



Hemp Advisory Meeting
Linn County Extension Office,
33630 McFarland Road, Tangent, OR 97389
November 15, 2019

12:00 Lunch

1:00 Call meeting to order - Chair – Crystal Fricker

1. Introductions
2. Review of Agenda and Bylaws – Crystal Fricker
 - a. Correct typo
3. Global Hemp Innovation Center update – Kristin Rifai
4. Review OSCS Hemp standards with updated AOSCA standards – Andrew Altishin
5. Review of Part A & B of AOSCA Variety Review forms – Dan Curry

Break

6. How to Certify Hemp in Oregon, and example documents – Andrew Altishin
7. Q&A on reports (Reports are included in the packet)
 - a. ODA – Elizabeth Savory
 - i. Private Seed lab requirements (uncertified seed)
 - b. Seed Lab – Jodi Keeling
 - i. Feminized Seed tests, Dormancy procedures
 - c. Seed Certification – Andrew Altishin
 - d. Seed Services – Daniel Curry
 - e. Crop and Soil Science/College of Ag – Thomas Chastain
8. Any new studies/items of interest/new business
 - a. Pollen Flow Studies
 - b. OECD and out of country tagging options
9. Election of representative to the Seed Certification, Foundation Seed and Plant Materials Board Meeting - Wednesday February 19th, 2020
10. Renewal of appointments – motion to the Hemp Stewardship Committee
11. Choose time for the next meeting

End of 1st Hemp Certification Advisory Meeting

Hemp Advisory Committee Meeting
November 15th, 2019
Linn County Extension Service, Tangent Oregon

Present: Crystal Fricker, Austin Fricker, Dan Curry, Elizabeth Savory, Kristin Rifai (Proxy for Jay Noller), Peter DeLong, Matt Cyrus, Seth Crawford, Paul Bracher, Andrew Altishin, Rachel Hankins,

Via teleconference: Clint Shock, Justin Tombe, Jeremiah Dung, Sheldon Heffernan

Guests: Christina Cooley and Paul Radloff – teleconference, Mary Beuthin, Alex Albion, Jeff McMorrان, Brandi Cox, Terry Burr, Tami Brown, Dale Brown, Dr. Wei, Justin Jones, Farhad Shafa, Carrie Lewis, Jodi Keeling, Brooke Getty, Will Jessie

Call meeting to Order: meeting was called to order at 12:58

1. Introductions
2. Review of Agenda and Bylaws
 - a. Motion to approve agenda, moved and seconded, all in favor.
 - b. Motion to approve correction to the bylaws, moved and seconded, all in favor.
3. Global Hemp Innovation Center update
 - a. Kristin Rifai gave an update on behalf of the GHIC including Hemp harvest roundup, and brief information on a symposium in 2020.
4. Review OSCS Hemp standards with AOSCA
 - a. Review of the AOSCA standards and OSCS standards discussion. Andrew gave background about the history of Hemp in AOSCA. The original standards were adopted in 2015, revised in 2017, and more recently in 2019. The 2019 standards were updated to match Canada's standards which gives an allowance of plants within the isolation zone. These standards do not have any specific standards for greenhouses, but the clonal standards do. OSCS believes the national level will move towards having greenhouse standards, but it's not there yet. Some committee members think that it may be beneficial to have separate greenhouse and field production standards, and require a higher sample size on field production to prove isolation. There was a consensus that the current standards are applicable for Food, Fiber and Grain, but not for CBD/CBG or other essential oil production – which would require a higher isolation. After further discussion it was decided to call the current standards Industrial Hemp for Grain production and develop new standards for Feminized Seed production.
 - b. Additionally there was some discussion about a grow out test, and the time and costs involved, as a method to double check the DNA based feminization tests. A motion was made to form a subcommittee to develop Feminized Seed standards, and report back to the group prior to the board meeting. The subcommittee will be made up of Seth Crawford, Peter DeLong, Paul Bracher, Justin Jones, Paul Radloff. Seth will coordinate and Rachel will work with them.
 - c. There was concern about the minimum sample size as stated in the handbook, and it was noted that it has not been officially changed, but excess seed could be

returned. Some of the tests are destructive tests (germination and PCR) and the lab is required to keep enough to re-run tests if any questions arise. The seed lab asked about the AOSCA double inert standards, stating that the inert can only have 0.5% less than “other than seed fragments”. It was suggested that it could be because of automatic seeders (needle seeders), as it can actually plug them if there is a lot other inert - the coating can flake off and make a dust. A motion was made to recommend to AOSCA to remove the second inert level, moved and seconded, all in favor.

5. Review Part A&B of AOSCA Variety Review Board

- a. Review of flow chart: Discussion topic – see flow chart on page 27 of the packet. There is currently not an AOSCA review board for Hemp, it was supposed to be ready by September.
- b. Review of the AOSCA applications, Part A and Part B. There was some discussion about the THC requirement in Part B. A breeder made a recommendation that the variety description be based on the relative ratio of CBD to THC levels. There was clarification that based off the USDA AMS regulatory, we cannot certify marijuana, anything over .3% THC (THC as defined by USDA – total or Delta 9). Once the USDA changes their levels/requirements these will update without a vote. The committee discussed the definition of oil used in the documents - why does it not differentiate types of oil? It was pointed out that the USDA will be collecting data, and it's not helpful to know that 90% of the country grew for “oil”, but not if it was cooking oil, essential oil or CBD oil. Motion made to send a recommendation to AOSCA to add “Seed Oil, Fiber, Other, Essential Oil” as types on the VRB application. Moved and seconded, all in favor. In further discussion about the documents there some confusion because the variety application is very subjective based on the type of variety, fiber/grain or CBD. For example, short for an auto flower will be 3 ft vs short for a fiber is going to be 12 ft. It was also suggested when you are filling out the descriptions to add where it will show those characteristics; field or greenhouse. Rachel recommended that it be put in section B3, to give the reviewers additional information. Motion was made to form a subcommittee to send suggestions to AOSCA for the Variety Review Board application. Moved and seconded, all in favor. Subcommittee is Brooke Getty, Austin Fricker, Clint Shock and Andrew Altishin.

6. How to Certify hemp in Oregon

- a. Andrew walked the committee through the Guidelines that are also posted on our website. (NOTE: Not attached in packet, as they are outdated as of 1/1/20, can be found on our webpage at <https://seedcert.oregonstate.edu/crop-information/hemp>).

7. Q&A on reports

- a. ODA
 - i. Elizabeth Savory reviewed the handout in the packet. Mentioned that the 849 registrations number may be inflated, because they are not sure how many are actually growing. She also ran through a quick chart of how to

export to other countries requiring phytosanitary certificates. ODA is hoping to redefine handlers so that it can exempt seed labs, currently they have to obtain a handlers permit.

- b. Seed Lab
 - i. David Stimpson gave an update on the Seed Lab. There was a discussion that female hemp plants can test 100% female on a PCR test, but may demonstrate male phenotypes, and it's heritable. It was recommended by an industry member that if you are using PCR you have a disclaimer/legal to say that it is based on PCR.
 - c. Seed Certification
 - i. Andrew highlighted a few crops and acreage reports, see attached reports for more details. Still no Industrial Hemp acres signed up.
 - d. Seed Services
 - i. See report in packet
 - e. Crop and Soil Sciences
 - i. See report in packet.
8. New studies/items of interest/New business
- a. Some discussion on ongoing isolation/pollen flow studies. There have been no concrete conclusions.
9. Election of representative to the Board
- a. Clint was nominated to be the appointee to the board. Move and seconded, all in favor.
10. Renewal of appointments
- a. A motion was made to send a recommendation to the Hemp Stewardship Committee to renew Crystal and Matt's appointments, moved and seconded.
11. Choose time for next meeting: Jan 31st, lunch at 12:00, meeting at 12:30.
12. Adjourn



2019 Industrial Hemp Advisory Committee

Oregon Certification, Foundation Seed and Plant Materials Board

Name	Affiliation	Address	Term*
Crystal Rose-Fricker <i>Chair</i>	"Other" Willamette Valley		2019
Matt Cyrus <i>Vice Chair</i>	Grower, Central Oregon		2019
Paul Brocher	Grower, Columbia Basin		2020
Seth Crawford	Breeder, Willamette Valley		2021
Justin Tombe	Breeder, Southern Oregon		2019
Peter DeLong	Breeder, Southern Oregon		2020
Sheldon Heffernan	Grower, North East Oregon		2021
Clint Shock	Breeder, South East Oregon		2020
Jay Noller	OSU Hemp Center		Appointment Voting
Andrew Hulting	OSU Extension Service Weed Management Specialist	Department of Crop and Soil Science 337 Crop Science Building Corvallis, OR 97331 Andrew.Hulting@oregonstate.edu	Appointment Voting
Jeremiah Dung	OSU Extension Service Plant Pathologist		Appointment Voting
Thomas Chastain	OSU, Crop and Soil Science Department Head	109 Crop Science Bldg., OSU Corvallis, OR 97331 (541) 737-2821	Ex Officio Nonvoting
Dan Curry	OSU, Crop and Soil Science, Seed Services Director	351B Crop Science Bldg., OSU Corvallis, OR 97331 (541) 737-5094 daniel.curry@oregonstate.edu	Ex Officio Nonvoting
Andrew Altishin	OSU Extension Specialist Seed Certification Manager	31 Crop Science Bldg., OSU Corvallis, OR 97331-3003 (541) 737-4513 andrew.altishin@oregonstate.edu	Ex Officio Nonvoting
Dave Stimpson	OSU Seed Laboratory Manager	3291 Campus Way Corvallis, OR 97331 (541) 737-4464 david.stimpson@oregonstate.edu	Ex Officio Nonvoting
Elizabeth Savory	Oregon Department of Agriculture	635 Capitol St. NE Salem, OR 97301-2532 esavory@oda.state.or.us	Ex Officio Nonvoting
Rachel Hankins <i>Committee Secretary</i>	OSU Extension Specialist Seed Certification	31 Crop Science Bldg., OSU Corvallis, OR 97331-3003 (541) 737-4513 Rachel.hankins@oregonstate.edu	Appointment Nonvoting

* Term expires at the end of the annual Certification Board Meeting in February of the following year.



Hemp Certification and Foundation Seed and Plant Materials Advisory Committee Bylaws

Article I. Name and Location

The name shall be the Hemp Certification and Foundation Seed and Plant Materials Advisory Committee (shortened version: Hemp Certification Advisory Committee). The principal office and place of business shall be in the College of Agriculture, Oregon State University.

Article II. Objective

The objectives of the Advisory Committee are set forth as follows:

1. To promote and improve hemp seed by developing high quality seed certification standards.
2. To advise and cooperate with the Oregon State University Certification and Foundation Seed and Plant Materials Board by recommending changes to the Board which are in the best interest of the hemp industry of Oregon.
3. To aid in the dissemination of information affecting Oregon hemp growers and dealers by working through their respective organizations.

Article III. Membership

1. The advisory Committee shall consist of 11 voting members, representing the different growing regions of the state, and will include breeder, grower, and processor representatives as well as OSU researchers. Of the breeder, grower, and processor representatives, two will be from the Willamette Valley, two will be from Southern Oregon, one will be from Central Oregon, one will be from the Columbia Basin, one will be from Northeast Oregon and one will be from Southeastern Oregon. Representing the OSU **researchers**, one will be a hemp researcher, one will be an OSU weed specialist, and one will be an OSU plant pathologist. The following shall serve as non-voting ex-officio members: Crop and Soil Science Department Head, Director of Seed Services, Certification Project Manager, Seed Laboratory Manager, a representative of the Oregon Department of Agriculture, and such other ex-officio members the Dean or the Committee shall deem necessary.
2. Until established industry organizations are operational, Representatives of the Committee shall be appointed by the OSU Hemp Stewardship Committee according to the regional needs operating in the best interest of the hemp industry.
3. If a vacancy occurs before established industry organizations are operational, the OSU Hemp Stewardship Committee or the Dean may appoint appropriate representatives.

