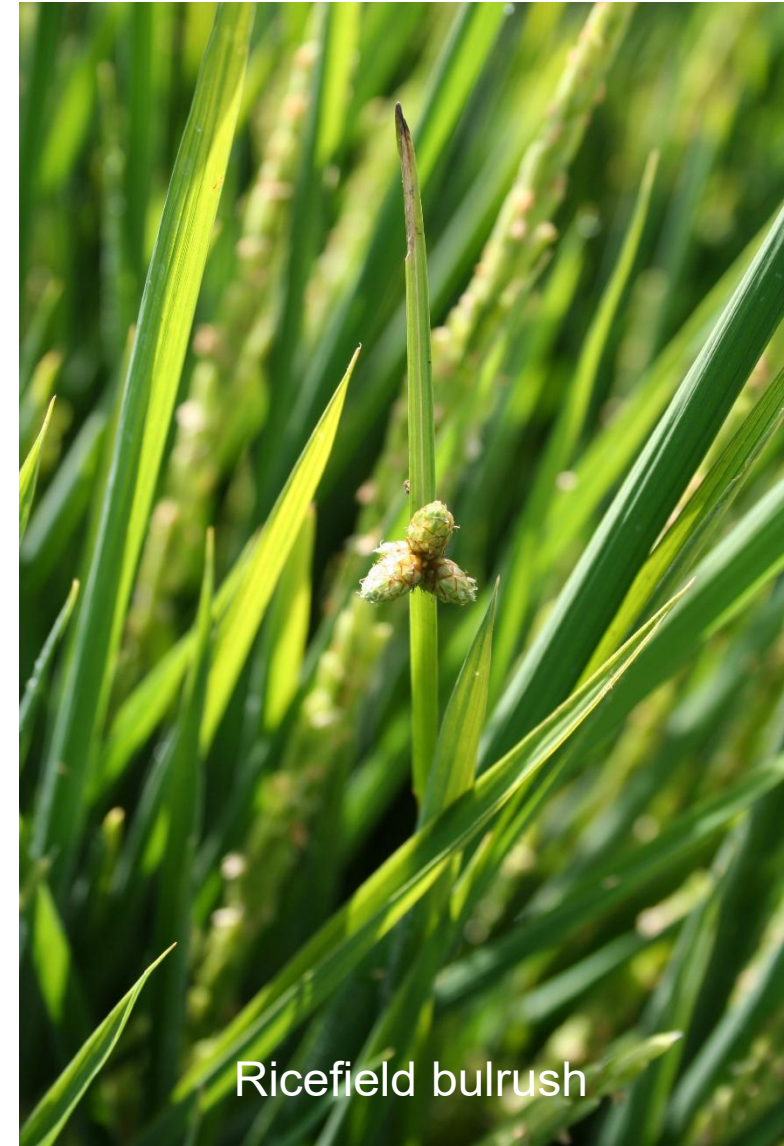
Pendimethalin has label use restrictions and only controls non-emerged weeds

*Zemba must be applied preemergent for control.

Weeds - Sedges



[Charles T. Bryson, USDA Agricultural Research Service, Bugwood.org](http://Bugwood.org)



		Sedges	
Mode of Action		Ricefield bulrush	Smallflower umbrella sedge
ACCase inhibitor ▶	Clincher® CA (cyhalofop)		
Pigment synthesis inhibitor ▶	Cerano® 5 MEG (clomazone)		
Lipid synthesis inhibitors ▶	Abolish® 8 EC Bolero® Ultramax (thiobencarb)		
Photosystem II inhibitors ▶	Stam® 80 EDF CA SuperWHAM!® CA (propanil)	R	R
ALS inhibitors	Asses of ALS inhib		
Protox inhibitor	Shark® H ₂ O (carfentrazone)		
	Zembu® (pyraclostrobin)		
Auxin mimics	Grandstand® CA (triclopyr)		
	Loyant® CA (florpyrauxifen-benzyl)		
Cell division inhibitor ▶	pendimethalin		

		Sedges	
Product name (active ingredient)		Ricefield bulrush	Smallflower umbrella sedge
SU = sulfonylurea	Londax® (bensulfuron)	R	R
	Sandea® (halosulfuron)	R	R
	Strada® CA (orthosulfamuron)	R	R
	Regiment® CA (bispiribac)	R	R
POB = pyrimidinyl oxbenzoate			
	Granite® GR Granite® SC (penoxsulam)	R	R
TSA = Triazopyrimidine sulfonamide			
	Lipid synthesis inhibitor + ALS inhibitor (SU) League® MVP	R	R
HPPD inhibitor + ALS inhibitor (SU)	Butte® Herbicide (benzobicyclon + halosulfuron)		
	HPPD inhibitor Cliffhanger® SC (benzobicyclon)		

