California Rice Research Board

Issue #35, Fall 2016

Single Red Rice plant, mid-season

Weedy Rice

Folks, we have a problem. We can deny it, ignore it, or hope it will go away – but we still have a problem. We hope you will engage with us and work to eradicate weedy rice (a.k.a. red rice) in California.

Could it be a big problem here? Let's look at the South. Timothy Blank, CA Crop Improvement Association, states that high infestations in the South have resulted in yield reductions of over 60%. A 2008 survey in Arkansas found that 62% of rice fields are infested to some degree.

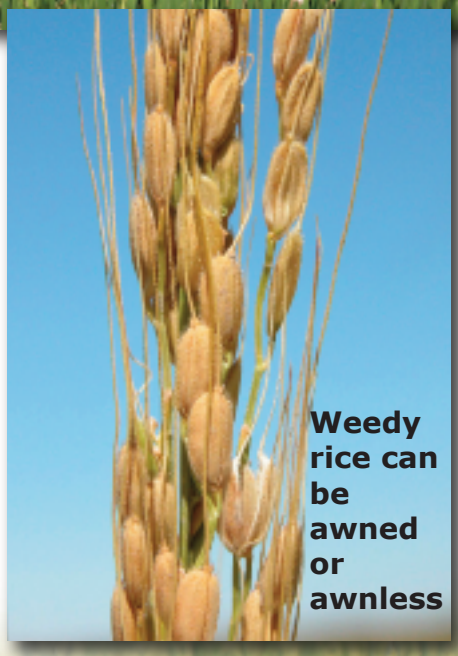
California has been fortunate. Over the last 100 years of rice production here, there have been periodic infestations. Most of these infestations were eradicated or have been taken out of rice production. So things have gone well – up to 2003 when weedy rice was found in rice fields in Colusa and Glenn counties. Efforts were made to eradicate weedy rice in these fields, but the populations have persisted. In addition, several new populations have been discovered in almost all rice producing counties. Luis Espino, UCCE rice advisor, states that the known infestation is about **8,000 acres.** The industry needs to be very diligent and proactive if we are going to beat this infestation back.

There are no regulatory implications for fields infested with weedy rice. It is up to the rice industry to make sure infested fields are managed to reduce infestation levels and eventually get rid of this weed.

Do we know all the answers yet – No. The researchers and farm advisors have put together Best Management Practices with our current knowledge. Here is what you can do today:

Before Harvest

Weedy rice plants are easiest to identify at the heading stage, UCANR brochure, http://rice.ucanr.edu/files/239170.pdf. The three consistent characteristics are 1) red colored bran, 2) shattering, and 3) seed dormancy. It can be distinguished from most conventional rice varieties in that it has lighter green leaves, rougher leaves, a wider canopy, and is taller. If you have suspect plants: 1) take a trash bag and capture the seeds so you don't spread the problem, 2) dig up the plant, and 3) bring it to one of the county farm advisors for identification.



Weedy rice can be awned or awnless

In This Issue

During Harvest

Isolation is the key. If you have a field where you might have weedy rice, harvest it, but DO NOT contaminate other fields by moving equipment that may carry weedy rice seeds from one field to the next. Best option – harvest the contaminated field last. Next best option – clean all harvesting equipment thoroughly before moving from the affected field to the next field.

Make sure paddy rice from an affected field does not get into the seed channel, even for your own fields.

Straw should be cut as low as possible to the ground to facilitate burning. If you are going to bale the straw, don't cut it especially low so there will be something to burn.

After Harvest

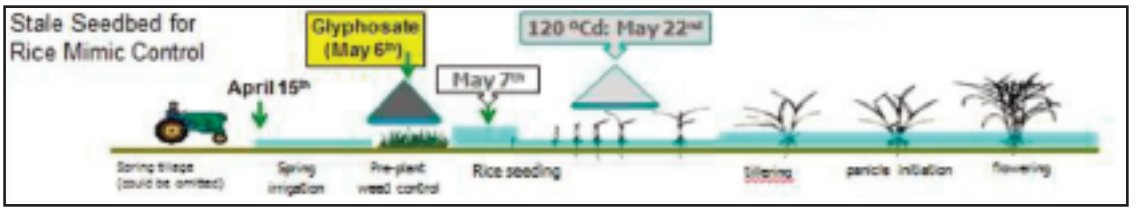
Harvesting equipment (combine, bank outs, trailers, etc.) should be thoroughly cleaned in the affected field to make sure there is no carry over of weedy rice seed to other fields. Cleaning should include the removal of plant material from the equipment including mud from tires or tracks that may contain seeds.

If possible, burn the affected field this fall. Make contaminated fields your top burning priority. Prioritization of fields will occur at the county level, so notify your County Ag Commissioner if your field is infested. Please follow the rules regarding burning. Take measures to have the most effective burn (raking, spreading, favorable conditions). Consider coming back after burning the field with a propane burner to burn exposed seeds on the soil surface. This practice is most effective and reasonably safe only after open field burning.

DO NOT perform fall tillage. This will bury weedy rice seeds and stretch the infestation out for years to come.

Next Season

Fallow the field if you can. Recommended fallow management: 1) do not till before flooding in spring, 2) Close drains, flood, and allow water to subside, 3) Wait for weedy rice to emerge (around 2 weeks) and spray with glyphosate, 4) when soil is dry enough (about two weeks), disc soil, 5) Close drains, flood, and allow water to subside, 6) repeat glyphosate application about two weeks after weedy rice seedling emergence.



If planting the field, **use certified seed**. Certified seed has zero tolerance for weedy rice. Saving seed can contribute to the spread of weedy rice, and is not recommended at this time, both for those growers that have a confirmed infestation and for those that do not.

Consider using the stale seedbed technique if you can. Contact your farm advisor for more information on how to properly implement the stale seedbed technique. The graphic shows the basics. Also, details may be found on the RRB website (carrb.com) under the Newsletter section, Summer of 2009, Got Watergrass. Details can be found under Annual Reports, 2011 and 2012, Full report link, Weed Control in Rice, Objective 3.

The Future

The Weedy Red Rice Task Force has been reestablished to determine the most effective path to eradicate weedy rice. Greenhouse studies will be conducted over the winter and projects are planned for the spring to examine the best management methods. Expect further information in 2017.

No organization can do this alone. It takes your individual effort to monitor your fields. It takes your individual decisions to get rid of this pest. We encourage you to join with the industry to make California a weedy rice free state

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Whitney Brim-DeForest

Meet the newest UCCE rice advisor, Whitney Brim-DeForest. She will be based out of the Sutter-Yuba office, but will serve Placer and Sacramento counties as well. She holds a Ph.D. in Horticulture and Agronomy and an M.S. in International Agricultural Development (both from UC Davis), and a double B.A. in Biology and Music from Brown University. Before starting her graduate work, she served as a Peace Corps Volunteer in Senegal, West Africa, for three years, where she worked with growers in a variety of crops, including rice, sorghum, corn, and cowpeas. Since 2012, she has worked at the Rice Experiment Station in Biggs, CA, managing the field trials for the UC Weed Science program in rice.

Rice Farm Advisor Contact Numbers

Whitney Brim-DeForest: 530-822-7515

Luis Espino: 530-458-0570

Cass Mutters: 530-538-7200