Article IV. Term of Membership

1. The representatives shall be appointed to serve a three-year term. To initiate the committee the first year, position one from the Willamette Valley region, position one from the Southern Oregon region, and the Central Oregon representative shall be appointed for one year. The Columbia Basin, the Southeast Oregon, and position two from the Southern Oregon region shall be appointed for two years. The Northeast representative and position two from the Willamette Valley region shall be appointed for three years. Re-appointment for an additional term is permissible, but whenever possible, new individuals should be appointed.
2. The OSU hemp researcher, OSU weed specialist, and OSU pathologist shall serve at the Dean's discretion.

Article V. Officers

1. Officers shall consist of a chair and vice-chair. Each will serve a one-year term. The vice-chair will become chair. If the first chair is a breeder, the vice-chair will be grower. For selecting a breeder for alternating terms, the processor will be considered part of the breeder group. After the first year, the breeders and growers will be represented as chair on alternate years. The Hemp Stewardship committee shall appoint the first chair and vice-chair of the Hemp Certification Advisory Committee.
2. A secretary shall be chosen by the Dean and may or may not be a member of the committee.

Article VI. Meetings

1. The committee shall meet at least once a year.
2. Special meetings may be called by the chair as is deemed necessary.
3. Meeting notices shall be mailed 20 days before each annual meeting. The secretary shall mail or email a notice to each member. Notices of special meetings shall state the nature of the business to be considered. Minutes of each meeting will be forwarded to each appointing organization and each member of the Advisory Committee and the Board within 20 days before the next meeting.
4. The voting members present shall constitute a quorum of the transaction of business at any officially called meeting.

Article VII. Amendments

These bylaws may be amended at any officially called committee meeting by a two-thirds affirmative vote of the members present, subject to the Board's approval.

Oregon State University Extension Service prohibits discrimination in all its programs, services, activities, and materials on the basis of race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, familial/parental status, income derived from a public assistance program, political beliefs, genetic information, veteran's status, reprisal or retaliation for prior civil rights activity. (Not all prohibited bases apply to all programs.)

AOSCA Standards

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

(adopted June 2015)

(including changes effective June 2016, June 2019)

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. Hemp crops for Foundation and Registered classes must not be grown on land which in any of the preceding 3 years produced a crop of industrial hemp.
- B. Hemp crops for Certified classes must not be grown on land which:
 - 1. In the preceding year produced a certified crop of the same variety.
 - 2. In either of the preceding 2 years produced a non-certified crop of industrial hemp or a different variety of industrial hemp.
- C. Weeds
 - 1. The presence of Broomrape (*Orobanche* spp.) in industrial hems crops is 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 once prior to swathing or harvesting, except in the case of Foundation, Registered, and Certified monoecious types and unisexual hybrids and Foundation dioecious types, in which 2 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 for all classes of monoecious types must be made just before or at early flowering. First inspection for all classes of dioecious types must be made after flowering when male plants are beginning to senesce.
 - b. Second inspection for all classes of monoecious types, and the Foundation class of dioecious types must be made when seeds are well forming.
 - c. Isolation areas will be inspected for volunteer industrial hemp plants on each inspection.
- B. Isolation
 - 1. The area, density, stage of maturity and location of any contaminating pollen source is an important factor in cross pollination, and therefore must be noted on the *Seed Crop Inspection Report* for consideration in determining certification status. There shall not be any *Cannabis sativa* L. plants within 100 m of the crop and not more than 10 plants/ha beyond 100 m within the isolation requirement.
 - 2. The required isolation must be present prior to flowering and crop inspection.

Table 1 –
Minimum Isolation Distances Required Between Inspected Industrial Hemp and Other Crops

Inspected Crop	Other Crops	Isolation Distance Required (feet)
Dioecious type – Foundation	- Different varieties of Industrial Hemp	15,748
	- Non-certified crop of Industrial Hemp	
	- Lower certified class seed crop of same variety	6460
	- Same class of certified seed crop of same variety	10
Dioecious type – Registered	- Different varieties of Industrial Hemp	15,748
	- Non-certified crop of Industrial Hemp	
	- Seed crop of same variety that meets Certified standards for varietal purity	5249
	- Seed crop of same variety that meets Registered standards for varietal purity	3
Dioecious type – Certified	- Different varieties of Industrial Hemp	2624
	- Non-certified Industrial Hemp	
	- Planted with certified seed of the same variety that meets Certified standards for varietal purity	656
	- Seed crop of same variety that meets Certified standards for varietal purity	3
Monoecious type – Foundation	- Dioecious variety of Industrial Hemp	15,748
	- Non-certified crop of Industrial Hemp	
	- Other Monoecious varieties	9690
	- Lower certified class seed crop of same variety	
Monoecious type – Registered	- Same class of certified seed of same variety	16
	- Dioecious variety of Industrial Hemp	15,748
	- Non-certified crop of Industrial Hemp	
	- Different varieties of the same type of Industrial Hemp (Monoecious or Female Hybrid)	6460
Monoecious type – Certified	- Seed crop of same variety that meets Certified standards for varietal purity	3230
	- Seed crop of same variety that meets Registered standards for varietal purity	3
	- Dioecious variety of Industrial Hemp	3230
	- Non-certified crop of Industrial Hemp	
Monoecious type – Certified	- Different varieties of the same type of Industrial Hemp (Monoecious or Female Hybrid)	656
	- Planted with certified seed of the same variety that meets Certified standards for varietal purity	
	- Seed crop of same variety that meets Certified standards for varietal purity	3
	- Seed crop of same variety that meets Registered standards for varietal purity	

C. Impurity Standards

1. Impurities should be removed prior to crop inspection.
2. Any combination of impurities may be reason for declining certified status.
3. Table 2 indicates the maximum number of impurities permitted by AOSCA in approximately 10,000 plants of the inspected crop. The inspector makes at least 6 counts (10,000 plants each) or the equivalent to determine the number of impurities. The resulting average of these counts must not exceed the maximum impurity standards in Table 2

Table 2 - Maximum Impurity Standards

Plot Crop	Maximum Impurity Standards per 10,000 plants in Industrial Hemp Seed Crops	
	Maximum Number of Dioecious Male Plants Shedding Pollen	Maximum Number of Off-Types or Other Varieties
Dioecious type – Foundation	–	3
Dioecious type – Registered	–	10
Dioecious type – Certified	–	20
Monoecious type – Foundation	1	3
Monoecious type – Registered	2	10
Monoecious type – Certified	100	20

IV. SEED STANDARDS

Industrial Hemp Seed Standards

Standards for Each Class

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

*Inert matter shall not include more than 0.5 per cent of material other than seed fragments of the variety under consideration.

**Other kinds shall not exceed 2 per lb. (454 grams) for Foundation; 6 for Registered; 10 for Certified.

Guidelines for the Production of Certified Industrial Hemp Seed

1. Definitions

- Industrial Hemp (*Cannabis sativa L. subsp. sativa.*) includes varieties of these kinds:
 - Dioecious type: with male and female flowers on separate plants.
 - Monoecious type: with male and female flowers on the same plant.
 - (Unisexual Female) Hybrids: with sterile male and fertile female flowers on the same plant.
- “Approved Cultivar” means any variety designated as eligible for production by federal or local regulatory authorities
- “THC” means delta-nine (Δ^9) tetrahydrocannabinol, which is the component of Industrial Hemp regulated by federal or local regulatory authorities.
- Although traditionally a crop with a Dioecious plant type, many Monoecious varieties of industrial hemp (*Cannabis sativa L. subsp. sativa*) have been developed. Industrial hemp is sexually polymorphic and often produces many different ratios of intersexual plant types that can increase roguing requirements. Variety descriptions normally define these ratios.

2. Foundation Seed Production

Any means of processing or conditioning of seed from a Foundation production area which may contaminate the varietal purity of the seed is prohibited.

Area of Foundation Fields

When unforeseen circumstances do not permit proper maintenance of the entire field, it is recommended that the area be reduced by destroying part of the field or by isolating a part to meet the requirements of a lower status of certified seed. The remainder of the field must meet the requirements for Foundation field production.

The area of a Foundation field includes the “walkways” provided within the field to facilitate effective roguing.

3. Recommended Production Procedures

Field Planting

- a) Fields should be planted to facilitate inspection, roguing and harvesting.
- b) Fields should be planted in areas easily accessible for frequent maintenance and to provide the maximum protection from outside sources of contamination, such as roadways and building sites.
- c) Regulations for land requirements are minimum standards and caution is necessary in choosing land, as volunteer growth from previous crops may vary according to local conditions.
- d) The regulations for isolation are minimum standards. It is always to the grower’s advantage to provide more isolation than required. When planting Foundation fields, specific requirements may influence the location and size of the field. It is a safeguard if adjacent crops are the same variety as the field and are inspected for certified status.

Roguing

- a) The field must be thoroughly and intensively rogued many times throughout the crop season.
- b) Off-type male flowers must be removed before the receptive stage of female flowers in the inspected crop.
- c) The numbers and kinds of plants removed should be recorded and described on the appropriate forms.
- d) All male flowers rogued from the crop must be removed from the production area and burial is recommended.
- e) Regrowth of rogued flowers or plants must be prevented.

Harvesting, Cleaning and Storing

- a) A seed grower should have access to the necessary equipment for harvesting and cleaning the seed from the field in such a manner as to ensure that the varietal purity of the seed is maintained.
- b) The seed should be stored, in compliance with federal or local regulations, in a clean, cool, dry area.
- c) The seed containers should be labelled for identification.

It is recommended that not more than one variety of Industrial Hemp be grown under the management of one grower.



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 certified Industrial Hemp standards.

Varieties Certified: Only varieties approved for production by Federal or local regulatory authorities may be eligible for seed certification. Varieties may represent the following types¹: Monoecious, with male and female flowers on the same plant; Dioecious, with male and female flowers on separate plants; and (unisexual female) Hybrids, with sterile male and fertile female flowers on the same plant.

Field History: To produce Foundation and Registered seed, land must not have grown or been seeded to any *Cannabis sp.*, Hops or Tobacco during the previous five years, for Certified seed three years, unless the previous crop was of the same variety and certified. Hemp must be planted in distinct rows. OSCS must approve exceptions prior to planting.

Field Inspections: Three inspections may be required depending on the variety type and production generation; at least two inspections are required prior to seed harvest. The first inspection occurs before female (pistillate) flowers of the crop are receptive and after the formation of male (staminate) flowers, preferably before pollen is shed; the second inspection occurs during the receptive stage of female plants, normally within 3 weeks after first inspection; the third inspection, if necessary, occurs when off- type female flowers can be identified. The field application must be submitted within 60 days of planting, and a seed crop application must be submitted by April 15 of each year in which seed is produced.

