

# Group Assures Crop Quality, Purity

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When growers buy seed, how can they be sure that what's in the bag is exactly what's listed on the label?

They can buy seed certified by the [California Crop Improvement Association](#) (CCIA). CCIA is a private, non-profit group recognized as the sole official seed certification agency for the state of California.

"Growers know when they buy seed certified by CCIA that it will be high quality and genetically pure because we rigorously monitor seed producers and conditioners adherence to federal and state seed rules," says Larry Teuber, executive director of CCIA and a UC Davis crop and ecosystems science professor. "We're a voluntary quality assurance program for the maintenance and increase of agronomic and vegetable crop seed."

Last year, CCIA certified about 150,000 acres of seed representing 42 different species and hundreds of varieties. Each variety entered into their program possesses a unique set of characteristics such as pest resistance, adaptation, uniformity, quality, and yield. Seed production is closely monitored to prevent out-crossing, weed, other crop and disease contamination that may negatively affect seed quality.

Seed growers don't have to ask CCIA to inspect and certify their harvest. But many of them do.

"Their seed crop is more valuable when it's certified," says Kitty Schlosser, CCIA administrative manager.

So how does CCIA seed certification work? An applicant contacts CCIA and submits an application to certify their seed crop.

"First, we make sure the seed being planted is genetically pure, that it came from a legitimate source and was obtained in a legal manner," Kitty says. Once it's planted, inspectors check the field several times throughout the growing season when distinct crop morphological characteristics, diseases and other important criteria are most noticeable.

"We make sure the entire crop is true to type, isolated from other varieties of the same species, absent of weeds, and other criteria," Larry says.

Inspections continue through harvest and beyond. "With the help of local agricultural commissioners, we make sure the equipment used in the field is clean, the

conditioning facilities are clean and identity of a seed lot is maintained," Larry says. And then the tests for germination and purity begin.

"Conditioners send a random sample of cleaned seed to the lab where they make sure it meets minimum germination requirements ranging from 80 to 90 percent depending on crop species," Kitty says. "They check for inert material—like little pieces of dirt or stone, and check to see if there are any weed seeds or off-type varieties among the sample seeds."

If the random sample doesn't stay within minimum certification standards, it fails and is denied certification.

"Certification genetic purity standards are strict and well-defined because when purity is compromised, insect and disease resistance, crop quality and uniformity can be reduced," Larry says.

There are four classes of seed. Seed stock obtained from a plant breeder is called "breeder" seed. This genetically pure sample is planted and the next generation harvested is "foundation" seed and is marked with a white tag on its bag. Foundation seed is planted to produce "registered" seed—a purple tag. The fourth generation of seed produced is the blue-tagged "certified" seed which is then sold by the seed company to the grower/producer. The seed produced from the certified seed is used for consumption—animal grain feeds, sunflower oil, alfalfa hay, etc.

CCIA is located on the UC Davis campus in the Frank G. Parsons Seed Center, a building named for the longtime UC Davis agronomy professor who made seed certification his mission.

"CCIA grew out of the work Frank Parsons did here to lead the production of basic seed—to increase and maintain new varieties," Larry says. "He was one of the few people in the world doing that in the late 1930s and early 1940s and it was because of his focus and commitment that the CCIA grew into what it is today."

Membership in the CCIA is open to any person, partnership, company or firm growing certified seed in California, or an individual who has current or past affiliation with seed certification. An applicant who is not a member of the CCIA and wishes to grow seed for certification may apply for membership in the Association. But growers don't have to be a CCIA member to produce certified seed.

For more information on CCIA, see their Web site at: <http://ccia.ucdavis.edu/>

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