Spreading or widespread resistance in sedges

- propanil
- Londax
- Sandea
- Strada
- Regiment
- Granite
- League MVP

Control or Suppression options

Ricefield bulrush

- Shark (C)
- Grandstand (C)
- Loyant (C)
- Zembu (S) - weak

Smallflower umbrellasedge

- Abolish/Bolero (C)
- Shark (C)
- Loyant (C)
- Zembu (C)



	Control		Partial control / Suppression		No control			No control of resistant plants. The resistance is already widespread.		No control of resistant plants. The resistance is spreading.
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*Zembu must be applied preemergent for control.

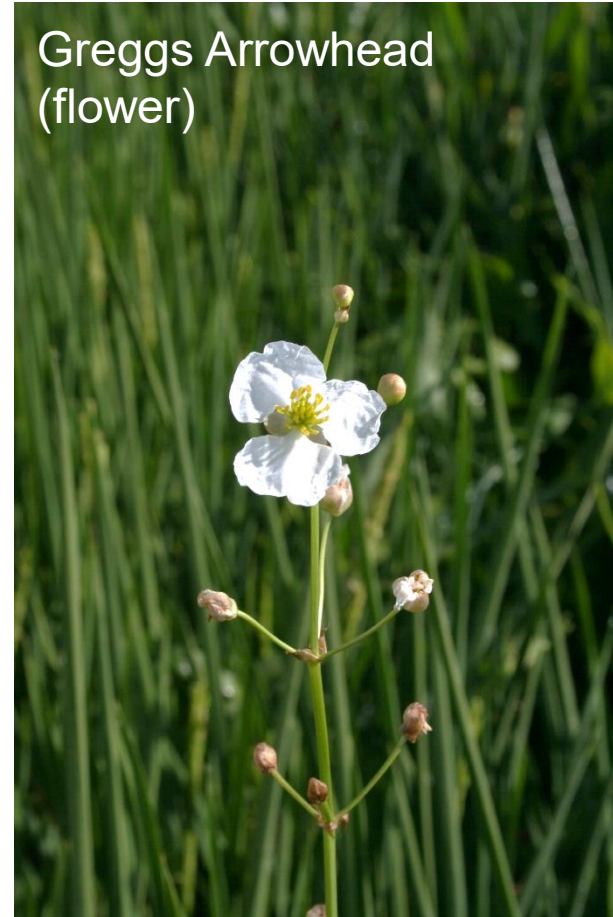
Weeds - Broadleaves



Redstem



CA Arrowhead



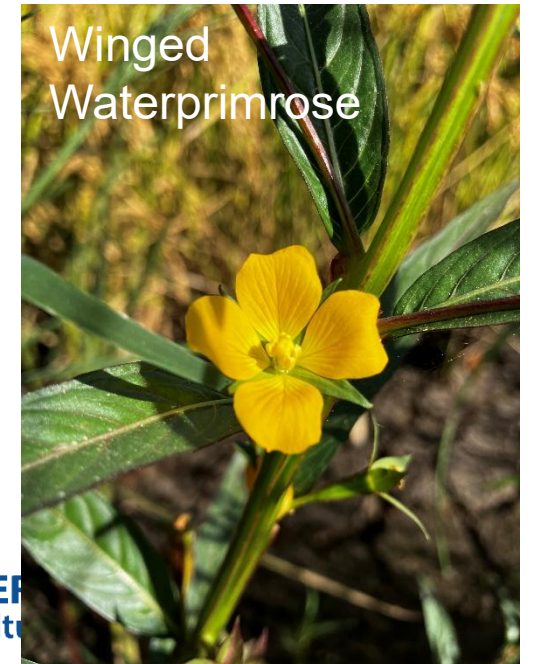
Greggs Arrowhead
(flower)



Monochoria



Duck salad



Winged
Waterprimrose

		Broadleaf weeds			
Mode of Action		Ducksalad	Monochoiria	Redstem	California arrowweeds
ACCCase inhibitor ▶	Clincher® CA (cyhalofop)				
Pigment synthesis inhibitor ▶	Cerano® 5 MEG (clomazone)				
Lipid synthesis inhibitors ▶	Abolish® 8 EC Bolero® Ultramax (thiobencarb)				
Photosystem II inhibitors ▶	Stam® 80 EDF CA SuperWHAM1® CA (propanil)				
ALS inhibitors					
Protox inhibitor ▶	Shark® H ₂ O (carfentrazone)				
	Zembu® (pyraclostrobin)				
Auxin mimics ▶	Grandstand® CA (triclopyr)				
	Loyant® CA (florpyrauxifen-benzyl)				
Cell division inhibitor ▶	pendimethalin				