Field Standards:

Class of Seed Produced	Variety Type	Maximum Number of "Too Male" Monoecious Plants ²	Maximum Number of Dioecious Male Plants Shedding Pollen ^{2,3}	Maximum Number of Other Impurities ²	Number of Inspections	Isolation Distance Required	
						From Different Varieties or Types	From Lower Certified Class of Same Variety
Foundation ⁴	Monoecious	500	1	3	3	3 miles	2 miles
	Dioecious	--	--	3	3		
Registered ⁴	Monoecious	1000 (10%)	2	10	3	3 miles	1 mile
	Dioecious	--	--	10	2		
Certified ⁴	Monoecious	--	100	10	2	1 mile	--
	Dioecious	--	--	10	2		
	Hybrid	--	100	10	2		

Seed Standards: (Minimum Sample Size – 1 Pound)

Factor	Foundation (White tag)	Registered (Purple tag)	Certified (Blue tag)
Pure seed, minimum	98.00%	98.00%	98.00%
Other crops, maximum	0.10%	0.25%	0.50%
Inert matter, maximum	2.00%	2.00%	2.00%
Weed seed ⁵ , maximum	0.10%	0.10%	0.25%
Germination	85%	85%	85%

Special notes:

- A. Greenhouse production – For certification purposes, a greenhouse will be identified as a single "field."
- B. Growers may be required by Federal or local regulations to obtain THC test results from a recognized laboratory verifying that the THC content of their Industrial Hemp crop complies with applicable regulations. Growers may be required to submit these results to OSCS to complete seed certification

¹ Although traditionally a crop with a Dioecious plant type, many Monoecious varieties of hemp have been developed. Hemp is sexually polymorphic and often produces many different ratios of intersexual plant types that can increase rogueing requirements. Variety descriptions normally define these ratios.

² Maximum impurities allowed per 10,000 plants; applied as an average of six counts involving at least 10,000 plants each. Includes off-types or other varieties.

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 7 feet for Registered seed crops.

⁴ An OSU Seed Lab Orobanchae exam is required if Small Broomrape is found in a certification field inspection. Two samples are to be submitted in separate containers: one for the Orobanchae exam, the other for standard purity and viability testing.

⁵ None of the prohibited weeds listed in Section V in the OSCS Handbook, nor any Docks, Sheep Sorrel or St. Johnswort allowed in any class of seed.



**SAVE this form to your desktop or computer.
Enter required information and upon completion, return to nvrb@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 remember, you only need to submit ONE Part A application for multiple Part B applications)

Please email the completed application to:
nvrb@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 shall 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 delete 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) (9 digit code, if available)

Telephone _____ Fax _____ E-Mail _____

Sponsoring Institution (if other than Applicant) _____

Street Address _____

City _____ State _____ Zip _____ - _____
(2 letter abbreviation) (9 digit code, if available)

Breeder's Name (if other than Applicant) _____

Street Address _____

City _____ State _____ Zip _____ - _____
(2 letter abbreviation) (9 digit code, if available)

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.**

**Statement of Indemnification and Hold Harmless Agreement
for Applicants to Variety Review Boards**

The applicant, breeder and/or owner of the variety described in this application acknowledges, upon submission of an application, that the role of a Variety Review Board is to review the material as it is originally submitted or supplemented. It is understood that the information contained within the application is deemed to be confidential and only the summary information prepared and submitted by the applicant will be made available to the general public by the Association of Official Seed Certifying Agencies. A favorable review of the variety does not automatically confer eligibility for certification in any particular agency jurisdiction nor does it imply eligibility for final certification or final certification of any existing seed or seed that is subsequently produced. Such eligibility recognition and final seed certification decisions are solely the prerogative of individual certifying agencies. All conclusions of the review process are the opinions of the review boards solely as to the suitability of varieties for certification as determined by the information presented. Such conclusions are not to be construed as statements about the commercial worth or performance merit of any variety.

While a review board may provide review of the variety name for prior use or similarity with a previously released variety for that crop kind, or genetic ties to a previously released variety, it is ultimately the responsibility of the applicant to submit a variety name that is legal to use in relation to state and federal variety naming statutes.

The protocols published in Part B are the basis for review and acceptance. Prior actions may not establish precedent. *If the variety review board does not consider any of the protocols published in Part B of the application, it will not be deemed or construed to be a waiver of the published protocols, or in any way to affect the right of the variety review board to thereafter enforce each and every provision of these protocols.*

The person, company or organization submitting this application for review hereby agrees to indemnify, defend, and hold harmless all directors, officers, members, employees, agents, representatives, consultants, attorneys, and contractors of the Association of Official Seed Certifying Agencies, the members of the Variety Review Board, and the organizations and agencies that sponsor the members of the Variety Review Board from and/or against any and all claims, damages, costs, losses, demands, penalties, fines, liabilities and expenses, including reasonable attorneys' fees and costs made by any third party due to or arising out of the review of varieties for eligibility for certification. Such agreement to indemnify and hold harmless shall extend for a period to include the life of the variety being reviewed plus ten (10) years.

Variety Name _____ Experimental Designation _____

Variety Applicant _____

Variety Owner _____

**IT IS THE APPLICANT'S RESPONSIBILITY TO SUBMIT AN AMENDMENT APPLICATION FOR
NAME CHANGE WHEN THE PERMANENT VARIETY NAME HAS BEEN SELECTED.**

Signature of Representative or Agent of Owner**

Date

**An electronic signature or name of the agent (person) may accompany digitally-submitted applications, but in addition a hard copy of this page with an original personal signature must be sent to AOSCA before the application can be reviewed.

***If submitting multiple applications, please list each Variety Name/Experimental Designation below:**



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

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

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

Please email the completed applications, in Word format, to: nvrb@aosca.org

All information provided on this application shall 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 receipt of any applications for review. Upon completion of the review process, reviewers will be required to destroy or delete all applications in their possession. One copy of each application will be maintained on file in the AOSCA office for six years.

**APPLICATION FOR REVIEW OF
INDUSTRIAL HEMP (*CANNABIS SATIVA L. SUBSP. SATIVA*)
VARIETIES FOR CERTIFICATION**

Instructions:

- 1. This application consists of multiple sections. Applicants are to insert appropriate content after each section heading. Where necessary, attach well-constructed tables as a separate attachment in Microsoft Word format.**
- 2. The applicant must DESCRIBE and DOCUMENT, in this application, the characteristics of the variety or line which confer its distinctiveness.**
- 3. Insert your text into the appropriate cells or table rows. See sample form on the AOSCA web site for guidance.**

Applicant _____ Date _____

A. Variety Name _____ or temporary designation _____

USAGE: Please check market usage type.

_____ 1. OIL _____ 2. FIBER _____ OTHER

B. Origin and Breeding History of the Variety (insert after each category of information)

1. Provide the variety's pedigree, including public and private varieties and/or lines. Discuss breeding methods and selection criteria used: Include a brief description of any special or unique traits attributed to the variety. If claims are made regarding variety performance or harvested components, provide supporting documentation.
2. Provide details of subsequent stages of selection and multiplication.
3. State the location(s) and year(s) from which data used in this application were collected.

C. Objective Description of the Variety**INDUSTRIAL HEMP Variety Objective Description**

Complete sections 1-20 below or an equivalent variety description that includes the characteristics of this variety's plants and seeds that distinguish it from other varieties. For multiple choice options, place an "X" in the selected characteristic.

1. Taxonomic Classification: _____
2. Did you confirm that this variety has no more than 0.3% delta-9 tetrahydrocannabinol (THC) concentration level on a dry weight basis, as determined by using post-decarboxylation or other similarly reliable method (i.e., total THC, including THC acid)?
 - a. YES
 - b. NO. Application is denied.

_____ Applicant's initials to confirm that this variety has no more than 0.3% delta-9 tetrahydrocannabinol (THC) concentration level on a dry weight basis [in accordance with the most recent standard testing procedures set forth in the *Testing guidelines for Identifying Delta-9 Tetrahydrocannabinol (THC) Concentration in Hemp* for the USDA Hemp Program and the establishment of a Domestic Hemp Production Program by the Department of Agriculture, Agricultural Marketing Service.]

3. Sexual Type: Dioecious _____ Monoecious _____ Hybrid _____
4. Flowering Type: Male _____ Female _____ Male & Female _____
5. Time of Flowering: _____ days after seeding
6. Disparity of Female Flowering to Male Flowering: _____ days
7. Plant Height (including inflorescence):
 - a) Short _____ Medium _____ Tall _____
 - b) _____ to _____ cm.
8. Plant Branching: Few _____ Medium _____ Numerous _____

In Middle Third of Plant:

9. Stem Internode Length: Short _____ Medium _____ Long _____
10. Stem Color: Yellow _____ Green _____ Grey _____ Red _____
11. Leaf Color: Yellow _____ Green _____ Grey _____
12. Leaf Color Intensity: Weak _____ Medium _____ Strong _____
13. Leaf Size: Small _____ Medium _____ Large _____

The following information has been submitted with other varieties and is useful for varietal purity verification:

Inter-Sex Combination Within Female Plant Population (Sengbusch Scale):

	% Female Flowers	10 to 20	30 to 40	40 to 50	70 to 90	mainly
% Male Flowers	80 to 90	Type 1 = _____ %				
	60 to 70		Type 2 = _____ %			
	40 to 50			Type 3 = _____ %		
	10 to 30				Type 4 = _____ %	
	less than 10%					Type 5 = _____ %

14. Stem Grooves: _____
15. Leaf Anthocyanin Coloration: Absent _____ Weak _____ Medium _____ Strong _____
16. Male Flower Anthocyanin Coloration:
Absent _____ Weak _____ Medium _____ Strong _____
17. Hairs on Calyx: _____
18. Seed Size & Shape: _____

Other

19. Variants and Acceptable Levels:

20. Off-Types:

Provide a one-page description of the variety, to be published by AOSCA, based on the information provided in this application. This is the only information about this variety that will be published by AOSCA for use in conducting field inspections. Confidential business information need not be revealed. Points 1-7 below refer to the following table. Include the following points:

1. A brief statement of the origin and breeding history, including selection criteria and the identity of the developer. State the variety's predominant oil type.
2. State the area of probable adaptation and primary purpose for which the variety will be used. Report states and areas within states where the variety has been tested and proposed areas of recommendation and merchandising.
3. Provide information of value to field inspectors - identifying characteristics.
4. Provide a statement relative to its disease, insect, and herbicide resistance/reaction.
5. Name the party responsible for maintaining stock seed, procedures for maintaining seedstock and limitations specified by the breeder. State any licensing agreements that are associated with this variety that would affect certifying agency activities.
6. State when certified seed will first be offered for sale if this variety is recommended for certification by official certifying agencies. State whether certified seed production acreage can be published by AOSCA and certifying agencies.
7. State whether application will be submitted for protection under the U.S. Plant Variety Protection Act and whether such application would elect the option that seed sold by variety name must be certified (Title V Certification Option). State whether AOSCA may provide descriptive information to the PVP database.

Industrial Hemp

Insert Variety Name Here
Insert Experimental Designation Name(s) Here

Origin & Breeding History

1.

Areas of Adaptation

2.

3. Identifying characteristics – insert the descriptive term from the Objective Description (pages 2-3), except where indicated:

1. Taxonomic Classification: _____
2. THC Content: _____
3. Sexual Type: _____
4. Flowering Type: _____
5. Time of Flowering: _____
6. Disparity of Female Flowering to Male Flowering: _____
7. Plant Height: _____ to _____ cm.
8. Plant Branching: _____
9. Stem Internode Length: _____
10. Stem Color: _____
11. Leaf Color: _____
12. Leaf Color Intensity: _____
13. Leaf Size: _____
14. Stem Grooves: _____
15. Leaf Anthocyanin Coloration: _____
16. Male Flower Anthocyanin Coloration: _____
17. Hairs on Calyx: _____
18. Seed Size & Shape: _____
19. Variants and Acceptable Levels: _____
20. Off-Types: _____

Disease, Insect, or Herbicide Resistance

4.

