

**University of California**

Agriculture and Natural Resources | Cooperative Extension Butte County

Sign up for the 2019 UCCE Rice Yield Contest!

You could win a John Deere gator

We realize that this has been a tough year for just about everyone growing rice; however the rice yield contest will go on and it will be interesting to see what sort of yields we can expect from a year like we have had. 2019 marks the fifth year of the UCCE Rice Yield Contest. We have learned a lot from these contests and have seen yields up to 135 sacks/acre! To enter the Rice Yield Contest, you need to send us an Entry form. Entry forms are required by August 28, 2019 at the Annual Rice Field Day. Entry forms and contest details will be available at the Field Day as well as at:

http://rice.ucanr.edu/Rice_Yield_Contest/.

The Prize: A number of companies have helped to sponsor the Grand Prize for the contest - a John Deere gator. 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: *Corteva, FMC, Gowan, Nichino, Syngenta, UPL, Valent, Wilbur-Ellis, and Valley Truck and Tractor.*

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

Article by Bruce Linquist, UC Davis

Collecting Weed Seeds for Herbicide-Resistance Testing

Herbicide resistance is a serious problem in California rice. However, not every control failure can be attributed to herbicide resistance. Other factors can be the cause of control failures. Among the most common are weather, incorrect rate, poor coverage or application timing, skips, and spray equipment malfunction.

When weed control fails, it is important to determine the cause. And when the cause is herbicide resistance, herbicide programs need to be adjusted. Resistance occurs after the same herbicides have been used repeatedly at the

same site for several years. You will notice a gradual decline in the efficacy of the herbicide to control weeds that were once susceptible. When herbicide resistance is the problem, you will find healthy plants alongside dead ones of the same species after treatment; surviving weeds form discrete patches that consistently survive the herbicide treatment.

The UCCE Rice Weeds Program conducts herbicide resistance testing for the major rice herbicides used in California at the Rice Experiment Station (RES) in Biggs. Results of

these tests help growers improve their weed control programs and also help the rice industry keep track of resistance issues. If you suspect herbicide resistance, collect seeds of the target weed, fill out the Resistant Weed Seed Testing form (included in this newsletter and also available at <http://rice.ucanr.edu/files/288907.pdf>), and bring them to your local Farm Advisor, or send or drop off at the RES to be tested. These samples will be tested in the greenhouse at RES. The contact person at the RES is Aaron Alvarez. We have hired new team to test 2019 season samples and expect to have all samples tested and results sent by end of March 2020. We have experienced some difficulties in the last season due to staff turnover; however, we are excited with the new weed testing team. To collect seeds for testing, follow these guidelines:

- Don't wait until harvest to collect the seed. By then, most weeds have shattered their seeds. If you collect after harvest, you may collect seeds from weeds that have emerged late and thus have not been exposed to the herbicide. The objective is to collect seed from plants that have survived the herbicide action.
- Collect seeds when they are mature and dislodge easily from the seedhead. In general, sprangletop matures the earliest, between rice panicle initiation and heading. Early watergrass, barnyardgrass, smallflower umbrellasedge, and ricefield bulrush usually follow, maturing sometime before rice heading until

maturity. Late watergrass matures last, at about the same time early rice varieties (M-205, M-206) mature.

- Collect seeds, not seedheads. Gently shake the seedhead inside a paper bag. Seeds that shatter are mature and will readily germinate. If seedheads are collected, seeds might not be mature or might have shattered already. It is good practice to keep the paper bag open for couple days to allow further seed drying.
- Collect seeds from areas of the field where you are certain the herbicide application in question was appropriate. Avoid field borders, tractor tire tracks, skips or areas where you suspect the herbicide was not sprayed correctly or not sprayed at all.

Make sure to collect enough seed. In order to have conclusive results, several replications of herbicide resistance testing are needed. When not enough seed is provided, replications may not be possible. For small sized seed weed species such as sprangletop, smallflower umbrellasedge or ricefield bulrush, collect seeds from at least 20 mature seedheads at each location. For barnyardgrass, early and late watergrass, collect from at least 30 mature seedheads.