		Broadleaf weeds			
Product name (active ingredient)		Ducksalad	Monochoiria	Redstem	California arrowweeds
SU	Londax® (bensulfuron)			R	R
	Sandea® (halosulfuron)			R	R
	Strada® CA (orthosulfamuron)			R	R
POB	Regiment® CA (bispiribac)			R	R
TSA	Granite® GR Granite® SC (penoxsulam)			R	R
				R	R
Lipid synthesis inhibitor + ALS inhibitor (SU)				R	R
League® MVP (thiobencarb + imazosulfuron)				R	R
HPPD inhibitor + ALS inhibitor (SU)					
Butte® Herbicide (benzobicyclon + halosulfuron)					
HPPD inhibitor Cliffhanger® SC					

Cliffhanger has no activity on redstem



Control
Partial control / Suppression
No control
R R No control of resistant plants. The resistance is already widespread.
R No control of resistant plants. The resistance is spreading.

*Zembu must be applied preemergent for control.

CALIFORNIA RICE WEED HERBICIDE SUSCEPTIBILITY CHART

		Grasses				Sedges		Broadleaf weeds			
Mode of Action		Barryadgrass	Early watergrass	Late watergrass	Sprangletop	Ricefield burrush	Smallflower umbrella sedge	Duckweed	Monochoria	Redstem	California arrowweeds
ACCase inhibitor ▶	Clincher® CA (cyhalofop)	R	R	R	R						
Pigment synthesis inhibitor ▶	Cereno® 5 MEG (clomazone)	R	R	R	R						
Lipid synthesis inhibitors ▶	Abolish® 8 EC	R	R	R							
	Bolero® Ultramax (thiobencarb)	R	R	R							
Photosystem II inhibitors ▶	Stam® 80 EDF CA SuperWHAM!® CA (propanil)	R	R	R		R	R				
ALS inhibitors → Three classes of ALS inhibitors →											
Protox inhibitor ▶	Shark® H ₂ O (carfentrazone)										
	Zembu®* (pyraclostrobin)										
Auxin mimics ▶	Grandstand® CA (triclopyr)										
	Loyant® CA (florpyrauxifen-benzyl)										
Cell division inhibitor ▶	pendimethalin										
TSA = Triazopyrimidine sulfonamide POB = Pyrimidinyl oxbenzate SU = sulfonylurea Grass Sedge Broadleaf											
		Barryadgrass	Early watergrass	Late watergrass	Sprangletop	Ricefield burrush	Smallflower umbrella sedge	Duckweed	Monochoria	Redstem	California arrowweeds
Londax® (bensulfuron)						R	R			R	R
Sanda® (halosulfuron)						R	R			R	R
Strada® CA (orthosulfamuron)		R	R	R		R	R			R	R
Regiment® CA (bispyribac)		R	R	R		R	R			R	R
Granite® GR		R	R	R		R	R			R	R
Granite® SC (penoxsulam)		R	R	R		R	R			R	R
Lipid synthesis inhibitor + ALS inhibitor (SU)		R	R	R		R	R			R	R
League® MVP (thiobencarb + imazosulfuron)											
HPPD inhibitor + ALS inhibitor (SU)											
Butte® Herbicide (benzobicyclon + halosulfuron)											
HPPD inhibitor Cliffhanger® SC (benzobicyclon)											



UC RICE

For additional information visit
<https://agronomy-rice.ucdavis.edu>



Control



Partial control / Suppression



No control



No control of resistant plants.
The resistance is already widespread.



No control of resistant plants.
The resistance is spreading.

*Zembu must be applied preemergent for control.

CALIFORNIA
 ural Resources

Rice Weeds Herbicide Resistance Screening Program

- **Provide diagnosis for cross/multiple resistance in rice fields and map the resistance for the rice production area in California**
- Study mechanism of herbicide resistance in weeds and identify programs/herbicides to manage to control resistant biotypes
- Finding new tools to control herbicide resistant weeds

HERBICIDE RESISTANCE TESTING FORM

Bring the sample and form to your local UCCE Farm Advisor or drop off samples at the address below by the end of October.
UC Rice Weed Program | Rice Experiment Station | 955 Butte City Hwy (162) | Biggs, CA 95917

OFFICIAL USE ONLY

_____ - _____

Date received: ____/____/____

Sample quality: _____

Weed: _____ Field ID: _____ Date: ____/____/____

Section 1: Submittee Information

The results of the resistance testing will be sent to this email.

