



California Hemp Seed Certification Process

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Topics Covered:

- **Introduction;**
- **Hemp Uses;**
- **Certified Hemp Cultivars;**
- **Seed Production Process;**
- **Summary.**





California Crop Improvement Association (CCIA)



California Crop Improvement Association (CCIA) is recognized by the California Seed Law as the official seed certifying agency for agronomic and vegetable seed in the State of California.

<https://ccia.ucdavis.edu/>



California Crop Improvement Association (CCIA)



The CCIA's objective is to ensure that California certified seed is of high quality. Quality characteristics of seed that are required for customer satisfaction include trueness to variety, varietal purity, freedom from noxious and problematic weeds, low inert matter, high germination and low/zero tolerance for problematic seed-borne diseases.

Hemp for Fiber



Hemp for Fiber



Outermost bark, the bast fiber, can be spun and refined into a variety of commercial items, including textiles and clothing.

Hemp for Grain



Hemp for Grain

Grain contains 25-40 percent edible oils by weight, has high protein content that is highly digestible, is gluten-free and has an ideal ratio of omega-3 and omega-6 fatty acids.



Hemp for CBD



Trichomes
(hair-like)



Clonal propagation and
feminized seed production
systems in greenhouses

CBD Infused Products



Hemp for CBD

CBD Oil



States allowing CBD: Alabama, California, Georgia, Indiana, Iowa, Kentucky, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, Wyoming.

Role in food additives, health and wellness

List of Approved Cultivars




1. Industrial hemp cultivars or propagative materials Certified by AOSCA and OECD;
2. Industrial hemp cultivars or propagative materials from AOSCA Quality Assurance Programs;
3. Industrial hemp cultivars or propagative materials produced by an authorized participant in a state industrial hemp pilot program pursuant to Section 7606 of Farm Bill 2014;
4. Industrial hemp seed or tissue culture plants imported from outside the United States that meets federal importation requirements;
5. Industrial hemp seed or propagative materials produced in California in accordance with the provisions of Division 24 of the Food and Agricultural Code.

Application for Variety Certification



CS-01-16-2017



SAVE this form to your desktop or computer.
Enter required information and upon completion, return to nvrhb@aosca.org
by clicking on this link and attaching the application.

**ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES
VARIETY REVIEW BOARD
INDUSTRIAL HEMP APPLICATION – PART A**

This application – Part A – must be submitted along with Part B
(please see notes, you only need to submit ONE Part A application for multiple Part B applications)

Please email the completed application to:
nvrhb@aosca.org
Association of Official Seed Certifying Agencies

The Association of Official Seed Certifying Agencies assesses fees for variety review. Prior to submitting a variety for review, the applicant must contact the AOSCA for current fee information and instructions for the proper method for payment. Payment must be received prior to variety review.

All information provided on this application will be maintained in complete confidence by the Association of Official Seed Certifying Agencies (AOSCA), its staff, and individual members of the AOSCA Variety Review Board. Each member of the Review Board will be required to sign a statement to this effect prior to their receipt of any applications for review. Upon completion of the review process, reviewers will be required to destroy or donate all applications in their possession. One copy of each application will be maintained on file in the AOSCA office.

Date _____

Applicant's Name _____

Street Address _____

City _____ State _____ Zip _____
(2 letter abbreviation) (5 digit code, 1 or 2 digits)

Telephone _____ Fax _____ E-Mail _____

Sponsoring Institution (if other than Applicant) _____

Street Address _____

City _____ State _____ Zip _____
(2 letter abbreviation) (5 digit code, 1 or 2 digits)

