



GOLDEN STATE PLANT NEWS

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The Certification of Native Seed (Pre-Variety Germplasm Certification Standards)

Large-scale disturbances of ecosystems, whether a result of human action or natural events (e.g., fire, floods, mudslides), frequently require efforts to restore, revegetate, improve, or stabilize native plant communities. As the demand for native seed has grown, so has the demand for ecotypic native seed. This demand is primarily from federal, state, county, and city governmental agencies. Though many native species may be suited for field cultivation and may be excellent candidates for improvement of plant performance through breeding efforts, the seed of a majority of species will continue to be collected from wildland populations. Because of the demand for native seed, it has become important to have seed certification to ensure genetic identity and origin.

In order to meet this need a national organization, the Association of Official Seed Certifying Agencies (AOSCA) has developed a certification program to address the needs of the producers and purchasers of native reproductive materials.

This program, although not as stringent as AOSCA cultivar certification programs, ensure that the native reproductive material maintains its genetic identity and that it is from a determined area. The California Crop Improvement Association is the AOSCA representative in California.

Seed certification is a voluntary program designed to ensure that proper identity of native grass reproductive material is maintained through all stages of collection and production. The term "reproductive material" refers to all forms of reproductive material including seed, seedlings, cuttings, rooted cuttings, and transplants.

Certification ensures that the reproductive material is correctly labeled so that the appropriate planting material is selected for the intended planting site. It is the prerogative of the resource manager to select the class of seed used; the certification program does not mandate the use of any particular seed class for a particular site.

AOSCA has published "Pre-Variety Germplasm Certification Standards" for the certification of germplasms that have not reached varietal status and "Grass Certification Standards" for certification of seed of germplasms which have been released as a variety. These standards apply to either wildland-collected or field-produced seed.

According to these certification standards, a race or ecotype of a native or naturalized species may be categorized into one of four classes. Each class will be identified by a color-coded tag and each class will have a minimum set of standards.

1. **Source Identified** (yellow tag): Propagating materials collected from natural stands, seed production areas, seed fields, or orchards where no selection or testing of the parent population has been made. There will be no purposeful genetic manipulation of ecotype or race. The original collection site will be identified and a site where the seed or plants will be grown can be designated. Source identified releases can be initiated by anyone.

2. **Selected** (green tag): Propagating materials shall be the progeny of phenotypically selected plants of untested parentage that have promise but not proof of genetic superiority or distinctive traits. They are produced so as to ensure genetic purity and identity. No purposeful genetic manipulation is conducted. Selected releases use site data, species literature search, and initial evaluation plantings to support releases. Comparisons are made to other accessions or cultivars (standards) for 1-2 years and the selected ecotype is superior. The original collection site will be identified. Selected releases can be initiated by anyone.

3. **Tested** (blue tag): Propagating materials shall be the progeny of plants whose parentage has been tested and that has proven genetic superiority or possesses distinctive traits for which the heritability is stable, as defined by the certifying agency, but for a variety that has not been named or released. This seed must be produced so as to ensure genetic purity and identity. No purposeful genetic manipulation is conducted. Tested releases use site data, species literature search, and multiple testing sites, replications, and data collected over a period of several years that statistically validates superior traits. Standards and ecotypes are used for comparisons. The original

collection site will be identified. Tested releases can be initiated by anyone.

4. **Cultivar**: The international term "cultivar" denotes an assemblage of cultivated plants that is clearly distinguished by any character (morphological, physiological, cytological, chemical, or others) and when reproduced (sexually or asexually), retains its distinguishing characteristic. Cultivars can be developed by purposeful genetic manipulation. Cultivar releases use site data, species literature search, multiple testing sites, replications, and data collected over a period of several years. Propagating materials of cultivars and generations of cultivars are referred to as

breeder, foundation, registered, and certified. Cultivar releases can be initiated by anyone.

The certifying agency for each state may limit the number of generations produced before it is necessary to return to the original site of collection for foundation propagating materials. This may be necessary to protect the purity, identity, and origin of the germplasm collection.

Further information can be obtained on this program by contacting the California Crop Improvement Association, Seed Certification Center, University of California, Davis California, 95616. Phone 530-752-0544.

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