Name: _____ Email: _____ Phone #: _____

Section 2: Grower Information

Name: _____ Email: _____ Phone #: _____

Section 3: Field/Site Information

GPS coordinates: _____

Township, Section, Range or Nearest Rd: _____

Section 4: Field size and affected portion

Size of the field? _____ When was the resistance suspected? _____

Percentage of the field that is affected by the suspected resistance? _____

Section 5: Map

Mark the tentative location on the map

Section 6: Herbicide use and resistance issues:

Herbicide	In the past	This year	Known resistance	Suspected resistance
Lipid synthesis (LS) inhibitor				
Abolish® 80 EC				
Bolero® Ultramax				
thiobencarb				
Pigment synthesis inhibitor				
Cerano® 5MEG				
clomazone				
Photosystem (PS) II inhibitor				
SuperWham!® CA				
STAM® 80 EDF				
Other propanil				
propanil				
ALS inhibitor				
penoxsulam				
Granite® GR				
penoxsulam				
Granite® SC				
bensulfuron-methyl				
Londax®				
halosulfuron-methyl				
Halomax®				
bispyribac-sodium				
Regiment® CA				
halosulfuron-methyl				
Sandea®				
orthosulfamuron				
Strada® CA				
Auxin mimic				
Grandstand® CA				
triclopyr				
PPO inhibitor				
carfentrazone-ethyl				
Shark® H2O				
pyraclostrobin				
Zemba®				

Section 7: Source(s) of water:

☐ Pump ☐ Canal ☐ Both

Section 8: Irrigation management:

☐ Continuous flood

☐ Pinpoint

☐ Leather's method

Section 9: Was water compromised or lost at any time of the season?

☐ Yes ☐ No

Section 10: Other details, if any

Section 11: Sample assessment:

Quality: _____

Quantity: _____

Section 12: Information provided:

Section 13: Resistance testing:

Successful? _____

If not, explain briefly.

Report sent on this date: ____/____/____

Report sent to this email: _____

HERBICIDES TESTED

RESISTANCE STATUS

VLCFA inhibitor	Your sample is NOT resistant.
Bolero®	NO
thiobencarb	All tested samples are susceptible.
HPPD inhibitor + ALS inhibitor	Your sample is NOT resistant.
Butte®	NO
benzobicyclon + halosulfuron-methyl	96% of tested samples are susceptible.
Pigment synthesis inhibitor	Your sample is NOT resistant.
Cerano® 5MEG	NO
clomazone	97% of tested samples are susceptible.
ACCase inhibitor	Your sample is MAY BE becoming resistant.
Clincher® CA	YES
cyhalofop-butyl	23% survival rate on tested samples.
PS II inhibitor	Your sample is resistant.
SuperWham®	YES
propanil	96% survival rate on tested samples.
ALS inhibitor	Your sample is resistant.
Regiment® CA	YES
bispyribac-sodium	99% survival rate on tested samples.

PHOTOGRAPH OF YOUR SAMPLE

Granular applied herbicides BYG-20-02

Foliar applied herbicides BYG-20-02

Example of a susceptible sample:

General Principles of Herbicide Resistance Management

- Apply integrated weed management practices. Use multiple herbicide sites-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
- Use the full recommended herbicide rate and proper application timing for the hardest to control weed species present in the field.
- Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
- Monitor site and clean equipment between sites.
- When resistance to an herbicide develops there may be resistance to all herbicides with the similar mode of action.

