



In This Issue

- UCCE Rice Production Workshop
- A weed problem all rice growers should be aware of: Weedy Rice
- Another field with the suspected new weed species: Sutter County!
- Planting progress for rice in 2018
- Weed Control in Rice: Matching Herbicides with the Weeds of Your Field

Whitney Brim-DeForest
UCCE Farm Advisor
Sutter, Yuba,
Sacramento and
Placer Counties

UCCE Rice Production Workshop

An in-depth workshop that covers the principles and practices of rice production



Tuesday, August 7, 2018

8:30 – 3:00 pm

Lundberg Family Farms
5311 Midway, Richvale, CA 95974

Program:

- 8:30am Sign in, pick up class materials
- 9:00am Introduction and Workshop Overview
- 9:10am Rice Growth and Development
- 9:30am Land Formation, Water Management
- 9:50am Tillage, Planting and Stand Establishment
- 10:10am Break
- 10:30am Variety Selection
- 11:00am Invertebrates
- 11:30am Diseases
- 12:00pm Lunch
- 1:00pm Fertility
- 2:00pm Weeds
- 3:00pm Adjourn

Enroll online at <http://ucanr.edu/rice2018>

Prepaid enrollment (\$100) is required, and enrollment is limited to 75 people. Price includes Rice Production Workshop Manual, lunch and snacks.

Please enroll by August 1st to ensure your participation. Seats will be filled on a first-come basis.

DPR and CCA continuing education credits requested.

For more information, contact UCCE Farm Advisors Luis Espino (530-458-0578), Whitney Brim-DeForest (530-822-7515) or Michelle Leinfelder-Miles (209-953-6120)

A weed problem all rice growers should be aware of: Weedy Rice

Luis Espino, UCCE Rice Advisor

I visited a field known to be infested with weedy rice this week. They have finished with their herbicide applications, so the field is clean. The propanil burn is still noticeable. Looking closely, I can see some of the weedy rice plants poking through the canopy. This reminded me that we are starting the “keep an eye out for weedy rice” time. I thought appropriate to include this article I wrote for one of our rice counties Farm Bureau newsletters. Weedy rice, also known as red rice, is a rice weed that has the potential to do severe damage to the California rice industry. This weed was present in California during the early years of rice cultivation. Then, after the use of certified seed was widely adopted in the 1950s, weedy rice pretty much disappeared from the state. However, in 2003, weedy rice was found again. A few new sites were found the following years. But in 2015 many new sites were discovered. Currently, we estimate that the rice area affected is close to 10,000 acres. Why is weedy rice so problematic? Weedy rice is the same genus and species as cultivated rice; therefore, rice herbicides will not kill it. Weedy rice is also known as red rice because the grain’s bran is reddish when mature. If infestations are large, milled rice quality can be affected because of contamination with off-colored kernels. But the most important characteristics that make weedy rice problematic are its shattering and dormancy. Weedy rice panicles shatter easily, and most grains drop to the ground before harvest. These seeds have dormancy and can remain in the soil for several years before they germinate. These two characteristics make eliminating weedy rice from a field very difficult. So far, weedy rice infestations are low to moderate. No yield or quality losses have been reported. But as mentioned earlier, if left unchecked, this weed has the potential to severely impact the industry. Research and education are being conducted to make sure that all growers know how to prevent and identify infestations. Our website, www.caweedyrice.com, has information about prevention, identification, and best management practices for fields where weedy rice is already established. All growers should be vigilant, and if they find a suspect plant, contact a UCCE Farm Advisor. The sooner the problem is addressed, the higher the chances to eliminate weedy rice from a field.

Another field with the suspected new weed species: Sutter County!

Whitney Brim-DeForest, UCCE Rice Advisor

Last week, I went on a farm call in Sutter County. The PCA told me on the phone that he had a watergrass-like plant in the field that was not being controlled by any of the herbicides applications they had made. He had used many of the recommended herbicides for normal herbicide-resistant late watergrass, and nothing had worked (granular application followed by 2 foliar applications).

Upon inspection in the field, it was clear that the plants were definitely in the watergrass family, but even though they had recently been sprayed, they looked quite healthy and robust. Their leaves were wider and flatter than the leaves of “mimic”, and they clearly stood out from the rice.

I sent samples from similar looking plants to the UC Davis Herbarium in 2017 to have them identified, but the identification was inconclusive, so Ellen Dean, the director, sent the samples to two experts at other universities. The identification results were still inconclusive, which means that we will be doing further research.