Breeder's Name (if other than Applicant) _____

Street Address _____

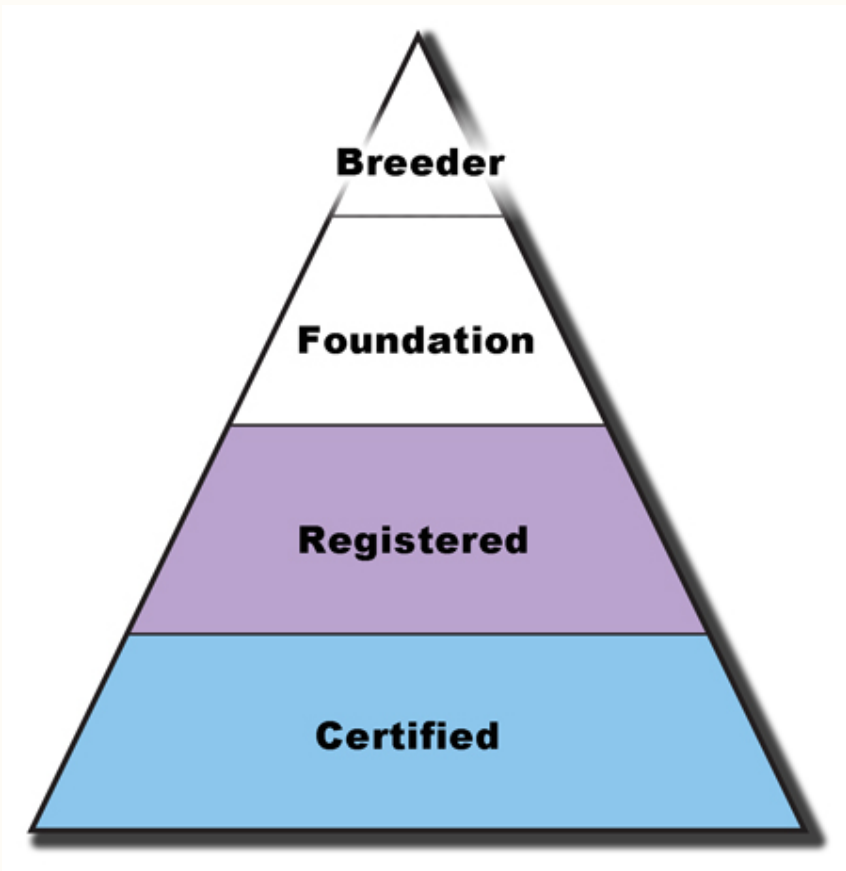
City _____ State _____ Zip _____
(2 letter abbreviation) (5 digit code, 1 or 2 digits)

Variety Name^ _____ Experimental Designation _____

^If submitting multiple applications, submit one Part A application, listing the Variety Name/Experimental Designations at the bottom of the Statement of Indemnification.

Page 1 of 2 (Industrial Hemp Application - Part A 2017)

Seed Certification Field and Seed Standards



Clonal Propagation



Clone Certification

Breeder Stock Plant



Mother Plant [Foundation]



Elite Plants [Certified]

D1 Daughter Plant

D2 Daughter Plant [Grand]

D3 Daughter Plant [Great Grand]

Feminized Seed Production



Female Pollen Producer



Female Pollen Receiver

Seed Certification Process

Application

Applicant: CCA Milling Co.
Crop: Corn
Official Variety ID: 1418 M 101

Field Inspection

Field Name: PASEP
Acres: 4.00

Harvesting



Movement



Tagging



Seed Inspection

Applicant: CALIFORNIA CROP IMPROVEMENT ASSOCIATION
Crop: Corn

Sampling



Cleaning



Online Application



[Edit](#)

App Num: App31341 Type: SD Cert Number:
 Cert Year: 2015 Initial Entry Date: 7/21/2015 Date Submitted: 7/21/2015

Warning Flag: Date Planted: 7/21/2015 Deadline: 9/15/2015 App L
 Overr

Renewal: Original Year: 2015 Previous App Num:
 Status: Pending Final Submission

Applicant: 7000 CCIA Milling Co.
 Grower: 7000 CCIA Milling Co.
 Crop: Rice Entered Variety: M-105 Official Variety ID: 14938 M-105
 Class Produced: Certified Acres Applied: 40.00

Comments:
 Applicant Comments:
 Applicant Notes:
 maps: [VE Map](#)
 Historic Overlaps:
 None found

* For applications, this is a direct link. For isolation mapping, use the "Find pin by #" fun
 Certificate/Tag:

Certificate/Tag Link
test
test

Planting Stock Info

Cert Num	Variety	# Plant	Class	Tag Issued	Grown	Purchased From
test	M-105	3000.00	Registered	California	California	

Field Name: test
 Township: Range: Section:
 County: BUTTE

Field History

	Year	Crop	Variety	Application #
Edit	2014	Rice	M-105	test

Package Complete?

- **Date Planted/Submitted**
- **Variety**
- **Class Produced**
- **Acres Applied**
- **Map**
- **Planting Stock Tag/Breeder Letter**
- **Planting Stock Information**
- **Field Name**
- **County**
- **Field History**
- **THC Test Result**
- **Registration**

Field Inspection



INDUSTRIAL HEMP (CANNABIS SATIVA L. SUBSP. SATIVA) CERTIFICATION STANDARDS

(adopted June, 2015)
(including changes effective June, 2016)

I. APPLICATION OF GENETIC CERTIFICATION STANDARDS

- A. The general requirements for seed certification found in Section I through IV of the Genetic and Crop Standards apply to (are basic) all crops, and together with the following specific standards, constitute the certified Industrial Hemp standards.
- B. The Genetic Standards are modified as follows:
1. All production of industrial hemp crops are subject to license application approval that may be required by regulatory authorities.
 2. Only varieties of industrial hemp approved by regulatory authorities are eligible for certification.
 3. The allowable area of an industrial hemp research area or production field may be determined by state or local agencies.
 4. Growers may be required by regulatory agencies to obtain THC test results according to applicable regulations. Growers may be required to submit these results to the seed certifying agency before a crop certificate is issued.

