HEALTHY FOOD SYSTEMS | HEALTHY ENVIRONMENTS | HEALTHY COMMUNITIES | HEALTHY CALIFORNIANS

Rice Briefs

August 2018

UC CE University of California
Agriculture and Natural Resources Cooperative Extension Colusa County

DON'T FORGET THE RICE FIELD DAY!

Wednesday August 29, 2018

Rice Experiment Station
955 Butte City Highway, Biggs, CA

The annual Rice Field Day will be Wednesday, August 29, 2018, at the Rice Experiment Station (RES), Biggs, California. You and your associates are cordially invited to join us to observe and discuss research in progress at RES. The Rice Field Day is sponsored by the California Cooperative Rice Research Foundation and University of California with support from many agricultural businesses.

7:30—8:30 a.m.	REGISTRATION AND POSTER VIEWING
8:30 - 9:15 a.m.	GENERAL SESSION
	Welcome by Gary Enos, Chairman, CCRRF
	CCRRF BUSINESS MEETING
9:20 - 10:45 a.m.	MAIN STATION TOUR
	Rice Breeding Program *Rice Entomology* *Assessing mid-season plant N demand*
10:30 - 10:45 a.m.	Refreshments – Research Building Canopy
10:45 - Noon	Repeat Station Tour with Red & White Groups
9:20 - 10:45 a.m.	HAMILTON ROAD TOUR
	Weed Control in CA Rice: Evaluation of New Weed Control Tools
10:45 - Noon	Repeat Hamilton Road Tour with Blue & Green Groups
Noon	LUNCHEON CONCLUDES PROGRAM
	Lunch will be served in the New Research Building with seating at the tables on the lawns under the canopies.

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Management of Stem Rot

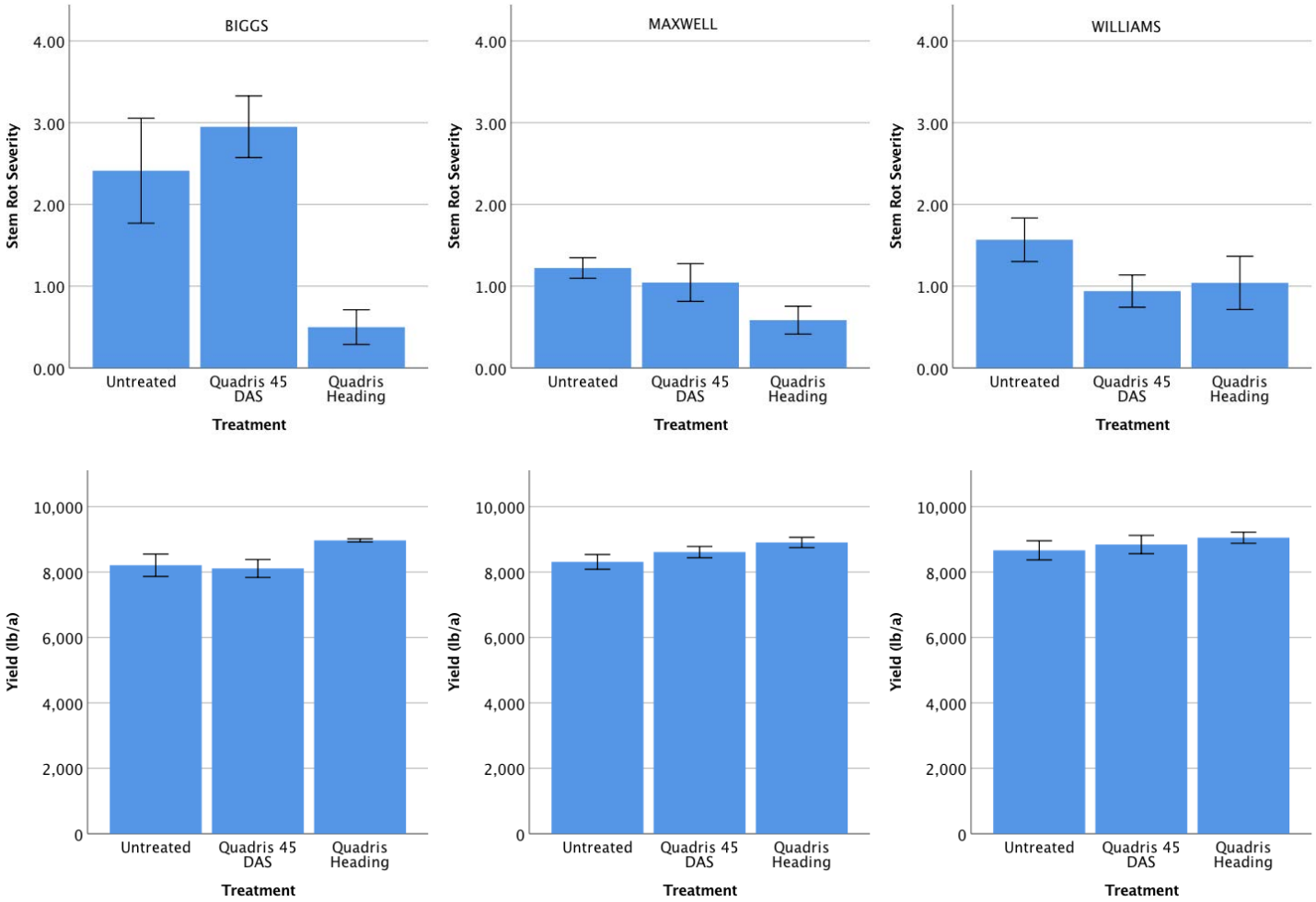
In the last couple of years I have been getting more calls regarding stem rot. In several fields I have seen severe infestations that have produced yield reductions. Stem rot is a fungal disease that has been around for as long as rice has been grown in California. The pathogen resting structures, called sclerotia, remain in the soil during winter, surviving in rice residue. Research conducted during the 70s and 80s showed that as the number of sclerotia in the soil increased, the severity of the disease increased as well. Because of this, the best strategy to reduce stem rot problems is to reduce the level of sclerotia in the soil. Burning is the most effective way to accomplish this. Baling straw is as effective as burning, as long as the straw is cut below the water line so that most of the sclerotia are removed. If straw can not be burned or removed, then making sure to get good straw decomposition during fall and winter is very important.