Invertebrates

Invertebrate pests

Early season



Tadpole Shrimp



Rice Seed Midge

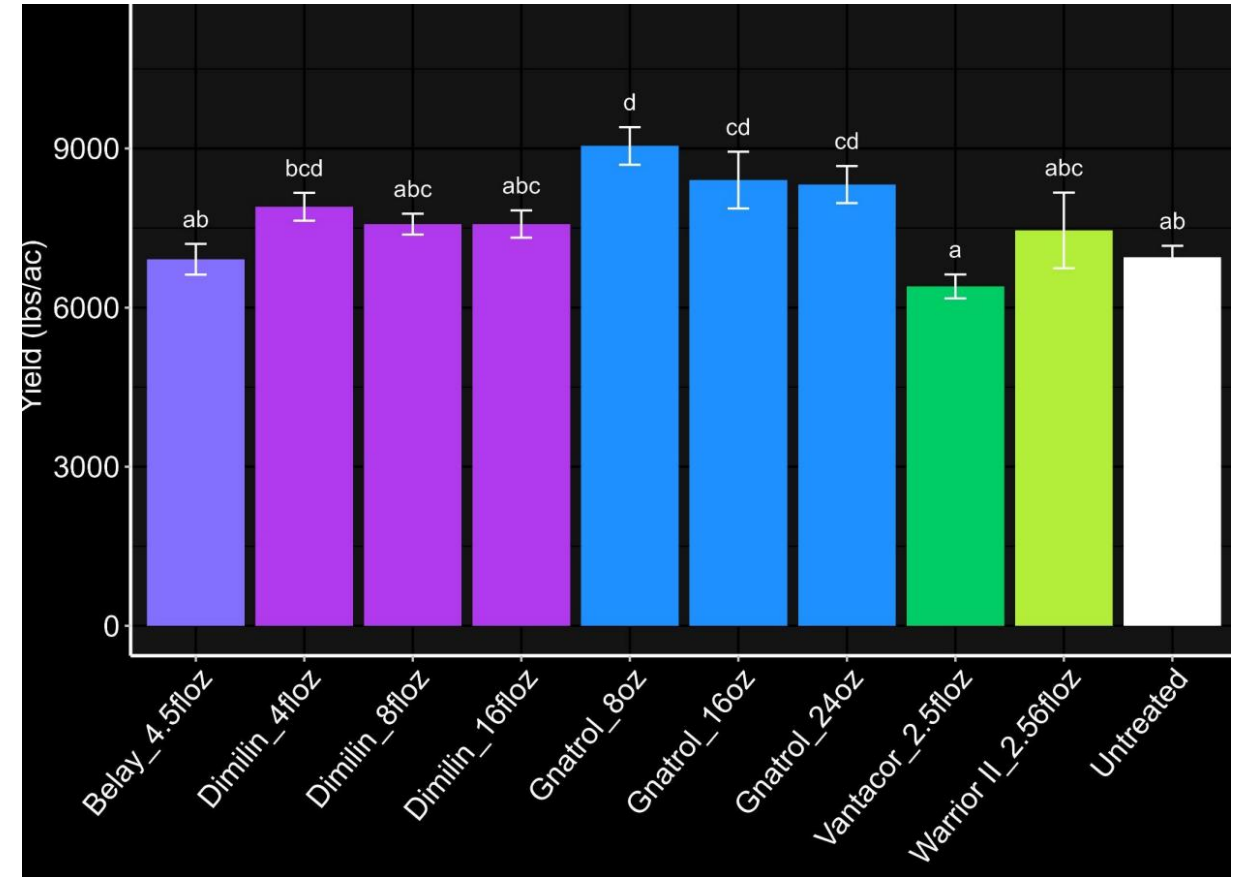
We don't often see yield reductions from these early season invertebrates

TPS

- Leather's method
- Copper sulfate
- Pyrethroids – only if resistance hasn't developed
- Dimilin

RSM

- Leather's method
- Warrior
- Belay



Armyworms



- We see 2 peaks of armyworm activity
 - End of June
 - Beginning of August
- Yield reductions can happen
 - First peak – if defoliation rate is $>25\%$
 - Second peak – if panicle blanking is $>10\%$