II. LAND REQUIREMENTS

- A. Crops should not be planted on land where volunteer growth from a previous crop may cause contamination.
- B. Fields for Foundation and Registered classes of industrial hemp seed must not be planted on land which in the previous 5 years grew a crop of industrial hemp.
- C. Crops for Certified seed must not be grown on land which in the preceding 3 years produced a crop of industrial hemp.
- D. Weeds
1. Fields may be refused certification due to excessive weeds.
 2. The presence of Broomrape (*Orobancha* spp.) in an industrial hemp field may be cause for declining certified status.

III. FIELD STANDARDS

A. Crop Inspection

1. It is the grower's responsibility to ensure that fields are inspected by an authorized inspector at least twice prior to swathing or harvesting, except in the case of Foundation and Registered monoecious type and unisexual female hybrids, in which 3 inspections are required.
2. A field that is cut, swathed or harvested prior to crop inspection is not eligible for certification.
3. Fields must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining certified status.
 - a. First inspection must be made before female (pistillate) flowers of the inspected crop are receptive and after the formation of male (staminate) flowers, preferably before pollen is shed.
 - b. Second inspection must be made during the receptive stage of the female plants in the inspected field, normally within 3 weeks of first inspection.
 - c. If a third inspection is necessary, it must be made when off-type female flowers can be identified.
 - d. Isolation areas will be inspected for volunteer Industrial Hemp plants and harmful contaminants on each inspection.

B. Isolation

1. Isolation areas must be kept free of Industrial Hemp plants. Under optimum conditions, not more than 3 plants per 11 square feet of harmful contaminants (species that can cross pollinate with the inspected crop) are permitted within the required isolation distance(s) adjacent to the inspected crop. The conditions of each crop are assessed by the seed certifying agency which may alter this standard, usually by reducing the number of contaminant plants permitted per square yard, according to the contamination risks involved.
2. The required isolation as outlined in Table 1 must be in place prior to the time of flowering and crop inspection.
3. If Dioecious male plants start flowering before removal from field, all plants around them should be destroyed for a radius of 10 feet for Foundation and 6 feet for Registered seed crops.

Field Standards

Isolation Distances

Inspected Crop	Other Crops	Isolation Distance
Dioecious type:		
Foundation and Registered	Other variety & Non cert	3 miles
	Lower Class crop	1.25 miles
Certified	Other variety & Non cert	1 mile
Monoecious and Hybrid type:		
Foundation and Registered	Dioecious & Non cert	3 miles
	Other Monoecious	1.25 (R) - 2 (F) miles
	Lower Class crop	1 mile
Certified	Other variety & Non cert	1 mile



Field Inspection Report



App00000

Field Inspection Report
California Crop Improvement Association
Frank G. Parsons Seed Certification Center
University of California
One Shields Avenue
Davis, California 95616-8541

Name: CALIFORNIA CROP IMPROVEMENT ASSOCIATION (Acct #)

Date: 0/00/2000

Address : One Shields Avenue
Davis, CA 95616-9340

The certification numbers below, assigned for acres passed, are to be used to identify the seed harvested and must be stenciled on all containers of seed from the corresponding fields. Field inspection is only a preliminary step in the process of certification which shall be determined by tests on officially drawn samples of seed. Before harvest, the county agricultural commissioner must be notified for supervision of harvesting, cleaning, and any intercounty movement of this seed.

Results below are for your 2016 Sunflower field located in YOLO county.

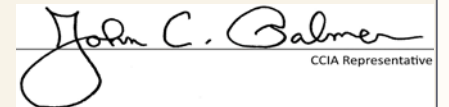
Appl Number	Grower	Crop
App00000	California Crop Improvement Association (Acct # 00)	Cubbage

Class Produced	Variety
Certified	00A00

Use certification number 00CA-000-00000 for Certified production

<u>Field Name</u>	<u>Comments</u>
Zanda	PASSED

Acres:	Approved	Rejected	FIO	Growout	No Crop
	100.00	0.00	0.00	0.00	0.00


CCIA Representative


cc. Ag. Commissioner
Farm Advisor, YOLO county

Field Harvesting



- A field harvested prior to field inspection cannot be certified under any circumstances.
- Permission to harvest the field should be sought and is only granted by the county Agricultural Commissioner and harvesting should be done by approved harvesters.
- The field should only be harvested after the Agricultural Commissioner verifies that all equipment, combines, trucks, wagons, and bins are clean to ensure varietal purity.

