

Certified Seed and QA Programs Stopping the Spread of Weedy Rice



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Topics of Discussion:

1. Overview of seed certification and QA programs
2. 2024 observations
3. 2025 outlook

Straw-hull, dark awned, red rice in seed field – Butte Co



The CCIA:

- Mission: “Provide services and support research that promotes the improvement, production, distribution and use of superior quality seeds and other agricultural products.”
- Was officially incorporated in 1944, however, seed certification in California began in 1925 through the efforts of the state Farm Bureau.
- Is the official seed certifying agency in California as recognized by California Seed Law.
- Is a private, non-profit organization affiliated with the University of California, Davis.
- Is funded through fees collected from services performed.



Rice Seed Certification and QA Programs

- Limited generation pedigree system
- Three inspected classes
- Seed fields and seed lots must meet minimum standards
- Field history requirement
- Seed fields inspected for off-types, other crops, weeds, and diseases
 - ZERO tolerance for weedy rice
- Seed lots tested for purity, germination, and red rice
 - ZERO tolerance for red rice in non-colored bran varieties



Generations in Certification and QA Programs

Similar standards, different terminology

A number of specialty rice varieties in California are ineligible for certification as the seed source was not officially from the variety developer.

- QA varieties include Koshihikari, Hitomebore, Akitakomachi, Carnaroli, Kokuho Rose, etc.

<u>Seed Certification</u>	/	<u>Quality Assurance Program</u>
Breeder seed	=	Breeder seed
Foundation	=	Basic (QA-1)
Registered	=	QA-2
Certified	=	QA-3



Overview of changes to Marketing Order in 2017

- Outside of a formal seed program, weedy rice proliferated in some of these non-certified varieties, as well as grower-saved seed in certified varieties.
- To stop the spread of weedy rice, the Marketing Order regulating CA rice production was updated in 2017 to require a 3rd party inspection system for all rice seed production. New regulations also prohibit grower saved seed.
- 2019 – ALL rice planted in California must be either certified seed or seed from a third party quality assurance program approved by the Certification Committee (*note: most RES varieties have PVP protection with the Title V option selected, and can only be sold as a class of certified seed*).
- 2019 – Handlers shall require producer verification of planting certified seed or seed enrolled in a third party quality assurance program approved by the Certification Committee.

Code of California Regulations, Title 3, Division 4, Chapter 2, Subchapter 5. § 2852.5

2024 Seed Field Observations

- A total of 26,869 acres were inspected (including 1058 acres in the QA program)
- ~264 acres (2 fields) did not pass for seed production in 2024 due to the observation of 4 red rice plants.
 - One field had single plant, Type 2
 - One field had 3 plants, medium grain, pubescent hull, red awns, tall



Continued UCCE-CCIA Collaboration

- UCCE and CCIA remain in regular contact regarding weedy rice observations
- Maintain confidential maps of all documented fields with weedy rice.



2025 Field Inspections

- 28,190 acres to be inspected
- Inspections begin on 8/8/21
- Passing fields free of weedy rice is of highest priority
- 4 inspectors; inspector training includes visits to commercial fields with weedy rice.
- CCIA inspectors can conduct test for presence of red rice with KOH test before grains are mature.
- Any fields with suspect red off-types will be reinspected by lead CCIA rice inspector (Timothy Blank).



In Summary:

- Seed Certification standards intended to provide rice growers with pure seed with strict tolerances for varietal contamination and zero tolerance for weedy rice.
- Quality Assurance program mirrors Certified Seed program, and was developed for varieties that cannot be certified.
- Effective in 2019, all commercial production must be planted with seed from either seed certification or QA programs.
- Red rice in Certified/QA seed fields is rare, but found annually
- Weedy rice detection and control remains of highest priority.

Questions