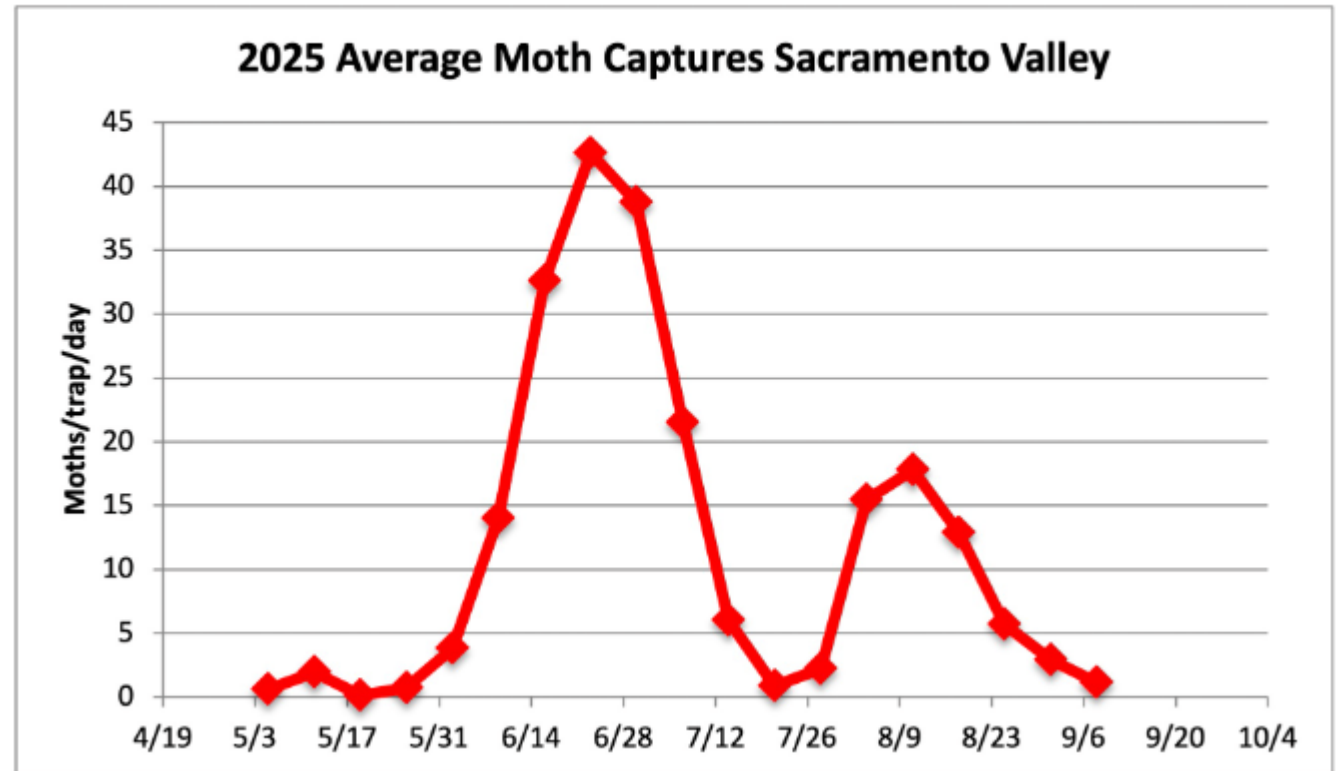
Intrepid, Dimilin (see PHI), and BT products

UCCE Armyworm Trapping Network

- 16 pheromone traps throughout CA commercial rice production areas
- Trap numbers reported weekly
- Sign up for email notifications



