

RED CLOVER

Trifolium pratense

Seed Certification Standards in California

GENERAL STANDARDS -- The standards on this sheet are in part condensed and apply to red clover. For greater detail and additional provisions, see the General Standards.

PLANTING STOCK -- In most varieties Breeder seed must be planted to produce Foundation seed, Foundation seed must be planted to produce Registered seed, and Registered seed must be planted to produce Certified seed. In varieties where there is no Registered class, Foundation seed must be planted to produce Certified seed.

APPLICATION -- Applications should be submitted electronically on CCIA's website (<http://ccia.ucdavis.edu>) as soon as possible and **no later than eight (8) weeks after planting**. New applicants should contact the CCIA office for instructions on obtaining access to the online application system. Applications for perennial crops must be renewed annually and these will be offered on the CCIA website after January 1. These applications should be submitted electronically no later than **February 15**. A choice of 'Renew' means the production field will be used for seed in the current crop season. A 'No Crop' renewal application is chosen if a seed crop will not be produced in the current crop season but the field will remain in the certification program for future seed production. A 'Cancelled' renewal application is chosen if the field will not be used for seed production and will be removed from the certification program.

FIELD ELIGIBILITY -- Foundation seed can only be produced on land on which no red clover has been seeded or grown for at least the preceding six (6) years and must have included a cultivated crop for three (3) years. The production of Registered seed must be on land which has not been seeded or grown red clover during the preceding three (3) years. Certified seed can only be produced on land which has had intervening irrigated crops and no red clover has been seeded or grown for at least the preceding two (2) years. During any period out of red clover every effort must be made to encourage germination of clover seed left in the soil and destroy the resulting volunteer plants. There can be no **prohibited noxious** weeds in the field. All fields or portions of fields intended for certification must have a definite boundary such as a fence, ditch, roadway, levee, or barren strip at least ten (10) feet wide.

ISOLATION -- Fields or portions of fields for certification must be isolated from blossoming red clover other than the same variety and certification class as follows: Foundation -- 900 feet; Registered -- 450 feet; Certified -- 165 feet. If for isolation reasons a portion of a field cannot be certified, there must be a definite, clearly visible boundary, such as a fence or barren strip, setting off that portion.

AGE OF STAND -- A stand of red clover will not be eligible to produce any class of certified seed after two (2) seed crops. These seed crops may be produced either in the same or consecutive years.

FIELD INSPECTION -- Each field intended for certification must be inspected prior to harvest. At least one inspection shall be made preferably during the mid-bloom stage and, in some cases, earlier and later inspections may be made.

Off-types -- Every field should be rogued to remove any plants of another crop or variety. Excess volunteer plants may be cause for rejection or reclassification of a seed field. Varieties cannot always be differentiated at field inspection. When differences can be distinguished, the maximum mixture of other varieties, established volunteers, and inseparable other crops such as alfalfa permitted is as follows:

Foundation	Registered	Certified
1:1000	1:400	1:200

Sweet clover shall not exceed ten (10) plants per acre.

Weeds --Fields must be free of any **prohibited noxious** weeds. **Restricted noxious** weeds, and common weeds difficult to separate must be controlled. Prohibited and Restricted noxious weeds are listed in the California Seed Law/CA Code of Regulations/Sections 3854 and 3855.

Fields may be refused certification due to unsatisfactory appearance caused by weeds, poor growth, poor stand, disease, insect damage, and any other condition which prevents accurate inspection or creates doubt as to identity of the variety.

A field inspection report will be sent to the applicant. If the field is approved, a certification number will be assigned. This number must be on all containers of seed before they leave the field. It is the responsibility of the applicant to make sure his field has been inspected before it is harvested.

HARVESTING -- Harvesting is subject to the supervision of the County Agricultural Commissioner who must be contacted prior to harvest. Any seed moved out of the county for conditioning must be accompanied by an Intercounty or Interstate Permit issued by the Commissioner.

CONDITIONING AND SAMPLING -- Conditioning of seed for certification may be done only in facilities approved for this purpose by the California Crop Improvement Association. It is the responsibility of the applicant to determine if the plant is eligible before delivering seed for conditioning. Conditioning, sampling, reconditioning, and blending must be supervised by the County Agricultural Commissioner. Conditioning equipment must be free from contaminating seed to the satisfaction of the supervising inspector.

SEED INSPECTION - All seed must be sampled and tested after conditioning and the seed lot must meet or exceed seed certification standards for that crop. A seed lab using the Association of Official Seed Analyst “Rules for Testing” must test the sample. A Registered Seed Technologist must sign each lab analysis. In addition to AOSA rules, specific seed testing may be required to meet CCIA seed certification standards.

The conditioner is required to submit a 1,000 gram sample to the laboratory for analysis and the CCIA dodder test. In some instances, varietal identity cannot be determined by visual seed inspections. Seed must be well screened and graded, bright in color, of good appearance and meet the following standards:

Pure Seed	99.50% (Minimum)
Inert Matter	0.50% (Maximum)
Total Other Crop Seed	
Foundation	0.20% (Maximum)
Registered, Certified	0.50% (Maximum)
Other Kinds	
Foundation	0.10% (Maximum)
Registered, Certified	
Other Varieties	
Foundation	0.10% (Maximum)
Registered, Certified	0.25% (Maximum)
Weed Seed	0.15% (Maximum)
Plantago species, Rumex species, Sweet Clover	
Foundation	9 seeds per pound (Maximum)
Registered, Certified	45 seeds per pound (Maximum)
Brassica species	
Foundation	None
Registered, Certified	None
Noxious Weed Seed	None
Germination and Hard Seed	85.00% (Minimum)
To detect the presence of dodder, a one pound sample must be run over a velvet roller dodder mill (or similar dodder detection equipment).	

RETAINED SAMPLES – The conditioner must also retain in storage a 1,000 gram sample of each lot certified. These shall be maintained for one year and be made available for any CCIA audits and reference testing.

FINAL CERTIFICATION AND TAGGING -- If the seed sample meets all standards a seed inspection report is issued. Before certification is complete, however, each container must have an official tag or attached. Certified seed may be sold to a grower in bulk without tagging if a

properly filled out Bulk Sale Certificate accompanies the shipment. The tags and Bulk Sale Certificates are issued by the California Crop Improvement Association to the County Agricultural Commissioner who supervises their attachment.

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