Seed Stock Maintenance

5.

Seed First Offered for Sale

6.

U.S. Plant Variety Protection Act

7.



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

**ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES
GRASS VARIETY REVIEW BOARD
APPLICATION – PART B – 2015**

This application – Part B – must be submitted along with Part A
(please remember, you may submit ONE Part A application for multiple Part B applications)

Please email the completed application to:
nvrb@aosca.org

All information provided on this application shall be maintained in complete confidence by the Association 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 receiving any applications for review. Upon completion of the review process, reviewers will be required to destroy or delete all applications in their possession. One copy of each application will be maintained on file in the AOSCA office.

Applicant: Certified Grass Breeders, LLC (CGB)

Kind (Common): Tall fescue Genus species: Festuca arundinacea

Variety Name: Certgrass Experimental Designation: CGB200

Primary use: Forage Turf Other (specify) _____

IT IS THE APPLICANT’S RESPONSIBILITY TO SUBMIT AN AMENDMENT APPLICATION FOR NAME CHANGE WHEN THE PERMANENT VARIETY NAME HAS BEEN SELECTED.

I. Breeding History of Certgrass Tall Fescue

Sources of Germplasm Used to Breed "Certgrass" Tall Fescue

The germplasm used to develop "Certgrass" was selected 100% from the Certified Grass Breeder variety Bestgrass.

Breeding chronology

1998 – In the spring of 1998, sixty-four exceptionally dark green plants were selected out of the nursery used to produce breeder seed of the variety Bestgrass at CGB’s Research Station near Seedville, Oregon. These plants were transplanted to an isolated crossing block and allowed to inter-pollinate. Following seed ripening, the plants in the cross were harvested individually. In the fall of 1998 seed from the 59 plants in the cross that produced 50 or more grams of seed was used to plant half-sib rows at CGB’s Research Station. A portion of the seed was also used to plant progeny turf plots at CGB’s Research Station.

2000 – In the spring 49 dark green, net blotch resistant plants were selected from 15 of the 59 families that showed superior turf quality in the 1998 fall-sown progeny test. These plants were crossed in an isolated block and seed was harvested from each plant separately. In the fall of 2000 seed from the 40 plants with the highest seed yield was planted in progeny turf plats at CGB’s Seedville Research Station. A portion of the seed from these plants was also used to plant a replicated family nursery at the Research Station. This nursery designated Certgrass consisted of three replications of 30 plants of each family for a total of 3600 plants.

Table 1. Heading dates in Julian days of tall fescue varieties grown near Seedville, Oregon and a site southwest of Grasstown, Oregon in 2002. The Seedville test was grown on Concord silt loam with a pH of 5.0. At the Grasstown site the plants were grown on Woodburn silt loam with a pH of 5.6. Both trials consisted of three replications of each variety with 10 plants per replication. Trials were conducted using completely random designs. Plant spacings were 1.5 feet within rows and 3 feet between rows.

VARIETY	Seedville	Grasstown	Average
Tomahawk	143.5	143.6	143.6
Bestgrass	146.2	145.3	145.8
Hounddog 5	147.8	148.1	148.0
CERTGRASS	148.2	147.9	148.0
Olympic Gold	148.5	148.9	148.7
Watchdog	148.7	148.1	148.4
Rembrandt	149.7	149.5	149.6
Dynasty	149.9	147.8	148.8
Masterpiece	150.0	149.7	149.8
LSD @ 0.05	2.0	2.1	
C.V. - %	4.6	5.1	

Table 3. Turf characteristics of tall fescue cultivars grown in full sun near Seedville, Oregon
 Trial was sown in September 2001. Cutting height was 1.25 inches. The trial received 6 pounds
 of actual Nitrogen per year and was irrigated to prevent stress. Total entries in trial=40.

NAME	2002	2003	02-03	2002	2003	02-03
	Turf Quality 1-9; 9=Ideal Turf	Turf Quality 1-9; 9=Ideal Turf	Turf Quality 1-9; 9=Ideal Turf	Net Blotch 1-9; 9=No Disease	Net Blotch 1-9; 9=No Disease	Net Blotch 1-9; 9=No Disease
CERTGRASS	7.6	7.1	7.3	6.0	6.0	6.0
Bestgrass	7.1	6.8	6.9	6.0	5.3	5.7
Rembrandt	5.9	5.5	5.7	5.3	5.3	5.3
Masterpiece	5.6	5.6	5.6	4.0	3.7	3.8
Watchdog	5.6	5.4	5.5	4.3	4.3	4.3
Olympic Gold	5.5	5.6	5.6	5.0	5.3	5.2
Dynasty	5.2	5.1	5.2	4.3	3.3	3.8
Hounddog 5	5.1	5.2	5.2	4.3	4.3	4.3
Tomahawk	5.0	4.7	4.9	5.7	3.3	4.5
GRAND MEAN	5.6	5.2	5.4	4.7	4.2	4.5
Highest Rated Entry	7.6	7.1	7.3	6.7	6.3	6.3
Lowest Rated Entry	2.3	1.4	1.8	2.0	2.0	2.2
LSD @ 0.05	0.5	0.7	0.5	1.5	1.0	0.9
CV - %	9.0	6.5	7.0	8.6	9.7	9.1

Grass

1. **Variety name:** Certgrass Kind: Tall fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): CGB200
Date submitted: January 2014

2. Certgrass was developed by Certified Grass Breeders, LLC beginning with individual plant selections from a breeder seed nursery of the CGB variety Bestgrass in western Oregon. Bestgrass plants displaying particularly dark green color were initially transplanted to a crossing block. Subsequently, three cycles of seed selections for high seed yield, net blotch resistance, turf quality and dark green color were utilized to form a crossing block that produced the first breeder seed in 2001.
3. Certgrass was tested for turf use in two locations in western Oregon and in the NTEP trials in southern Illinois, central North Carolina and central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

4. Growth & Morphology	Heading Date – Julian Days		Plant Height (cm)		Flag Leaf Length (cm)	
	2002		2002		2002	
	Seedville, OR	Grasstown, OR	Seedville, OR	Traits	Seedville, OR	Grasstown, OR
Certgrass	148.2	147.9	80.9	60.4	10.8	8.9
Bestgrass	146.2	145.3	79.4	61.6	11.0	10.5
Houndog 5	147.8	148.1	97.6	77.7		
Rembrandt					18.7	19.5
LSD (.05)	2.0	2.1	5.6	3.6	1.9	2.3
C.V. - %	4.6	5.1	6.3	6.5	5.2	6.1

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: None have been observed or documented

5. Turf Use	Turf Quality (1-9)		Net Blotch (1-9)		Genetic Color (1-9)		Leaf texture (1-9)	
	Seedville, OR		Seedville, OR		2003		2003	
	2002	2002	2002	2003	A	B	A	B
Certgrass	7.6	7.6	6.0	6.0	8.7	7.3	8.7	7.3
Bestgrass	7.1	7.1	6.0	5.3	6.7	5.3	6.7	5.3
Masterpiece	5.6	5.6	4.0	3.7				
Dynasty			4.3	3.3				
Rembrandt					5.3	5.7	5.3	4.7
LSD (.05)	0.5	0.5	1.5	1.0	1.3	1.5	1.3	1.5
CV - %	6.5	9.0	8.6	9.7	13.9	16.2	13.9	14.7

•Scale used to report traits (if appropriate): 1-9 with 9 ideal quality or no disease or darkest green or finest texture

•Insert additional information for use by inspectors (if any): None

**If necessary, identify locations in line b) by the following key A: Carbondale, IL B: Raleigh, NC

6. Certified Grass Breeders, LLC will maintain seedstocks of Certgrass. Sufficient breeder seed was produced in 2001 and 2002 to last the anticipated life of the variety. Only the Foundation and Certified classes are recognized. Breeder seed plantings may produce Foundation seed for a maximum of two years, followed by a maximum of four years of Certified seed. Foundation seed plantings may produce Certified seed for five years. Exceptions may be granted by CBG. CGB associates will be licensed to produce and sell Certgrass.
7. Certified seed is anticipated to be available in the spring of 2011. PVP will be sought with the certification option that seed sold as Bestgrass variety must be a class of certified seed.



Oregon Seed Certification Service
Oregon State University, 31 Crop Science Bldg., Corvallis, Oregon 97331
T 541-737-4513 | F 541-737-2624 |

Guidelines for Certification of Industrial Hemp Seed in Oregon July 1, 2019

Definitions

- “Industrial hemp” means the plant *Cannabis sativa* L. and any part of such plant whether growing or not with a delta-9 THC concentration of not more than 0.3 percent on a dry weight basis including the following kinds:
 - Dioecious: Types with male and female flowers on separate plants
 - Monoecious: Types with male flowers and female flowers separated but on the same plants
 - Unisex hybrids: Types with sterile male flowers and fertile female flowers on the same plant
- “Approved variety” means any variety of industrial hemp approved through one of the Oregon Seed Certification Service (OSCS) variety approval processes.
- “Seed certification” means the process to ensure varietal purity and seed quality through review and retention of crop production records and a series of field and laboratory evaluations resulting in a final certification tag or certificate being issued for each container of seed.

Grower Eligibility

- Only growers licensed by the Oregon Department of Agriculture (ODA) to produce industrial hemp are eligible to produce certified hemp seed.
- Growers must provide proof of a current ODA hemp grower and hemp seed license with their application for field inspection.
- ODA administers and enforces all OARs and ORS rules regarding the production of hemp in Oregon.

Varietal Eligibility

- Only varieties approved by OSCS are eligible for production of certified classes of seed.
- To be eligible for certification, approved varieties must meet all the requirements of Federal Seed Act 201.68.
- Only varieties that are accepted by one of the following will be accepted for certification:
 - AOSCA national variety review board
 - An official seed certifying agency
 - OECD

Seed Source Eligibility

- Documentation of the planting stock of an approved variety must be submitted at the time of application. All original tags must be submitted with the application. Scans or copies will not be accepted.
- Breeder seed is the original source of all classes of certified seed, typically used to produce Foundation class seed.
- Foundation seed is produced from Breeder seed and can be used to produce Registered and Certified class seed.
- Registered seed is produced from Foundation class seed and is used to produce Certified class seed.
- Certified class seed is produced from any of the above classes and is generally the seed sold to the commercial market.

Field Eligibility

- Field eligibility requirements are intended to reduce or eliminate the potential for contamination from volunteer plants. Eligibility is determined by previous cropping history and the class of seed being produced.
- Foundation and Registered seed may not be produced on fields that produced industrial hemp in the previous five years and not for the previous three years for Certified class seed.
- Fields should be selected with isolation requirements in mind. Isolation from other fields of industrial hemp are three miles for the Foundation and Registered class and one mile for the Certified class seed fields. Growers should plan ahead to ensure no other hemp production is planned within the isolation areas.

Planting Requirements

- Fields should be planted to facilitate roguing and field inspections. Solid seeding is not allowed due to the difficulty in getting through the field and identifying plants that need to be removed.

Roguing

- Roguing to remove off-type plants should be completed prior to the arrival of the field inspector. The field inspector's job is to assess the purity of the seed field according to the variety description, not to identify problems for the producer to address later.
- Identification of fertile, pollen producing off-types during the field inspection is too late and will likely result in the failure of the inspection and the certified seed crop.
- Rogued plants must be removed from the field in a way that regrowth is not possible.