Seed Movement

- 
- It is the joint responsibility of the applicant and grower to maintain the identity and genetic purity of the crop intended for certification throughout harvest and during delivery to a conditioning facility approved by the CCIA.
 - Seed movement within California shall be accompanied by an 'Inter-county Permit' and that destined for another state or an AOSCA country by an 'Inter-State Transfer of Seed Certificate' issued through the authority of the local Agricultural Commissioner.

Seed Cleaning

- Only CCIA approved and accredited conditioners with proper equipment can condition certified seed in California.
- Conditioning of seed intended for certification is subject to supervision by the county Agricultural Commissioner.
- The conditioner will clearly mark bins and containers, accept delivery of seed from the harvester, and condition the seed using appropriate and acceptable processes, and keep all documentation for verification.



Seed Sampling



- Seed sampling is supervised by the county Agricultural Commissioner. The conditioner will submit a seed sample to a Seed Laboratory of choice and will keep a duplicate sample for 3 years as per Federal Seed Act requirements.
- The CCIA executes a Certified Seed Sampler Program with AASCO's oversight. The objective is to attain uniformity in seed sampling in California and to obtain accurate seed test results.

Seed Laboratory Testing



Seed Standards

Factor	Foundation	Registered	Certified
Pure seed (min)	98.00%	98.00%	98.00%
Inert matter (max)	2.00%	2.00%	2.00%
Weed seeds (max)	0.10%	0.10%	0.10%
Total other crop seeds (max)	0.01%	0.03%	0.08%
Other varieties (max)	0.005%	0.01%	0.05%
Other kinds (max)	0.01%	0.03%	0.07%
Germination (min)	80.00%	80.00%	80.00%



Seed Certification



SEED INSPECTION REPORT

California Crop Improvement Association
Frank G. Parsons Seed Certification Center
University of California
One Shields Avenue
Davis, California 95616-8541

Applicant: CALIFORNIA CROP IMPROVEMENT ASSOCIATION (ID# 0000)
1 Shields Avenue
Davis, CA 95616-9340

Conditioner: CALIFORNIA CROP IMPROVEMENT ASSOCIATION (ID#0000)
1 Shields Avenue
Davis, CA 95616-9340

Sample Form No: SID 00000
Variety and Crop: 00A00 Sunflower

Certification No: 00CA-000-00000-0000000
Class Produced: Certified
Seed Certification Result: PASSED
Remarks: OECD Test: Pure Seed 99.93% Inert 0.07% Germination: 94.00% DOT 00/00/2000

Net Fee = \$000.00
Total Charges = \$000.00

Invoice Copy

John C. Palmer
CCIA Representative

SEED INSPECTION REPORT 00 SID 00000.0

California Crop Improvement Association
Frank G. Parsons Seed Certification Center
University of California
One Shields Avenue
Davis, California 95616-8541

Applicant: CALIFORNIA CROP IMPROVEMENT ASSOCIATION (ID# 0000)
1 Shields Avenue
Davis, CA 95616-9340

Conditioner: CALIFORNIA CROP IMPROVEMENT ASSOCIATION (ID#0000)
1 Shields Avenue
Davis, CA 95616-9340

A sample of the seed lot described below has been tested to meet minimum seed inspection standards for certification. Final certification on seed lots meeting standards as indicated below may be obtained by the owner of the seed requesting attachment of official certification tags, and assuming responsibility for any portion of the lot, so certified being of certified seed quality. If the seed fails to meet certification requirements, reasons are given below.

Sample Form No: SID 00000
Variety and Crop: 00A00 Sunflower

Certification No: 00CA-000-00000-0000000
Class Produced: Certified
Seed Certification Result: PASSED
Remarks: OECD Test: Pure Seed 99.93% Inert 0.07% Germination: 94.00% DOT 00/00/2000

Net Fee = \$000.00
Total Charges = \$000.00

Invoice Copy

John C. Palmer
CCIA Representative



- An accredited conditioner must submit to the CCIA an online request to certify a seed lot at <http://ccia.ucdavis.edu>. Conditioners should review the 'Online Request for Seed Certification' instructions on the CCIA website under 'Seed Certification' in the 'Certification Programs' area.
- The CCIA will accept a Laboratory Report of Analysis (LROA) with purity and germination results within 6 months of sampling. The CCIA will accept these results up to 8 months for wholesale and 15 months for retail, as per California Seed Law.
- The CCIA will review and verify the request vis-à-vis the 'Crop Standard' and issue a Seed Inspection Report (SIR) online.

Topics Covered:

- **Introduction;**
- **Hemp Uses;**
- **Certified Hemp Cultivars;**
- **Seed Production Process;**
- **Summary.**