Week of September 8



Diseases



Bakanae



Stem Rot



Aggregate
Sheath Spot



Blast



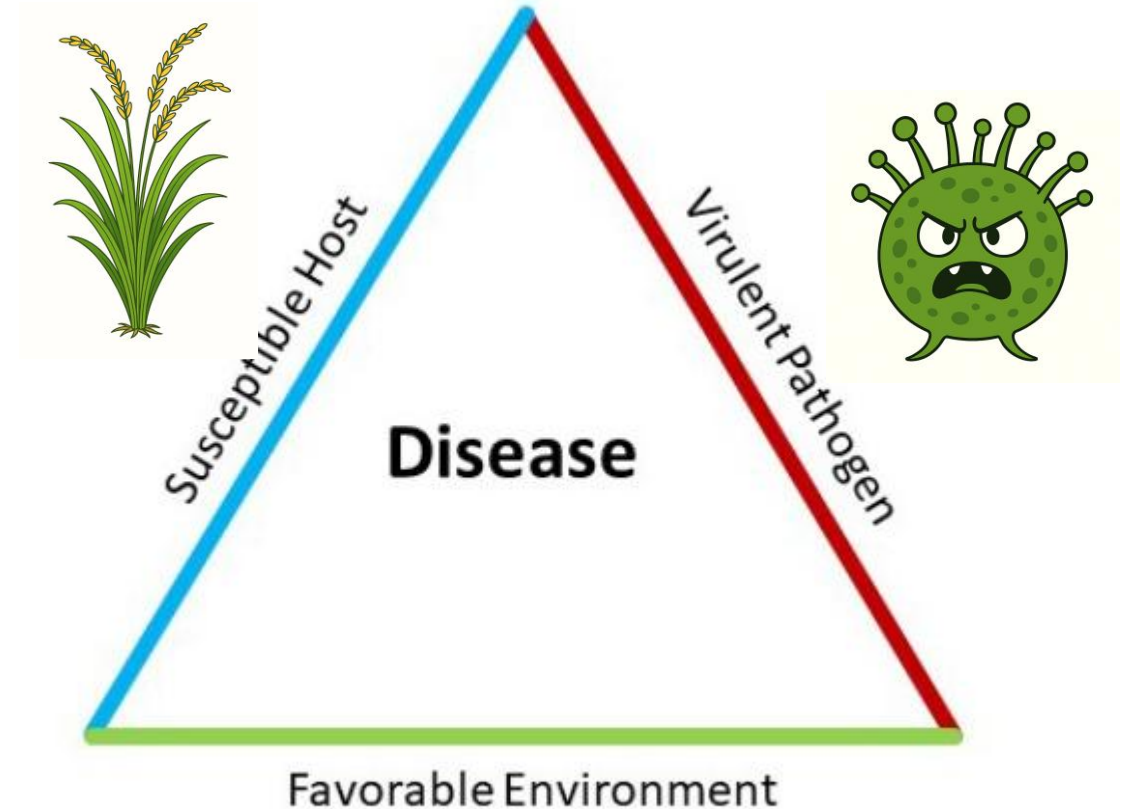
Kernel Smut

Will we have high disease levels in 2026?

It depends!

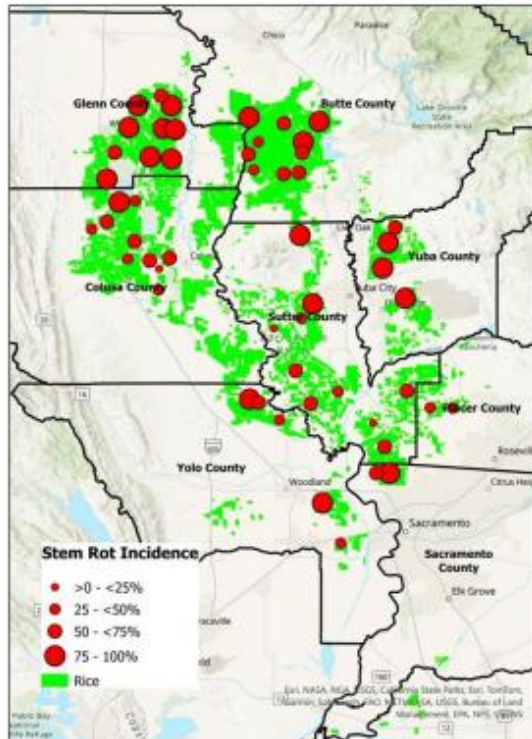
All rice diseases in CA are fungal diseases.

Some rice growing regions are more prone to certain diseases.