Field Inspection

- Seed producers must apply for field inspection with OPCS within 15 days of planting.
- Applications received after that time frame will be assessed late fees.
- Applications submitted after the optimal time for inspection will be rejected.
- Field must be inspected at a stage of growth when varietal purity is best determined. It is important that the seed producer communicates with OPCS to ensure that the crop is inspected at the optimal time.
- All classes of seed (Foundation, Registered, Certified) – two inspections are required

- The first inspection will be made after the formation of male flowers, preferably before pollen is shed, and before female flowers are receptive.
- Second inspections will be made when female flowers are receptive.

Seed Conditioning

- To be eligible for final certification, seed must be conditioned at an OSCS approved cleaning facility (warehouse) by the seed grower or by a contracted seed cleaner. A list of approved conditioners is maintained by OSCS. Seed conditioned by a non-approved conditioner will not be eligible for certification.
- It is possible that currently approved OSCS warehouses have limited to no experience with conditioning hemp seed so be sure to ask questions to protect your seed crop.

Lab Testing

- All eligible seed lots must be tested for purity and germination by the Oregon State University Seed Laboratory.
- Certification samples must be drawn, by OSCS samplers only, at the warehouse where it was cleaned. If the seed lot is moved prior to sampling, the seed lot becomes ineligible for certification.
- Only seed lots from plants that meet the ODA requirements for THC levels will be eligible for labelling.
- THC testing will be conducted by the ODA according to their rules. The results from these tests must be submitted to OSCS to confirm eligibility for certification.

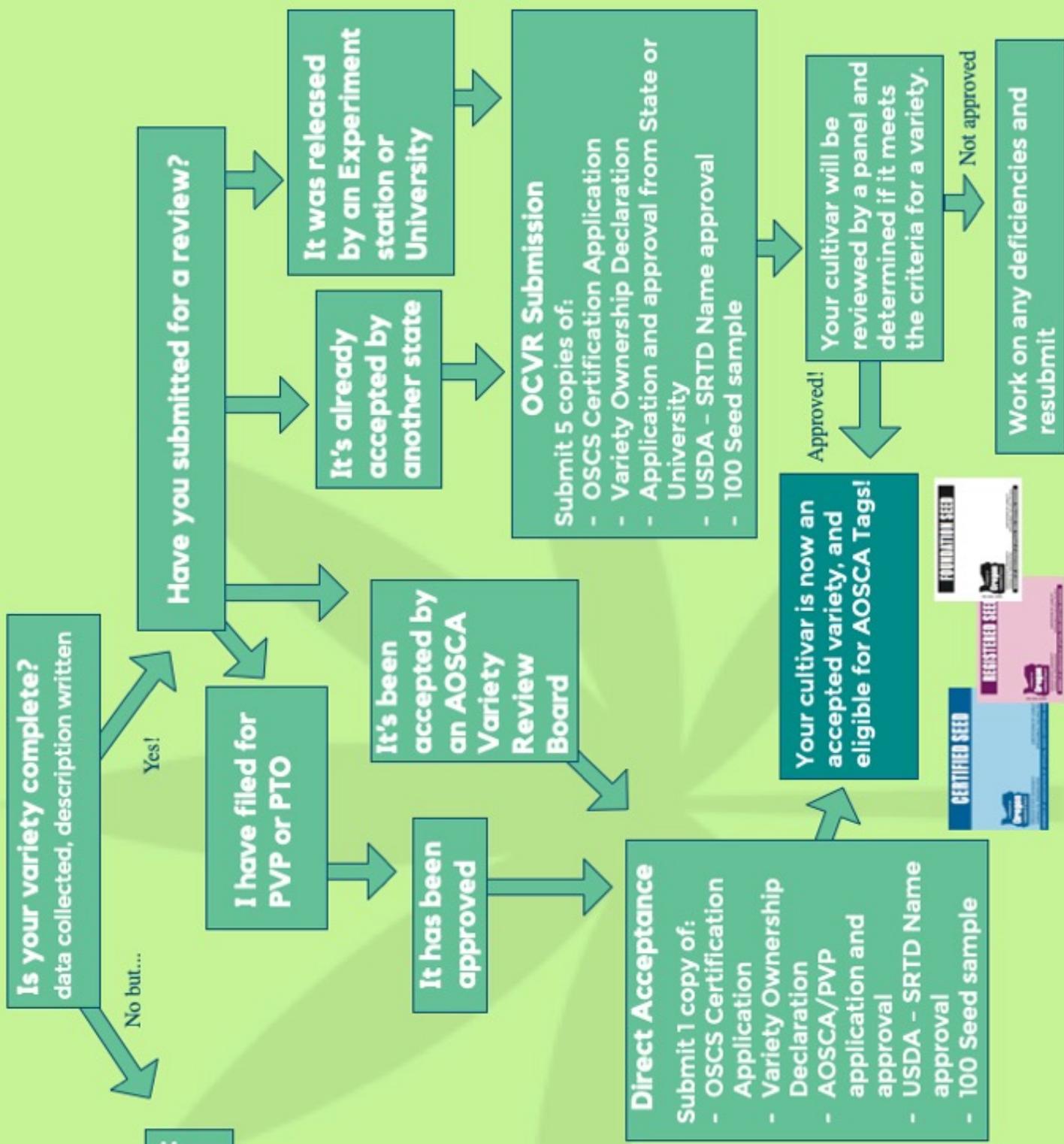
Final Certification

- Field inspected seed is not certified until a clean sample has been tested and the results have been determined to meet or exceed seed standards for the class of seed.
- Once final certification has been completed, Oregon certification tags will only be issued to the grower or seed contractor on the original application.
- Tags must be attached to the containers of seed or returned if not used.



Oregon State University

HOW A HEMP CULTIVAR BECOMES AN AOSCA CERTIFIED VARIETY



What Experimental means: You may still be working on an application, or waiting on a AOSCA Variety Review Board.

How it is different: Oregon has a specific white tag to indicate Experimental lines and the Experimental line has 3 years of eligibility. After that it must go through one of the routes to become a Certified variety.



Standards for Handling Experimental Lines of Industrial Hemp

(Adapted from AOSCA YellowBook)

The Experimental Line Program provides guidelines for seed increase using OSCP field and seed standards during the final stages of testing an experimental line so that classes of certified seed may be available once the cultivar has gone through Variety Review (PVP, AOSCA, OCVR). The program is to be used for seed production of an experimental line that has not yet been reviewed or accepted into certification. Seed produced using this program cannot be sold or represented as a class of certified seed, however, the tag will suffice as documentation for transfer to other states. Once the variety is accepted as a variety for certification, the experimental tag/transfer will be eligible for conversion to a Certified tag.

A) Definitions:

- 1) **Experimental Line:** A germplasm/cultivar that has not been released and/or recognized as eligible for certification and is being tested with the possibility of release as a variety at some point in the near future.
- 2) **Classes of Experimental Lines**
 - a) Exp-F: Eligible for Foundation seed upon variety acceptance.
 - b) Exp-R: Eligible for Registered seed upon variety acceptance.
 - c) Exp-C: Eligible for Certified seed upon variety acceptance.

B) The Experimental Line applicant should provide documentation that includes the following information prior to field inspection.

- 1) OSCP Experimental Line application for Hemp and Variety Ownership Declaration. These documents will provide required information such as:
 - a) The experimental line owner.
 - b) The experimental line identification or the proposed name of the experimental line.
 - c) A brief description with sufficient morphological, physiological, and/or other characteristics of the plants and seed to identify the experimental line during field and/or seed inspection. A statement of the generations through which the experimental line may be multiplied.
 - d) The generation of the stock seed used to plant the field must be documented. Acceptable generations are Breeder Seed, Experimental Line-F, or Experimental Line-R.

C) Standards

- 1) The requirements of sections B1a, B1b, B1c and B1d should be met.
- 2) All land requirements, isolation standards, field standards, and seed standards for the crop and corresponding class of certified seed should be met.
- 3) All inspections required for that crop should be performed.
- 4) The limited generation system should be maintained, with a maximum of three generations, those being the equivalent of Foundation (Experimental Line-F), Registered (Experimental Line-R), and Certified (Experimental Line-C) classes.
- 5) Seed meeting documentation, field and seed standards is eligible for seed stock tags or documents that identify it as eligible under the Experimental Line Program.
- 6) Production through the experimental line program is limited to 2 years of production. This means two years of greenhouse production or two years of field production. A third year may be granted of field production. After this time, the variety must go through a variety

approval process, or the line can be dropped. If the line is dropped, no Certification tags will be issued for the previous production, and it will be considered uncertified seed.

D) Labels

- 1) Tags, labels, or official documents such as Transfer Certificates provided by an AOSCA member agency for seed produced using the Experimental Line Program should be clearly marked with the words “Experimental Line” and “Pending Certification”.
- 2) “Foundation”, “Registered”, or “Certified” shall not appear on tags, labels, or official documents for seed produced using the Experimental Line program with the exception of wording required in section D1.
- 3) It is recommended that agencies use a buff-colored tags for seed produced under this program.
- 4) An example tag for Foundation-eligible XYZ hemp grown in Oregon would state:
EXPERIMENTAL LINE – PENDING CERTIFICATION
Class: Exp-C
KIND: Hemp
EXPERIMENTAL LINE IDENTIFICATION: XYZ
LOT NUMBER: B42-19-1234EF
ORIGIN/CERTIFICATION AGENCY: Oregon



E) Completing Certification of seed produced using the Experimental Line Program.

- 1) In the event that the experimental line meets AOSCA variety eligibility requirements and is accepted for certification, Experimental Line seed stock tags or documents may be replaced by AOSCA tags or documents for the appropriate class of certified seed.

Industrial Hemp Experimental Line Application

Oregon Seed Certification Service

31 Crop Science Bldg., OSU
Corvallis, OR 97331-3003

ph 541-737-4513
fax 541-737-2624

seedcert.oregonstate.edu
osu-cert@oregonstate.edu

Date submitted

Proposed name (if known)

Crop common name

Experimental designation(s)

Crop genus and species

Indicate the corresponding certification classes recognized for this cultivar: Foundation Registered Certified

For Hybrids, please fill out one form for each parent, and hybrid.

The number of harvests allowed for each recognized class is limited by OSCS to three consecutive production years. A fourth year of eligibility may be granted by OSCS only upon approval of the applicant's written request for special consideration of an additional year. At the conclusion of this evaluation period, the cultivar must be accepted for AOSCA certification or dropped from the OSCS Experimental Line Program.

Describe the cultivar, including parentage:

Is this cultivar a Parent Line Hybrid Conventional production

Describe the breeding method:

Indicate the proposed propagation method

Seed propagated Clonal propagation

Select the Sexual Type

Dioecious Monoecious Hybrid

List at least one variety with a similar flowering date, including the number of days earlier or later relative to this cultivar:

- 1.
- 2.
- 3.

List other characteristics distinguishing this cultivar from the varieties listed above:

- 1.
- 2.
- 3.

List the primary use intended for this cultivar:

Information to be completed and signed by the applicant

Person / Company

Street / PO

City

State / Province

Postal Code

Phone

Fax

E-mail

Representative 1

Signature 2

1 Name and title within the company of the person providing this information if a company name is listed as the Applicant, Breeder, Owner, Licensee or Contractor of this experimental line.

2 A signature is required to signify agreement with the statements listed on the submitted experimental line application.