Article by Kassim Al-Khatib, UC Davis

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 #: _____

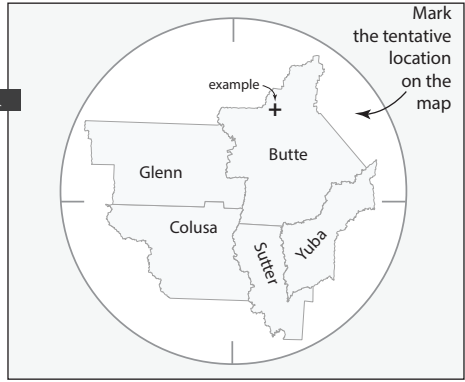
Grower Information

Name: _____ Email: _____ Phone #: _____

Section 2 **Field/Site Information**

GPS coordinates: _____

Township, Section, Range or Nearest Rd: _____



Section 3 **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 4 **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				
ACCase inhibitor				
Clincher® CA				
cyhalofop-butyl				
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				
Shark® H2O				
carfentrazone-ethyl				

League® MVP (LS inhibitor + ALS inhibitor, thiobencarb + imazosulfuron)

Butte® (HPPD inhibitor + ALS inhibitor, benzobicyclon + halosulfuron)

RiceEdge® 60 DF (PS II inhibitor + ALS inhibitor, propanil + halosulfuron)

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:

Successful? _____

If not, explain briefly.

Report sent on this date: _____ / _____ / _____

Report sent to this email: _____

2019 Armyworm Update

We had a good start of this armyworm season with the news that Intrepid received a Section 18 in early June. This put growers and PCAs at ease, knowing that if populations and injury get high, they have a tool that works for control.

The trapping season started with low numbers of true armyworm (TA) moths, but with very high numbers of western yellowstriped armyworm (WYA) moths. In the three years of trapping I have conducted, I have not seen such high numbers of WYA moths. Even though moth numbers were high, I could not find any worms in rice or weeds, and I did not get any reports of WYA in other crops. I would have expected to see or hear of WYA worm infestations, but they did not happen.

The outbreaks we have experienced in the past few years have been caused by TA. This year, as the season progressed, the number of TA moths started to increase in early June, and we saw a clear peak by July 1st (Fig. 1). Last year the peak occurred in June 25, about a week earlier.

I closely monitored three fields in Butte and Glenn counties where traps have been set up and have a history of high worm numbers. In these fields, the first small worms were found between June 14 and June 18, just as TA moth numbers started to go up. By July 1st, worms were of medium size, probably around the third instar. A week later, on July 8, worms were large, and defoliation was noticeable. Large worms continued to be present all the way until the end of July, with worms starting to pupate as early as July 23.

TA moth numbers are starting to go up again, but in most locations the numbers are low. By this time last year, TA moth numbers were peaking at 18 moths/trap/day; right now the number is just above 5. The fields I'm monitoring don't have any worms yet. Since the first peak was late, we might see a second peak later.

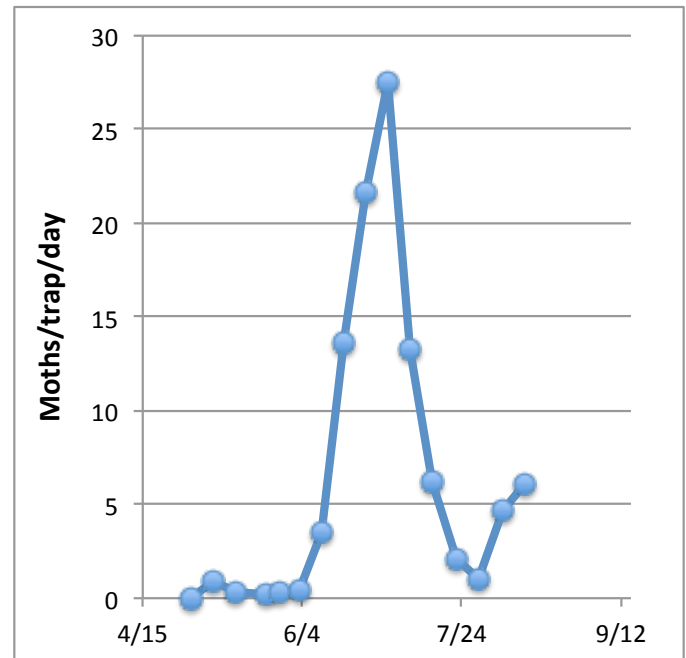


Fig. 1. Average number of true armyworm moths trapped per day in the Sacramento Valley during 2019.