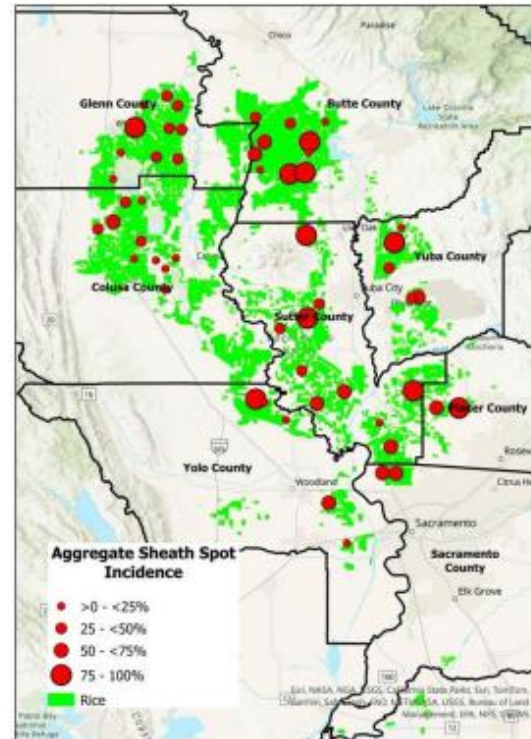


UCCE CA Rice Disease Survey - 2024

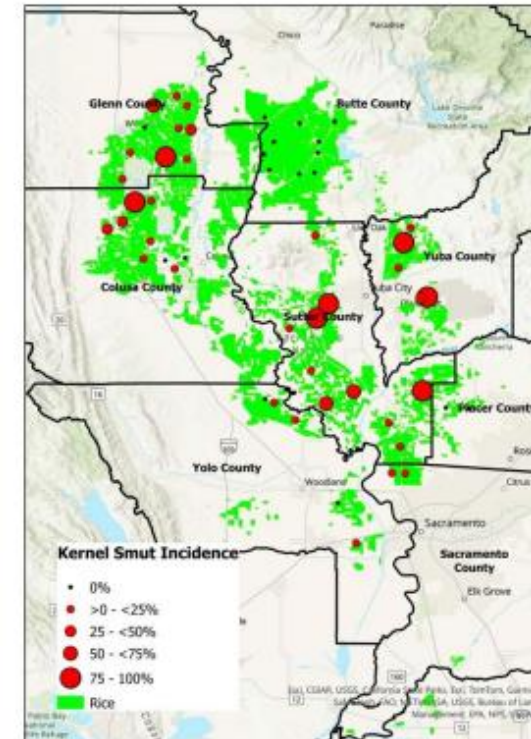
Stem Rot



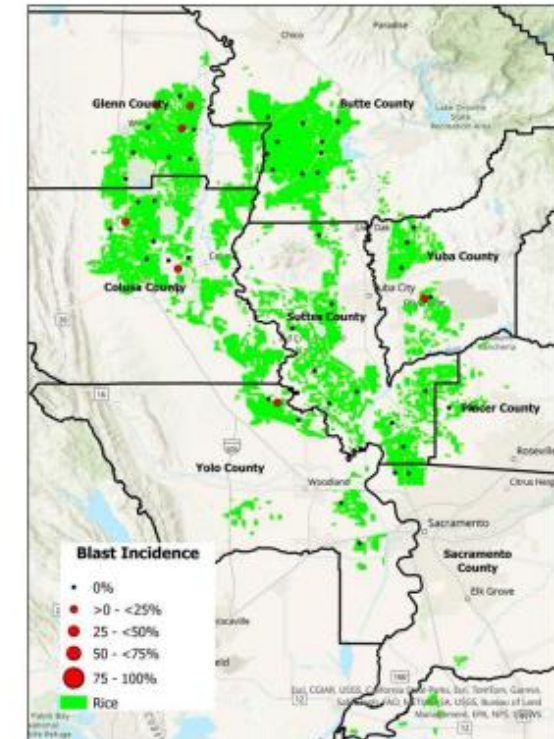
Aggregate Sheath Spot



Kernel Smut



Blast



Not a lot of options for fungicides

Products containing azoxystrobin (Quadris), propocanizole (Tilt), or both (Quilt Xcel)

Induced resistance (IR) products... mixed results

Conditions that favor disease development

Category	Bakanae	Stem Rot	AGSS	Blast	Kernel Smut
Variety				Planting a susceptible variety	Planting long grain varieties
Seed treatment	Not bleach-treating seed				
Planting method	Planting seed 24+ hours after soaking			Drill-seeding	
Fertility		• High N fertilization • Low soil K levels	Low soil K levels	High N fertilization	High N fertilization
Weather				• Extended periods of leaf wetness • High humidity • Low wind • Nighttime temps 63-73°F	
Post-harvest	Not removing crop residue in the fall (minor)	Not removing crop residue in the fall	Not removing crop residue in the fall	Not removing crop residue in the fall	

Conditions that favor disease development

Category	Bakanae	Stem Rot	AGSS	Blast	Kernel Smut
Variety				Planting a susceptible variety	Planting long grain varieties



What does 2026 have in store for us?



What does 2026 have in store for us?



Making a plan for 2026

- Soil test in spring
- Pick varieties suited for risks and reward factors
- Use results of the herbicide resistance screening to make weed management decisions – specific to your weed populations
- Keep an eye on the armyworm monitoring program
- Scout early and often
 - Weeds
 - Invertebrates
 - Diseases

Upcoming Meetings

- **February 4th** - Grower Discussion on the Cost of Rice Regulations
 - CIP Conference Room, Colusa
 - 9:00 am -12 pm
- **February 24th** - Weed Management Area Meeting
 - UCCE Sutter Yuba, Yuba City
 - 9:00 am – 11:00 am
- **February 26th** - Propanil Stewardship Meeting
 - CIP Conference Room, Colusa
 - 9:00 am – 11:00 am
- **March 18th and 19th** – Rice Production Workshop
 - Lundberg Family Farms, Richvale
 - 8:30 am – 3:00 pm

****registration required****
- **July 30th** – Rice Quality Workshop
 - Hillcrest Catering, Yuba City
 - 9:00 am – 12:00 pm

****registration required****
- TBD Emerging Weeds Meeting



Thoughts on Rice

A UCCE PODCAST

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ON YOUR FAVORITE
STREAMING SERVICE



amazon music



Questions?

Thank you!