Variety Ownership Declaration

Contractor Authorization
 Release of OSCS Production Data

Oregon Seed Certification Service

31 Crop Science Bldg., OSU
Corvallis, OR 97331-3003

ph 541-737-4513
fax 541-737-2624

www.oscs.orst.edu
osu-cert@oscs.orst.edu

Date submitted

Variety name

Crop kind

Information to be completed and signed by the variety applicant

Person / Company	Phone
Street / PO	Fax
City	E-mail
State / Province	Representative ¹
Postal Code	Signature ²

Information to be completed and signed by the breeder if not the same as the applicant listed above

Person / Company	Phone
Street / PO	Fax
City	E-mail
State / Province	Representative ¹
Postal Code	Signature ²

Contractor Authorization and Release of OSCS Production Data

List the companies, or individuals, authorized by the variety owner ⁵ to contract certified production of this variety in Oregon, beginning with the primary licensee if applicable. Only those contractors or licensees authorized by the variety owner will be listed by OSCS for certification in Oregon. The option to authorize release of OSCS production data, as designated below, may be granted by the licensee or contractor if signed by their representative.

Licensee	Representative ¹
OSCS data may be released to: (no reply)	Signature ³
Exclusions ⁴	

Contractor	Representative ¹
OSCS data may be released to: (no reply)	Signature ³
Exclusions ⁴	

Contractor	Representative ¹
OSCS data may be released to: (no reply)	Signature ³
Exclusions ⁴	

Information to be completed and signed by the variety owners ⁵ if different than the variety applicant

Person / Company	Phone
Street / PO	Fax
City	E-mail
State / Province	Representative ¹
Postal Code	Signature ⁵

1 Name and title within the company of the person providing this information if a company name is listed as the Applicant, Breeder, Owner, Licensee or Contractor of this variety.

2 A signature is required to signify agreement with the statements listed on the submitted variety application.

3 This authorization for the release of OSCS data is valid only if signed by a representative for the licensee or contractor.

4 List any exclusions related to the release of OSCS production data (e.g., withhold grower name, field number, or production generation).

5 The owner is the person or company that holds all rights, title and interest in this variety. Signature required for licensee and contractor designations.



Oregon State
University

Oregon Seed Certification Service

031 Crop Science Bldg., Corvallis, Oregon 97331

T 541-737-4513 | F 541-737-2624 | seedcertrequests@oregonstate.edu

Hemp Field Application

Date Applied

Grower

ODA Grower #

Field number

Field or Greenhouse production Greenhouse

If field, acres

Hybrid, parent line increase or conventional production Hybrid

Harvest Generation Foundation

Variety

Date planted

Estimated date of female flowers receptive

Source generation (If hybrid, list Female first) Breeder Breeder

Source lot (If hybrid, list Female first)

Field county

Field location

Township Range Section

Oregon Quadrant SE

Previous 5 year's crop history (field Production Only

Year

Crop

2018

For Greenhouse production are best practices used to clean/sanitize between varieties?

Yes No

Weight of Seed planted: or Number of Clones:

Special notes: Call before inspecting, decontamination protocols etc.

Hemp Seed Advisory Committee Report November 15, 2019

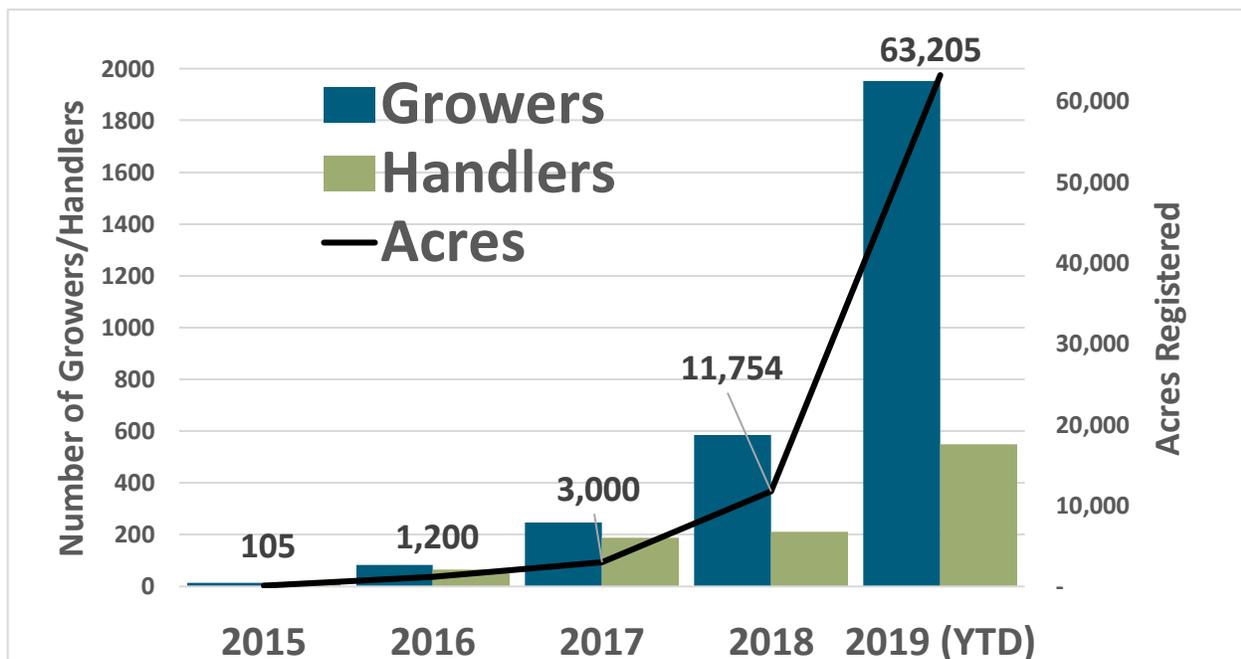


Seed Regulatory Program

- <https://oda.direct/HempSeed> - webpage with hemp seed-specific information
- ODA Agricultural Hemp Seed Requirements Handout – see attached
- Current Challenges: outreach related to labeling and recordkeeping requirements; lack of disease incidence knowledge; potential disease and weed seed introductions through hemp seed trade.
- Hemp seed exports – have successfully facilitated exports to Australia, Ecuador, Peru, and Jamaica; requests for Puerto Rico, Canada

Hemp Program

- 849 registered hemp seed producers





OREGON CANNABIS

Agricultural Hemp Seed Requirements



Oregon
Department
of Agriculture

Seed Regulatory Program
(503) 986-4620

Agricultural hemp seed is:

- Sold or intended to be sold for planting;
- Unprocessed or partially processed; and
- Capable of germination.

How do I know the seed is hemp and not marijuana?

- Agricultural hemp seed was harvested from hemp plants that have been tested pre-harvest and found to contain no more than 0.3% THC.

Involvement with Seed & Sales	Registration Requirements				
	Hemp Grower	Hemp Handler	Hemp Seed Producer	Retail Seed Dealer	Wholesale Seed Dealer
Cleaning or conditioning of agricultural hemp seed	✓	OR	✓	AND	✓
Selling or offering for sale only agricultural hemp seed you produce	✓	OR	✓	AND	✓
Seed broker who does not take possession of agricultural hemp seed					✓
Seed reseller who takes possession of agricultural hemp seed <i>Viable hemp seed is legally defined as hemp, therefore a registration is required.</i>		✓			
A. Selling or offering for sale agricultural hemp seed produced by others to growers for planting			AND	✓	
B. Selling or offering for sale agricultural hemp seed produced by others to retailers, distributors, brokers, or other wholesalers for resale				OR	✓

The state of Oregon does not recognize seed licenses issued by other states. If you sell in Oregon, you must meet the above requirements. More information on hemp: <https://oda.direct/hemp> and seed licenses: <https://oda.direct/SeedLicenses>

How do I find information about certified agricultural hemp seed varieties?

- Certified agricultural hemp seed does not guarantee any specific THC level in hemp plants grown from that seed. The Oregon State University Seed Certification Service manages seed certification in Oregon. Visit: <https://oda.fyi/OSUSeedCert> or Email: seedcert@oregonstate.edu

I need a purity and germination test for my agricultural hemp seed, who do I contact?

- The Oregon State University Seed Lab offers these services. Visit: <https://oda.fyi/OSUSeedLab> or Email: seedlab@oregonstate.edu — There may also be private labs offering purity and germination tests.

Labeling and Record Keeping

Do I have to label my agricultural hemp seed?

- Yes. Hemp seed is considered an agricultural seed as defined in ORS 633.511 to 633.750 and therefore the labeling requirements outlined in the Federal Seed Act and Oregon Seed Laws must be followed. For more information: <https://oda.direct/SeedLabeling>

What are the record keeping requirements for producing, processing, cleaning/conditioning, or selling agricultural hemp seed?

- The Oregon Hemp Program and ORS 633.680 requires certain records to be maintained. The Oregon Seed Laws and the Federal Seed Act also have record keeping requirements. These requirements may not overlap—check with both programs to ensure that the correct information is maintained.
 - Hemp record keeping requirements: <https://oda.direct/hemp>
 - Oregon and Federal Seed Act record keeping requirements: <https://oda.direct/SeedRecords>

Shipping and Export

I would like to ship my agricultural hemp seed to another state. How do I do this?*

Check with the state department of agriculture (or other entity that regulates import of agricultural hemp seed) in the state where you want to ship seed to determine their requirements.

A visual phytosanitary inspection (sometimes called a Pest & Disease or P&D inspection) or a phytosanitary certificate is often required. Depending on a state's requirements, other inspections or disease testing may be required.

- To apply for a state phytosanitary certificate, an account is needed with the Phytosanitary Certificate Issuance and Tracking (PCIT) System. For more information: <https://pcit.aphis.usda.gov/pcit/>
- The Oregon Department of Agriculture (ODA) Plant Health Program can provide P&D inspections for agricultural hemp seed lots and other disease testing. For more information: <https://oda.direct/SeedTesting>

** Oregon statutes and rules are silent concerning the movement of hemp out of the state. Inspections or certificates do not constitute an endorsement by the Oregon Department of Agriculture of the movement of hemp or hemp products out of the state of Oregon.*

I would like to ship my agricultural hemp seed to another country. How do I do this?

ODA can assist with processes related to exporting agricultural hemp seed. Contact the ODA Plant Health Program at: (503) 986-4620.

A visual phytosanitary inspection (sometimes called a Pest & Disease or P&D inspection) and a phytosanitary certificate are required for all seed exports. Additional inspections or disease testing may also be required.

- You may need an import permit – this should be provided by the importer and will contain the phytosanitary requirements of the importing country.
- To apply for a federal phytosanitary certificate, an account is needed for the Phytosanitary Certificate Issuance and Tracking (PCIT) System: <https://pcit.aphis.usda.gov/pcit/>
- The ODA Plant Health Program can provide P&D inspections for agricultural hemp seed lots and other disease testing. For more information: <https://oda.direct/SeedTesting>

For questions regarding hemp registration:

ODA Hemp Program: <https://oda.direct/hemp> | hemp@oda.state.or.us

For questions regarding seed licenses, pest & disease inspections, and disease testing:

ODA Seed Program: <https://oda.direct/SeedLicenses> | ODA Seed Testing: <https://oda.direct/SeedTesting>

For questions regarding seed certification and purity & germination testing:

OSU Seed Certification Service: seedcert@oregonstate.edu | OSU Seed Lab: seedlab@oregonstate.edu



OREGON CANNABIS

Hemp FAQs

Q1: Is there a limit on how much hemp you can grow?