Other two factors can affect the incidence of stem rot. High nitrogen rates and dense stands favor stem rot development. When possible, adjusting these two variables can help reduce the incidence and severity of stem rot. All California varieties are more or less equally susceptible to stem rot, but there are slight differences. For example, on a scale from 0 to 10, where 0 is no disease and 10 is severe disease, M-206 has a score of 4.8, while M-104 has a score of 5.4. Most varieties' scores are between these values. In the field, it is difficult to see much difference when disease pressure is high. Varieties that require less nitrogen than conventional medium grains tend to develop less disease because of the effect of nitrogen.

Fungicides can help with stem rot management. Trials conducted last year showed that the fungicide Quadris (active ingredient azoxystrobin) applied at heading at the maximum label rate reduced the severity of stem rot under high disease pressure. The application of Quadris earlier, about 45 days after seeding, was not effective. This result was surprising. The thought has always been that, since stem rot infects plants at the water line, any fungicide application should try and reach this area. Earlier applications can probably do this better than applications at heading. Nevertheless, the result of the trial indicates that the heading timing is effective. Under low disease pressure, the effect of the fungicide on stem rot severity was not as strong. The larger the reduction in disease, the bigger the increase in yield.

The trials are being repeated this year, since there could have been an effect of weather on the timing of stem rot infection or on how the disease developed during the season. Also, new modes of action are being tested.

Article by Luis Espino, UCCE Rice Farm Advisor.



Stem rot severity and yields from three trials conducted in 2017. Stem rot severity is rated on a scale from 0 to 4, where 0 is no disease and 4 is stem rotted through. Quadris rate was 15.5 oz/a. The Biggs location had the highest disease pressure and also the largest yield response to the use of Quadris at heading time.

New Watergrass Species: Be on the Lookout!