For now, we are asking all growers and PCAs to be on the lookout any grasses or grass-like plants that seem to be resistant to multiple herbicide applications. It will be important to get the plants identified, so please give your local University of California Rice Advisor a call.

Be on the lookout for:

- Grasses that seem healthy after herbicide applications that normally should take care of resistant watergrass or “mimic”. For example, Abolish + Regiment tank mix, or the 0.8 oz application of Regiment.
- Grasses that have particularly wide and flat leaves, distinct from “mimic” or watergrass



Figure 1. Panicle of *Echinochloa muricata* (rough barnyardgrass), a confirmed new weed of rice in California.



Figure 2. Panicle of *Echinochloa walteri* (coast cockspur grass), a suspected new weed of rice in California.

Planting progress for rice in 2018

Bruce Linquist, UCCE Rice Specialist

I looked at the USDA planting progress for rice in 2018. What the data show is that 50% of the crop was planted by May 14. That is 5 days earlier than last year and a couple days later than average. The delay was due to significant rains in early and mid-April which delayed groundwork. As I write (in the first full week of June) there are still some fields being planted – though not many. Having the benefit of driving around the valley for various research projects I am involved with, it seems that the west side of the valley was able to plant much earlier than the east side of the valley. So the east side of the valley may be further behind than the statewide data suggest. Last year, the late planting date was combined with a very warm summer; which, I feel, resulted in lower yields than many growers were used to. In general, there is a slight yield decline with delays in planting date. However, there are many examples in the data where we have had high statewide yields when 50% of the acreage has been planted by May 15. For example, in 2016 the 50% planting progress date was May 15 and that year was the second highest statewide yield average on record (88.4 sacks/ac). So, on a statewide basis, I think this year is off to a good start, although I do have some concerns about the late planting dates I have been seeing on the east side. I think the outcome in terms of yields will depend on summer temperatures and if we have a favorable fall for a timely harvest.



Weed Control in Rice: Matching Herbicides with the Weeds of Your Field

Kassim Al-Khatib, UCCE Rice Weed Specialist

While several herbicides can be applied to control weed at the beginning of the season such as clomazone (Cerano), thiobencarb (Bolero), or benzobyclone + halosulfuron (Butte), these herbicides may not give complete weed control or weed may emerge after these herbicides broken down in the field. If you do not have resistant weeds, the table below showed the activity of these three herbicides on common weeds in California rice fields. C = Control, N = No control, S = Suppression.

| Weed Species | Herbicides | | |
|----------------------------|------------|--------|-------|
| | Cerano | Bolero | Butte |
| Barnyardgrass | C | C | S |
| Bearded sprangletop | C | C | C |
| Watergrass, early | C | C | S |
| Watergrass, late | C | C | S |
| Bulrush, ricefield | N | N | C |
| Ducksalad | N | N | C |
| Smallflower umbrella sedge | N | S | C |
| Monochoria | S | N | C |
| Redstem | N | N | S |

In many cases, sequential applications of single herbicides or tank mixtures are needed as a follow-up treatment to clean-up the field. Tank mixtures may be used when two or more herbicides are compatible, and the best management practices for their application such as timing and water depth are the same. Tank mix combinations reduce the cost of application and often reduce the rates of one or more herbicides. The purpose of combinations is to broaden the spectrum of weed control such that each herbicide in the mix will control weeds not controlled by the other. In some cases, herbicide tank mixes may result in synergistic effects that improve weed control. If you do not have resistant weeds, use the susceptibility of weeds to herbicide control table below to find out what herbicide you need to use or mixed to control weeds survived early season herbicide application. You need to read and follow the label instructions. N=no control, C = Control, S = Suppression.

| Weed Species | Herbicides | | | | | | | | |
|----------------------------|------------|----------|-------|--------|---------|----------|--------|--------------------|------------|
| | Londax | Regiment | Shark | Sandea | Granite | Clincher | Strada | Stam, SuperWham | Grandstand |
| Barnyardgrass | N | C | N | N | C | C | S | C | N |
| Bearded sprangletop | N | N | N | N | N | C | N | N | N |
| Watergrass, early | N | C | N | N | C | C | S | C | N |
| Watergrass, late | N | C | N | N | C | C | S | C | N |
| Bulrush, ricefield | C | S | C | C | S | N | C | S | C |
| Ducksalad | C | C | S | C | C | N | S | S | N |
| Smallflower umbrella sedge | C | S | C | C | C | N | C | C | N |
| Monochoria | N | C | S | C | C | N | C | N | N |
| Redstem | C | S | C | C | S | N | C | S | C |

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