This year, some trends were noticeable in our moth monitoring. When moth numbers trapped per day were below 30, the worm pressure in the field tended to be low. However, catching more than 30 moths per night did not necessarily mean that the worm pressure was going to be high. Armyworm larvae began to appear as the flight of moths began, indicating the start of the period during which moths were laying eggs. Large larvae were found in the field about a week after moth trapping peaked.

I will continue to monitor the flight of the moths; hopefully we won't see another peak, which would indicate that we won't see high worm pressure in the field. The trap numbers are posted weekly on the UC Rice on-line website.

Article by Luis Espino, UCCE

Weedy Rice Scouting and Reporting

Just a quick reminder on suspected weedy rice reporting. If you have applied all herbicides to control grasses, and you are still seeing what appear to be skips or misses in grass control, it is a good idea to go out and check the plants. If they do not have a ligule and auricle, then they are a grass species (not weedy rice) (Figure 1). If they have a ligule and auricle, then they are either rice, or sprangletop.



Figure 1. Ligule and auricle on a rice plant. Watergrass species do not have ligules and auricles.



Figure 2. White midvein on sprangletop leaf.

Follow this key to help make the determination:

- 1) Does the plant have a ligule or auricle?
 - a. If yes:
 - i. Does it have a white midvein down the leaf? (Figure 2)
 1. If yes: → Sprangletop
 2. If no: → Rice
 - b. If no:
 - i. → Watergrass
- 2) If plant is rice (ligule and auricle), is it weedy?
- 3) Are the leaves smooth? (not rough)?
 - a. If yes:
 - i. → Likely a variety
 - b. If no: → Potentially weedy rice (call Farm Advisor to double-check).

So far this season, we have had many calls about weedy rice, but most have been varietal contaminants. Thank you to everyone that has had us out to the field to check plants. The more vigilant we all are, the better we can tackle this weed.

Article by Whitney Brim-DeForest, UCCE

Alligatorweed Spotted in Butte County

Alligatorweed (*Alternanthera philoxeroides* (Mart.) Griseb.) was recently spotted in Butte County, on the edge of the Feather River (Figure 1). It is an invasive weed, commonly found in the Southern United States, including in rice fields. It is considered a noxious weed in the California. It was introduced to the Southern US from South America in the early 1900's with a boat.



Figure 1. Alligatorweed populations were found in Butte County in August 2019, on the edge of the Feather River.

Alligatorweed grows well in shallow water, in muddy areas. It can grow up to 3 ft tall, and has hollow stems (Figure 2). The leaves are opposite on the stem, and the flowers are white and clover-like in appearance (Figure 3). It flowers during the summer (May-October). In the US, it does not reproduce by seed, but is spread vegetatively. This means that pieces of the plant have to float along waterways in order to spread. Boats are a likely mechanism of movement from waterway to waterway.



Figure 2. Alligatorweed in a body of water (photo: Chris Evans, University of Illinois).

We do not currently know of any populations in rice fields in California, but as always, it is a good idea to keep a lookout. If you suspect you have seen this in your fields, as always, please call your local CE Rice Advisors.



Figure 3. Alligatorweed flower, note the clover-like appearance (photo: Gary Buckingham, USDA Agricultural Research Service).

Article by Whitney Brim-DeForest, UCCE

Save the Date

2019 Rice Field Day

Wednesday August 28, 2019, from 8:30 am to noon (Registration begins at 7:30).

Rice Experiment Station, 955 Butte City Highway, Biggs, CA

More information: <https://www.crrf.org>

The 2019 Rice Weed Course

Friday, September 6, 2019, from 8:00AM to 4:10PM (Registration begins at 7:30AM)

Hamilton Road Field (**on West Hamilton Rd. between Hwy. 99 & Riceton Hwy.**)and Rice Experiment Station, Biggs, CA

https://wric.ucdavis.edu/events/rice_weed_course_2019.html

For questions, please contact Whitney Brim-DeForest at 530-822-7515, or by email at wbrimdeforest@ucanr.edu

Credits for PCA, QAC, QAL, Private Applicator: 6.0 other, 0.5 laws

CA Certified Crop Adviser: 6.0 IPM

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UC COOPERATIVE EXTENSION and UC DAVIS

Rice Weed Course 2019

Friday, September 6, 2019

[Hamilton Road Field](#) (on West Hamilton Rd. between Hwy. 99 & Riceton Hwy.) and Rice Experiment Station, Biggs, CA

Find out what the current weed science research is on rice. This one-day course will include training on:

- 1) emerging weed problems, such as red rice and winged primrose willow;
- 2) planning an herbicide program for susceptible and herbicide-resistant weeds;
- 3) hands-on early weed identification;
- 4) field component on new and standard herbicide programs.

