**Measuring Outcomes for Emerging Pest/Weedy Rice Program**

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**Background**

***Issue.*** Weedy rice (*Oryza sativa* L.) is a weed of rice that is the same species as cultivated rice. Since it is the same species as rice, herbicides are not an effective option for control. It is difficult to identify, difficult to eradicate, and has implications for the rice industry beyond that of a typical weed. California was the last rice-growing region on earth to have this weed, so the reputation of the entire industry was also impacted by the presence of the weed.



***Clientele.***Rice growers; Pest Control Advisers (PCAs) working in rice; Rice breeders (Rice Experiment Station, Lundberg Family Farms, etc.); Rice mills; California Rice Research Board; California Rice Commission; and others: Agricultural Commissioner’s Offices, California Crop Improvement Association (CCIA)

***Extension Methods.***

1. June 2016: We gathered a meeting of the Weedy Rice Taskforce, which was comprised of key industry leaders, including Agricultural Commissioners, California Crop Improvement Association, UCCE Rice Team, etc. UCCE Rice Team drafted a set of Best Management Practices out of this meeting
2. June-July 2016: UCCE Rice Advisors put out identification information in our newsletters.
3. July-August 2016: Started taking Farm Calls.
4. With the CCIA, put together a map (for internal use only).
5. 2017: Put on a series of trainings on identification and reporting. To date have trained over 1000 rice growers, PCA’s, and County Ag Biologists.
	1. Trained County Ag Biologists in all rice growing counties
	2. Trained growers and PCA’s at UCCE Rice Team Winter Grower Meetings
	3. Collaborated with Valent Corporation to conduct additional training at their MANDATORY pesticide trainings
	4. Met with every PCA company individually to train their employees
	5. Had two field days with cooperating growers, to allow viewing in the field
	6. Brought an expert from the Southern US to do a weedy rice specific seminar
6. Educational Materials: distributed 1000s of posters and brochures with identification information and Best Management Practices; put together a website: caweedyrice.com (with the assistance of the Rice Commission); created a weedy rice e-comm; etc.

**Measuring Outcomes Approach**

We knew that we needed to find out how much weedy rice was out there, so we were looking for increased reporting. Once we found the infested fields, we wanted to get rid of the pest so we were looking for utilization of our Best Management Practices. The most important priority initially was increasing awareness of the pest, which meant educating our community on identification and reporting procedures.

We were able to measure reporting of weedy rice infestations by talking directly to growers and PCA’s, through farm calls and phone calls. We also monitored use of Best Management Practices through farm calls and phone calls.

**Outcomes**

***Learning and behavior changes.***

1. Growers and PCAs identify weedy rice and utilize best management practices.
	1. In 2016, 43 reports of suspected weedy rice infestations were made by rice growers and Pest Control Advisers.
	2. In 2017, there was increased reporting (54 reports) and fewer positive identifications (23).

***Policy changes.***

Our research was used to inform policy changes for seed certification.

1. New Quality Assurance program implemented by CCIA for seed that is not able to be certified through the seed certification program because it is not patented (we cannot trace its lineage). We collaborated with the CCIA inspector for rice from the beginning.
2. Change to the CA State Seed Certification Law (2018), such that growers can no longer save their own seed given that contributes to the spread of weedy rice. A UCCE Rice Advisor sits on the California Rice Commission seed certification committee that drafted the new law.

**Lessons Learned**

* *Build trust with your community.* Show up at meetings, take field calls, take phone calls, or whatever other means that shows you are engaged and invested in their success.
* If the problem is an emerging problem, and there is no template for how to address it, engage key players in your community from the beginning. This may mean engaging with people other than your typical clientele.
* *Follow through*. If you say you are not going to release certain types of information, don’t release it. If you say you are going to set up meetings, or websites, etc., do it. This goes back to the trust issue, but it also shows that you are a leader that can be counted on to address an issue when it arises in your community.
* ***Collaborate!!!*** There are resources available to you when you reach out for help within your community or industry. Many brains are better than one. This project would not have happened, at the scale we achieved, without collaboration.