

CERTIFICATION STANDARDS HYBRID ALFALFA

(Medicago sativa) Revised February 23, 2023

Certification Standards: The general standards for seed certification found in the Oregon Seed Certification Service (OSCS) Handbook are basic to all crops, and together with the following specific regulations constitute the standards for certified hybrid alfalfa.

Varieties Certified: Varieties and classes eligible for planting may be found in the OSCS Handbook.

Genetic Standards: Designation of Classes of Seed

- a. Hybrid alfalfa is to be planted for any use except seed production
- b. Only the seed class "Certified" is recognized for seed production
- c. Commercial hybrids must be produced from certified Foundation seed
- d. Definitions of parental types.
 - A. male sterile (A);
 - B. any strain which when crossed with (A) maintains sterility (B);
 - C. any male used as a male in a commercial hybrid (C).

Field History: Land must be free from volunteer alfalfa before planting for at least 4 years to produce Foundation seed and for at least 1 year to produce Certified seed. At least two years must elapse between destruction of indistinguishable varieties or varieties of dissimilar adaptation and establishment of the stand for the production of the certified class of seed. Dissimilar adaptation will be determined as a difference of four or more fall dormancy values between that of the previous variety and the variety being planted. Fall dormancy values will be determined from descriptions prepared by the breeder for accepted varieties. With Certified fields, the time interval between harvest and new planting must be one year if the previous crop of hybrid alfalfa was of the same variety, same generation, and passed certification field requirements for genetic purity. Alfalfa must be planted in distinct rows. Exceptions must be approved by the Seed Certification Office prior to planting.

Field Inspections:

- 1. Use of Certification. The entire crossing field grown must be eligible and inspected.
- 2. Field inspection: Certified seed fields of commercial hybrids or Foundation seed stock shall be given at least two field inspections:
 - a. Seedling: After planting but before flowering.
- b. Full bloom crop inspection: at least 75% bloom, but before appreciable seed set, to determine pollen production in the male sterile parent. Two hundred plants shall be sampled to determine the pollen production index (PPI). Any inspection that is within 2 percentage points of the limit will require an additional 100 plants sampled and included in the calculation. Sampling shall be representative of the entire field.
- 3. For fields planted prior to January 1 the seedling application must be submitted within 60 days of planting. For fields planted between January 1 and July 1 the seedling application must be submitted within 15 days of planting. The seed crop application must be submitted by June 15 of each year in which seed is produced.

Class of seed produced	Maximum Permitted			Isolation Requirements ¹		
	Other Varieties ²	Sweet Clover	Red Clover	Less than 5	More than 5	
				acres	acres	
Foundation (AxB)	0.10%	None	None	1320 ft.	1320 ft.	
Certified	1.00%	10 plants/acre		165 ft.	165 ft.	
Only 10 ft. isolation is required between seed fields of different classes but of the same variety.						
No white top, leafy spurge, nor Russian knapweed allowed in any class of seed.						

Foundation ((A) x (B)) a parent border (B) is desirable.

There shall be at least 6 feet between (A) and (B) in a crossing block, or between the seed and pollen strains in a hybrid production field, and they shall be managed and harvested to prevent mixing.

Ratio of male sterile and pollen strains shall not be more than 2:1.

¹ See Section IV, D in the OSCS Handbook

² Includes off-type plants.

Pollen Production: Maximum Pollen Production Index (PPI) permitted*

Crop	Seed Stocks	Allowable Index			
Foundation production	A	14			
Certified production					
95% Hybrid	((A)x(B))x(C)	6			
75% Hybrid	((A)x(B))x(C)	42			
75% Hybrid	((A)x(B))+C	25			

^{*}Flowers shall be examined by tripping them on an instrument and rating them as producing pollen or no pollen production. The PPI is equal to the number of pollen production flowers out of 100 flowers tripped.

Seed Standards: (Minimum Sample Size – 1,000 grams)

Factor	Foundation	Certified	
Factor	(White tag)	(Blue tag)	
Pure seed, minimum	99.00%	99.00%	
Other crops, maximum	0.10%	0.25%	
Sweet Clover, maximum	None	90/lb.	
Inert matter, maximum	1.00%	1.00%	
Weed seed, ^{1,2} maximum	0.10%	0.25%	
Weed seed, GROUP A ³ , singly or combined	45/lb.	45/lb.	
Germination, including hard seed	85%	85%	

¹ The presence of dodder is not allowed in any class of seed. See Section IX, D4 in the OSCS Handbook.

² None of the prohibited weeds listed in Section V in the OSCS Handbook, nor St. Johnswort is allowed in any class of seed.

³ GROUP A – buckhorn plantain, docks, sheep sorrel and bedstraw