Participants will tour the rice weed science research plots on West Hamilton Road then head to the Rice Experiment Station for the remaining part of the program. ****BRING YOUR BOOTS****

WHO SHOULD ATTEND

Pest control advisors, farm advisors, chemical company cooperators, college faculty and students, and regulatory officials should not miss this event.

REGISTRATION FEE	Received by 8/1/2019	Received by 8/30/2019	Received after 8/30/2019
Non-student	\$80	\$90	\$100
Current student*	\$50	\$60	\$70
UCCE Farm Advisor	\$50	\$60	\$70

*Students must provide proof of current student status with registration form.

A discounted fee (for current students and UCCE Farm Advisors) is limited to the first 5 requests.

Registration fee includes handout material, light refreshments and light lunch (sandwich, drink and dessert). Space is limited to 60 people, so register early.

PAYMENT

Make checks payable to **UC REGENTS**. VISA, MasterCard, AMEX, and Discover credit cards accepted via online registration. UC account numbers also accepted.

REFUND

No refunds. If you are unable to attend, you may send a substitute in your place at no additional charge.

CONTINUING EDUCATION CREDIT

Pending approval from DPR and CCA.

REGISTER

🖥️ Online: <http://wric.ucdavis.edu> and click on RICE WEED COURSE

✉️ Mail your completed registration form along with your payment to:

UC WEED RESEARCH & INFORMATION CENTER
DEPT. OF PLANT SCIENCES, MS4
ONE SHIELDS AVENUE
DAVIS, CA 95616

CHECK-IN

7:30-8:00 AM at the [Hamilton Road Field](#) (on West Hamilton Rd. between Hwy. 99 and Riceton Hwy.) in Biggs, CA

PHOTO RELEASE

Occasionally we use photographs of participants in our promotional materials. By virtue of your attendance, you agree to the use of your likeness in such material.

QUESTIONS

Contact Whitney Brim-DeForest at (530) 822-7515 or wbrimdeforest@ucanr.edu.



REGISTRATION FORM

Rice Weed Course 2019

Sept. 6, 2019 • Hamilton Road Field, Biggs, CA

Please print.

NAME (first and last name)	BADGE NAME (first/nickname)
COMPANY	
MAILING ADDRESS	
CITY, STATE, ZIP CODE	
PHONE ()	
E-MAIL	

COST		Received by 8/15/2019	Received by 8/30/2019	Received after 8/30/2019	Subtotal
NON-STUDENT	includes handout material, light refreshments and light lunch	\$80	\$90	\$100	\$
Current student*	Same as above; Limited to first 5 requests.	\$50	\$60	\$70	\$
UCCE Farm Advisor		\$50	\$60	\$70	\$
				TOTAL	\$

*Students must provide proof of current student status with registration form

PAYMENT INFORMATION

CHECK enclosed (made payable to **UC REGENTS**)

CREDIT CARD payments are accepted via the online registration system. Visit <http://wric.ucdavis.edu> and click on RICE WEED COURSE.

Charge my
UC ACCOUNT NUMBER 3 L

ACCOUNT	SUB ACCOUNT	AUTHORIZED SIGNATURE

How did you hear about this event?

- newsletter e-mail UC Rice Blog UC Agronomy RIC website Other _____
 trade magazine supervisor UC Farm Advisor UC Weed RIC website

REGISTER BY

MAIL

completed form with
payment to:

UC WEED RESEARCH & INFORMATION CENTER
DEPT. OF PLANT SCIENCES, MS 4
ONE SHIELDS AVENUE
DAVIS, CA 95616

ONLINE

at:

<http://wric.ucdavis.edu> and click on RICE WEED COURSE

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