I have been to several farm calls in the past few weeks, and to a few last summer, which are beginning to make me a bit nervous. In total, I have seen 7 fields between last year and this year that appear to have bad infestations of this new watergrass species (*Echinochloa* spp.).

It would appear that we have an unknown watergrass species (not sure of the exact identification yet), that is maturing around mid- to late-July. It is small-seeded, and the awns are long, and purple. All of the plants I have seen so far have seed heads that are completely awned, which makes it different than barnyardgrass (which has seed heads that are variably-awned).

Most of the growers and PCA's that I have spoken with have described the infestation as being fairly small in the first year, and then spreading all over the check and/or to multiple

checks the next year. The weed appears to be resistant to, or tolerant of, all of our currently-registered rice herbicides. There is a possibility too, that because it is maturing so fast, that it is emerging well ahead of the rice, and that we are making applications when it is too large. Our next step in the research process is to identify the weed, but we also need to know more about its susceptibility to herbicides.

Please call Whitney Brim-Deforest (541-292-1553) or Luis Espino (530-635-6234), if you suspect that you have this weed in your field. We would like to collect seed samples to see what can be done to control it. We will also be looking for collaborators for possible field tests next year. Either way, please give us a call!

Article by Whitney Brim-DeForest, UCCE Rice Farm Advisor

How to ID:

- Every seed head has awns (unlike barnyardgrass)
- Should already be headed (by mid- to late-July)
- Awns are purplish in color (see photos)
- Seeds are small (smaller than late watergrass)

Seed head of unknown watergrass species (Echinochloa spp.) Notice visible purple awns.

Seed heads of unknown watergrass species (Echinochloa spp.) Notice visible purple awns, which can be seed before seeds are fully mature.

Full plant sample of unknown watergrass species (Echinochloa spp.). This plant headed in late July.

Testing for Suspected Herbicide Resistance: It's that Time of the Year Again!

The UCCE Rice Weeds Program tests grower submitted seed samples of potentially herbicide resistant ***watergrass species, sprangletop, smallflower umbrella sedge and bulrush***. However, we encourage you to submit ANY species that you suspect to be resistant. We keep individual grower information confidential and any reporting of results will not identify individual growers.

Please fill out the included form (inserted in the newsletter) for each weed seed sample (each field and/or species). The following tips will ensure that you receive the best possible results:

1. The best timing of collection is when the seed easily falls off the seed head by gentle agitation in a paper bag.

- For watergrass species, this should be close to rice harvest (seeds should be brownish in color)
- For sprangletop, timing will be earlier, in August or September (seeds will appear greenish)
- For the sedges, timing may be as early as July, all the way through early September
- Smallflower umbrella sedge seed is yellow, with brown hulls (looks like dust)
- Bulrush (roughseed) seeds are black and have small hairs

2. Seed should be collected from areas that you know have been sprayed with the suspected herbicide.

3. Collect seeds from multiple plants, and the amount should be at least a few handfuls of seed, to ensure sufficient quantity for testing.

4. Please do not collect seed from around field margins.

5. Allow seed to dry in the paper bag to prevent molding.

6. Do not collect seed heads, as the seed is likely not mature, and this will prevent you from receiving results. Instead, shake the seed heads inside a paper bag so only mature seed falls inside.

Bring the sample and form to your local UCCE Farm Advisor or send or drop off samples at the Rice Experiment Station (RES) in Biggs. If you need assistance in collection, please contact your Farm Advisor or PCA. Results should be available from Amar Godar (asgodar@ucdavis.edu) at the RES in March of 2019.

Article by Whitney Brim-DeForest, UCCE Rice Farm Advisor, Kassim Al-Khatib, UC Davis Specialist and Professor, and Amar Godar, UC Davis Staff Research Associate III.

Sign up for the 2018 UCCE Rice Yield Contest! You could win a John Deere side-by-side.

2018 marks the fourth year of the UCCE Rice Yield Contest. We have learned a lot from these contests and have seen yields close to 128 sacks/acre! To enter the Rice Yield Contest, you need to send us an Entry form. Entry forms are required by August 29, 2018 at the Annual Rice Field Day. Entry forms and contest details are available at http://rice.ucanr.edu/Rice_Yield_Contest/.