A: No. There are no minimum or maximums on the number of acres or plants. (Please see Q9 for homegrown option.)

Q2: What is the difference between a grower and a handler?

A: Growers can grow and harvest hemp. Handlers can buy hemp from growers to process into commodities or products.

Q3: What is the difference between hemp and marijuana?

A: Both are cannabis. Hemp is cannabis that contains no more than 0.3% THC.

Q4: How long does it take to process a registration?

A: Typically, the registration process takes between 2 to 4 weeks. Submit a complete and accurate application to speed up the process. Many people forget maps or provide incomplete information, which requires follow up before a registration can be issued.

Q5: Can I just have an agricultural hemp seed producer registration?

A: No. You must have a grower or handler registration in addition to the agricultural hemp seed producer registration.

Q6: How long is a registration good for?

A: All registrations are valid from Jan 1 - Dec 31 of the calendar year. It is illegal for you to grow or handle hemp without a registration.

Q7: How much does a registration cost?

A: Grower \$1300. Handler \$1300. Seed \$120 annually.

Q8: Can a grower or handler move hemp across state lines?

A: The Oregon Department of Agriculture only administrates Oregon law. Check with your lawyer and any states you will pass through, as well as your destination state.

Q9: Can I grow hemp for personal use without a registration?

A: You may grow up to 4 cannabis plants per household. This includes marijuana or hemp, or any combination, as long as it is 4 or fewer plants total. You must be 21 years of age or older.



Oregon
Department
of Agriculture

Hemp Program
<https://oda.direct/Hemp>
(503) 986-4644
Updated 5/2019

RESOURCES

Rules and statutes

<https://oda.direct/hemp>

Email list

<https://oda.fyi/subscribe>



Andrew Altishin

Oregon Seed Certification Service

Oregon State University, 31 Crop Science Bldg., Corvallis, Oregon 97331

T 541-737-4513 | F 541-737-2624 | andrew.altishin@oregonstate.edu

2019 Year in Review

Total Acres Certified of all Crops – 229,626

Total Acres of Grass Crops Certified – 192,751

Total Acres of Small Grains Certified – 24,130

Total Acres of Legumes Certified – 5,813

Total Acres of Misc. Other Crops Certified – 4,076

Total Acres of Potatoes Certified – 2,683

Total Acres of PVG Certified – 173

Total Acres of Hemp - 0

New Hires

- Mason McKinney, Office Specialist
- Amanda Alps, Seed Certification Aide (Sampler, Jefferson Co.)
- Emilly Guzman, Seed Certification Aide (Sampler, Linn Co.)
- Open position, Seed Certification Aide (Sampler, Union Co.)

OSCS Staffing

- 3 Administrative staff
- 2 Information Technology Staff
- 7 Seed Certification Specialists
- 8 Part-time/seasonal Seed Certification Specialists
- 9 Seed Certification Samplers
- 1 Manager and Seed Certification Specialist

Programs Administered

- Oregon Certified Seed
 - o Part of the Association of Official Seed Certifying Agencies (AOSCA)
- OECD Certified Seed
 - o Administered in Oregon for USDA - AMS

OSU Seed Services Update
November 15, 2019

Seed Services

- Two years ago the Tall Fescue Commission had requested some breeder K31 seed from Kentucky Foundation Seed (KFS). KFS sent 2 lbs. of endophyte K31 and 14 lbs. of endophyte-free K31 seed and it is being stored at the Hyslop cold room. It is possible that Certified K31 will be produced using these seed lots.
- The Ryegrass Commission asked a group of local folks to see if they can develop a small amount of breeder Gulf seed. The first year of a two-year project has finished. We hope to have a small amount of Gulf breeder seed by the fall of 2020.
- BDI research is continuing. BDI is a PCR test that may determine annual contamination within perennial ryegrass. An ISTA sub-committee is working on this method, trying to see if it will work on a majority of perennial ryegrass varieties. It is hoped results of the research will be finished by May of 2020.
- We are working with OSU Computer Science and Engineering students to develop a classification machine that uses computer vision of seed to try to classify seed into two fractions. This system, if perfected, may be able to help seed analysts during the busy harvest season get through more samples/hour.

OSU Update
8 November 2019

The following are highlights of activities over the past few months in Crop and Soil Science (CSS) and the College of Agricultural Sciences (CAS) as they affect clientele groups affiliated with CSS.

Crop and Soil Science

Personnel

Professor of Practice – Sherman/Wasco. Hired Jacob Powell as extension agent for Sherman and Wasco counties effective September 30, 2019. Jacob is from Wasco country and had most recently been serving as the Watershed Coordinator for the Sherman County Soil and Water Conservation District.

IPM Scientist - Madras (COAREC). Dr. John Spring started work on November 1, 2019.

Agronomist – Klamath Falls (KBREC). Offer has been made to finalist – an announcement will be made later.

Department Head – Corvallis. Interviews of the finalists have been completed.

Administrative Assistant – Corvallis. Interviews of the finalists have been completed.

Programs

Ecampus – In June, CSS launched the first online degree program in the nation in agronomy and soil science. We now have 19 majors enrolled in CSS through Ecampus in the first three months of operation.

College of Agricultural Sciences

The search for a new Executive Associate Dean has begun. The funding situation for the college has improved thanks to favorable legislative outcomes in the recently ended session. Some of the funds will be directed to new positions and the rest will be allocated to legislative mandates and programmatic support.

Oregon State University

The search for the next president of OSU is underway.

Industrial Hemp Adv. Committee—2019

Seed Lab Update

Work at the OSU Seed Lab is progressing as expected for this time of year. The sample flow was lower than normal in July and August so we are 6-8% below the 5-yr average on total samples received since July 1 (about 6500 total samples to date). Of course, most of those samples are grass seed samples.

Since January we have received 50 commercial Industrial Hemp samples.

In addition to the samples we have received, we are also investigating seed quality from a laboratory perspective. We have completed roughly 100 germination tests, 20 purity tests, 250 PCR samples for sex markers, and 10 TZ tests.

Research initiatives:

- Harvest Quality. We have looked at harvest timing, moisture content and fruit placement on the plant, and their effect on seed quality. There will be a paper published on these findings within the next six months.
- Newly harvested hemp seed has some dormancy. We have looked at the duration of dormancy and dormancy breaking techniques. We are currently using pre-chill to help break dormancy. The Lab is also looking at optimum temperatures for germination tests. We are planning a referee across multiple labs next summer and, if necessary, a Rule proposal for next fall.
- We have nearly completed validation of several markers for testing feminization. Our intent is to offer this testing by the end of the year.

The OSU Seed Lab will receive Liquid Chromatography / Mass Spectrometry equipment in the near future. Once the equipment is on site and installed, there will be training by the equipment / technology providers. Following the training we will begin validation studies on oil profile work.

We do not currently have any pollen flow studies scheduled, but the Lab is available for testing in support of such research.

OSU Seed Lab an AOSA (Assn. of Official Seed Analysts) laboratory and is accredited by the International Seed Testing Assn. (ISTA) to test Industrial Hemp seed to meet export needs.

The OSU Seed Lab is always available for tours. It is a good opportunity to see what the lab is up to as well as to become familiar with testing that is available for commercial and research needs. To schedule tours contact us at seedlab@oregonstate.edu or by calling 541-737-4464.

Hemp Advisory Committee Meeting – Subcommittee AOSCA VRB Application
November 26th, 2019
Zoom meeting

Present: Brooke Getty, Clint Shock, Austin Fricker, Rachel Hankins

This meeting went through the AOSCA Variety Review Board application and made some recommended changes. Most notably was adding an Essential oil check box under type, and recommending that the Sengbusch Scale be adjusted to include feminized seed, or made optional if that production method was being utilized. Due to the time constraints, these changes were sent to AOSCA several days after the committee met.

Hemp Advisory Committee Meeting – Subcommittee Feminized Seed
December 19th, 2019
Zoom meeting

Present: Peter DeLong, Justin Jones, Paul Radloff, Paul Bracher, Seth Crawford, Andrew Altishin, Rachel Hankins,

This meeting was very productive, and developed the Essential Oil Standards that was presented to the full Hemp Advisory Committee to be voted on during the January 17th meeting. During this meeting, there was also a lengthy discussion about developing a Standard Operating Procedure for sanitizing greenhouses, recommendation that would then be posted on the website for producers to use. Rachel will gather examples from several warehouses and put something together to be reviewed at the 2020 Hemp Advisory Committee. During this discussion the topic of Tyvek suits for the inspectors was brought up. It was a consensus that the individual greenhouses should provide these, that way the suit is up to their standards.



Hemp Advisory Meeting
The Tangent Inn
32994 Hwy 99E, Tangent, OR 97389
November 15, 2019

12:00 Lunch

12:30 Call meeting to order - Chair – Crystal Fricker

1. Introductions
2. Review proposed Essential Oil Standards from Sub-Committee
3. Make motion to change current Industrial Hemp Standards to Industrial Hemp, Food/Fiber/Grain
4. Discuss Growers/Variety list
5. Review AOSCA proposals for Transfer of Seedlings and Clonal Certification
6. Any new studies/items of interest/new business
7. Choose time for the next meeting (next November)

Hemp Advisory Committee Meeting II
January 17th, 2020
Tangent Inn, Tangent Oregon

1. Introductions: Andrew Altishin, Dan Curry, Tami Brown, Alex Albion, Farhad Shafa, Jodi Keeling, Brooke Getty, Elizabeth Savory, Carrie Lewis, Paul Radloff, Andy Hulting, Dave Stimpson, Justin Jones, Mike Leago, Dr. Wei, Crystal Fricker, Kristin Rifai, Rachel Hankins
Remote: Justin Tombe, Paul Bracher, Matt Cyrus, Peter DeLong, Clint Shock
2. Review proposed Essential Oil standards
 - a. Isolation: A concern was brought up about the 10 mile isolation. That is roughly 314 sq miles that we would have to inspect. The AOSCA standards are just under 3 miles. There was discussion on what is reasonable, but still would help the blue tag be meaningful. The consensus of the group was that the feminization rate would be more helpful to the consumer, and prove the isolation was adequate. Motion to increase the feminization rate from 99.0% to 99.9% moved and seconded, 5 to 2, 2 abstain, motion passes.
Motion to change the isolation to 4 miles moved and seconded, 7 in favor, 2 abstain, motion passes.
 - b. Motion to accept the Essential Oil as presented with the changes above, moved and seconded, 8 to 1, motion passes.
3. Current Industrial Hemp standards and other crops maximum
 - a. Motion to correct the other crop maximum to 0.01%, 0.25% and 0.08% to meet AOSCA minimums for Foundation, Registered and Certified respectively. Moved and seconded, all in favor, motion passes.
 - b. Motion to change the title of the standard from Industrial Hemp to Food Fiber Grain Industrial Hemp. Moved and seconded, all in favor, motion passes.
4. Discuss Grower/Variety list
 - a. Most people agree it would be helpful for the industry. Motion was made to create a public list to include companies name, email and phone number. Moved and seconded, all in favor, motion passes.
5. Review AOSCA proposal for transfer of seedlings and clonal certification.
6. Any new studies/ items of interest/ new business.
 - a. Kristin gave an update on the GHIC - see attached.

Meeting adjourned.



Oregon Seed Certification Service
<http://seedcert.oregonstate.edu>

CERTIFICATION STANDARDS
ESSENTIAL OIL INDUSTRIAL HEMP
 (*Cannabis sativa* L.)
 Approved February 16, 2016

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 certified Essential Oil Industrial Hemp standards.