2018 changes: The main change in 2018 will be that we will have three regions competing instead of four (the two southern regions south of Hwy 20 will be combined into a single region). We also have a much higher value prize (see below).

The Prize: This year a number of companies have helped to sponsor the Grand Prize for the contest - a John Deere side-by-side (XUV 560E). The winner from each region will have an equal chance (1 in 3 chance) of winning the Grand Prize. Contest winners will draw for the prize at the 2019 winter grower meetings. Each winner will still receive the coveted hat.

Sponsors: The following companies each supported the contest with gifts of up to $1500 each: *BASF, Bayer, Corteva, FMC, Gowan, Nichino, Oro-Agri, Syngenta, Valent,* and *Valley Truck and Tractor*.

If you have any questions, go to our website listed above or call Bruce Linquist at (530) 902-2943.

V-2018

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 recieved: ___/___/___

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 #:

Grower Information

Name: | Email: | Phone #:

Section 2

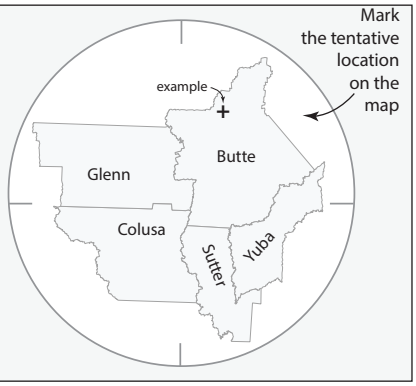
Field/Site Information

GPS coordinates:

Township, Section, Range or Nearest Rd:

OR

Mark the tentative location on the map



Section 3

Field size and affected portion

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

Percentage of the field that is afftected by the suspected resistance?

Section 4

Herbicide use and resistance issues:

	In the past	This year	✓ Known resistance	? Suspected resistance
Lipid synthesis (LS) inhibitor: Abolish® 80 EC; Bolero® Ultramax — thiobencarb	☐	☐	☐	☐
LS inhibitor + ALS inhibitor: League® MVP — thiobencarb + imazosulfuron	☐	☐	☐	☐
HPPD inhibitor + ALS inhibitor: Butte® — benzobicyclon + halosulfuron	☐	☐	☐	☐
Pigment sysnthesis inhibitor: Cerano® 5MEG — clomazone	☐	☐	☐	☐
ACCase inhibitor: Clincher® CA — cyhalofop-butyl	☐	☐	☐	☐
Photosystem (PS) II inhibitor: SuperWham!® CA; STAM® 80 EDF; Other propanil — propanil	☐	☐	☐	☐
PS II inhibitor + ALS inhibitor: RiceEdge® 60 DF — propanil + halosulfuron	☐	☐	☐	☐
ALS inhibitor: penoxsulam — Granite® GR	☐	☐	☐	☐
ALS inhibitor: penoxsulam — Granite® SC	☐	☐	☐	☐
ALS inhibitor: bensulfuron-methyl — Londax®	☐	☐	☐	☐
ALS inhibitor: halosulfuron-methyl — Halomax®	☐	☐	☐	☐
ALS inhibitor: bispyribac-sodium — Regiment® CA	☐	☐	☐	☐
ALS inhibitor: halosulfuron-methyl — Sandea®	☐	☐	☐	☐
ALS inhibitor: orthosulfamuron — Strada® CA	☐	☐	☐	☐
Auxin mimic: Grandstand® CA — triclopyr	☐	☐	☐	☐
PPO inhibitor: Shark® H2O — carfentrazone-ethyl	☐	☐	☐	☐

Other details, if any

Use empty space for additional details.

Section 5

Source(s) of water:

☐ Pump ☐ Canal ☐ Both

Irrigation management:

☐ Continuous flood

☐ Pinpoint

☐ Leather's method

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

☐ Yes ☐ No

OFFICIAL USE ONLY

1- Sample assessment:

Quality:

Quantity:

2- Information provided:

_____

_____

3- Resistance testing:

Sucessful? _____

If not, explain briefly.

_____

_____

Report sent on this date:

_____ / _____ / _____

Report sent to this email:

a

_____