Varieties Certified: Only varieties approved for production by Federal or local regulatory authorities may be eligible for seed certification.

Field History: To produce Foundation or Registered seed, land must not have been grown or seeded to any *Cannabis sp.* during the previous three years. To produce Certified seed, land must not have grown or been seeded to any *Cannabis sp.* in the previous 2 years. This may be reduced to one year if the same variety and certified. Hemp must be planted in distinct rows. OSCS must approve exceptions prior to planting. To produce Certified Seed in greenhouse production, the greenhouse must be free of all plants a minimum of six weeks prior, unless the previous variety was the same variety and Certified. Sanitation may be considered in lieu of the six weeks, and a plan must be submitted to and approved by OSCS prior to production.

Greenhouse and Field Inspections: Three inspections may be required depending on the variety type and production generation; at least two inspections are required prior to seed harvest. Crop inspection of pollen donor and pollen receptors must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining variety purity may be cause for declining certified status. The first inspection for pollen donor and pollen receptor types occurs just before or at early flowering, the second must occur at mid-bloom with active pollen shed, normally within 3 weeks after first inspection; the third inspection, if necessary, occurs when off-type female flowers can be identified. Applications shall be made within 7 days of placement of seedlings in the greenhouse or field. For fields directly seeded, applications shall be made within 14 days of planting.

Field Standards:

Class of Seed Produced	Variety Type	Maximum Number of Dioecious Male Plants Shedding Pollen ¹	Off Types	Number of Inspections	Isolation Distance Required		
					From different varieties of hemp or contaminating pollen source that has pollen present, or non-certified Hemp	Fields planted with Certified seed of the same variety	From same variety and meets certification standards
Foundation ²	Conventional	1	0	3	52,800 ft	15,840 ft	16
	Clonal	--	0	3			
Registered ²	Convention	2	10	3	52,800 ft	15,840 ft	3 ft
	Clonal	--	10	2			
Certified ²	Conventional	100	10	2	52,800 ft	15,840 ft	3 ft
	Clonal	--	10	2			
	Hybrid	100	10	2	52,800 ft	15,840 ft	3 ft
	Feminized	0	20	2			

¹ 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 7 feet for Registered seed crops.

² An OSU Seed Lab Orobanche exam is required if Small Broomrape is found in a certification field inspection. Two samples are to be submitted in separate containers: one for the Orobanche exam, the other for standard purity and viability testing.

Greenhouse Standards: Each greenhouse facility is limited to one pollen source

Class of Seed Produced	Variety Type	Maximum Number of Dioecious Male Plants Shedding Pollen ¹	Off Types	Number of Inspections	Isolation Distance Required*		
					From different varieties of hemp or contaminating pollen source that has pollen present, or non-certified Hemp	Fields planted with Certified seed of the same variety	From same variety and meets certification standards
Foundation ²	Conventional	1	0	3	52,800 ft	15,840 ft	16 ft
	Clonal	--	0	3			
Registered ²	Conventional	2	1	3	52,800 ft	15,840 ft	3 ft
	Clonal	--	1	2			
Certified ²	Conventional	100	2	2	52,800 ft	15,840 ft	3 ft
	Clonal	--	2	2			
	Hybrid	100	2	2			
	Feminized	0	2	2			

*Isolation distances may be waived if pollen exclusion methods are documented and submitted prior to inspection

Seed Standards: (Minimum Sample Size – 1 Pound)

Factor	Foundation	Registered	Certified (Blue tag)
Pure seed, minimum	98.00%	98.00%	98.00%
Other crops, maximum	0.01%	0.03%	0.08%
Inert matter, maximum ³	2.00%	2.00%	2.00%
Weed seed ⁴ , maximum	0.10%	0.10%	0.10%
Other varieties (maximum)	0.005%	0.01%	0.05%
Other kinds ⁵ (Maximum)	0.01%	0.03%	0.07%
Germination	85.00%	85.00%	85.00%
Feminized Seed ⁶	--	--	99%

Special notes:

- A. Greenhouse production – For certification purposes, a greenhouse will be identified as a single “field.” This should match the warehouse information given to ODA.
- B. Growers will be required by Federal or local regulations to obtain THC test results from a recognized laboratory verifying that the THC content of their Industrial Hemp crop complies with applicable regulations. Growers shall be required to submit these results to OSCS to complete seed certification, and the results will be verified with ODA.

³ Inert Matter shall not include more than 0.5% of material other than seed fragments of the variety under consideration

⁴ None of the prohibited weeds listed in Section V in the OSCS Handbook, nor any Docks, Sheep Sorrel or St. Johnswort allowed in any class of seed.

⁵ Other kinds shall not exceed 2 per lb. (454 grams) for Foundation; 6 for Registered; 10 for Certified

⁶ Determined by Variety Verification Trial or approved molecular testing.



Oregon Seed Certification Service
<http://seedcert.oregonstate.edu>

CERTIFICATION STANDARDS

INDUSTRIAL HEMP

Food Fiber Grain Industrial Hemp

(*Cannabis sativa* L.)

Approved February 16, 2016

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 certified Industrial Hemp standards.

Varieties Certified: Only varieties approved for production by Federal or local regulatory authorities may be eligible for seed certification. Varieties may represent the following types¹: Monoecious, with male and female flowers on the same plant; Dioecious, with male and female flowers on separate plants; and (unisexual female) Hybrids, with sterile male and fertile female flowers on the same plant.

Field History: To produce Foundation and Registered seed, land must not have grown or been seeded to any *Cannabis* sp., Hops or Tobacco during the previous five years, for Certified seed three years, unless the previous crop was of the same variety and certified. Hemp must be planted in distinct rows. OSCS must approve exceptions prior to planting.

Field Inspections: Three inspections may be required depending on the variety type and production generation; at least two inspections are required prior to seed harvest. The first inspection occurs before female (pistillate) flowers of the crop are receptive and after the formation of male (staminate) flowers, preferably before pollen is shed; the second inspection occurs during the receptive stage of female plants, normally within 3 weeks after first inspection; the third inspection, if necessary, occurs when off-type female flowers can be identified. The field application must be submitted within 60 days of planting, and a seed crop application must be submitted by April 15 of each year in which seed is produced.

Field Standards:

Class of Seed Produced	Variety Type	Maximum Number of "Too Male" Monoecious Plants ²	Maximum Number of Dioecious Male Plants Shedding Pollen ^{2,3}	Maximum Number of Other Impurities ²	Number of Inspections	Isolation Distance Required	
						From Different Varieties or Types	From Lower Certified Class of Same Variety
Foundation ⁴	Monoecious	500	1	3	3	3 miles	2 miles
	Dioecious	--	--	3	3		
Registered ⁴	Monoecious	1000 (10%)	2	10	3	3 miles	1 mile
	Dioecious	--	--	10	2		
Certified ⁴	Monoecious	--	100	10	2	1 mile	--
	Dioecious	--	--	10	2		
	Hybrid	--	100	10	2		

Seed Standards: (Minimum Sample Size – 1 Pound)

Factor	Foundation (White tag)	Registered (Purple tag)	Certified (Blue tag)
Pure seed, minimum	98.00%	98.00%	98.00%
Other crops, maximum	0.10%	0.25%	0.50%
Inert matter, maximum	2.00%	2.00%	2.00%
Weed seed ⁵ , maximum	0.10%	0.10%	0.25%
Germination	85%	85%	85%

Special notes:

A. Greenhouse production – For certification purposes, a greenhouse will be identified as a single "field."

B. Growers may be required by Federal or local regulations to obtain THC test results from a recognized laboratory verifying that the THC content of their Industrial Hemp crop complies with applicable regulations. Growers may be required to submit these results to OSCS to complete seed certification

¹ Although traditionally a crop with a Dioecious plant type, many Monoecious varieties of hemp have been developed. Hemp is sexually polymorphic and often produces many different ratios of intersexual plant types that can increase roguing requirements. Variety descriptions normally define these ratios.

² Maximum impurities allowed per 10,000 plants; applied as an average of six counts involving at least 10,000 plants each. Includes off-types or other varieties.

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 7 feet for Registered seed crops.

⁴ An OSU Seed Lab Orobanche exam is required if Small Broomrape is found in a certification field inspection. Two samples are to be submitted in separate containers: one for the Orobanche exam, the other for standard purity and viability testing.

⁵ None of the prohibited weeds listed in Section V in the OSCS Handbook, nor any Docks, Sheep Sorrel or St. Johnswort allowed in any class of seed.

Growers list examples

Small Grains Growers List (v1.00)

This query provides name and contact information for growers or contractors of small grain varieties; grower name and phone number is provided for public varieties, contractors for private varieties. The preliminary list provides growers or contractors with fields applied and accepted for certification; a final list pertains to production for which all field inspection requirements have been met. Queries for the current and previous year may be made; during the current year, most entries on the preliminary list will shift to the final list.

Crop Year:

 Type of List:

 Generation:

 Crop Kind:

 Variety Name:

Grower	Phone No.
Mid Columbia Producers, Inc.	1-541-442-5555

[Online Services](#) [Seed Certification](#) [Seed Laboratory](#) [Certification History](#)



Small Grains Growers List (v1.00)

This query provides name and contact information for growers or contractors of small grain varieties; grower name and phone number is provided for public varieties, contractors for private varieties. The preliminary list provides growers or contractors with fields applied and accepted for certification; a final list pertains to production for which all field inspection requirements have been met. Queries for the current and previous year may be made; during the current year, most entries on the preliminary list will shift to the final list.

Crop Year:

 Type of List:

 Generation:

 Crop Kind:

 Variety Name:

Contractor	Phone No.
Columbia Grain International (ID - Grangeville)	1-208-983-0540
Limagrain Cereal Seeds	1-970-498-2200
Mid Columbia Producers, Inc.	1-541-442-5555
Northwest Grain Growers	1-509-525-6510
Pendleton Grain Growers (McKennon)	1-541-278-5065

HEMP TRANSPLANTS **CERTIFICATION STANDARDS**

I. Application and Amplification of General Certification Standards

- A. The General Seed Certification Standards, as adopted by the association are basic and together with the following specific standards constitute the standards for certification of Hemp Transplants; a.k.a seedlings, plugs.
- B. Section V. of the General Standards is amplified as follows to apply specifically to hemp seedling certification.
 - 1. All certified transplants must be grown from a class of Certified seed or Certified clones to assure genetic purity. Proof of seed/clones planted may be established by providing either a Certified tag/label with invoice showing the lot number and pounds received or documentation of clone propagation under clone standards found in the Seed Certification Handbook. Source of seed/clones planted will be verified at the time of inspection.
 - 2. Seed coated or pelleted by non-approved conditioners will not be eligible for certification. Contact your state agency for a list of approved facilities.
 - 3. All containers must be labeled with adequate identification to assure trace back to any relevant documents that verify variety identity and Certification class. All containers offered for sale must be identified by the official seed certification tag/label. Certification eligibility of such seedlings must be provided to produce certified transplants for sale.
 - 4. All seed must have been tested by an approved seed laboratory for purity, seed quality and freedom from any relevant weed, grass or other crops seed. A copy of the report will be attached to the application for inspection and membership.

II.

Field and Plant Standards

Inspections will be made of transplants prior to sale.

- A. Traditional outdoor plant beds (fields) will be inspected at least two (2) times for varietal labeling, genetic purity, isolation, general physical condition and appearance of plants.
- B. Greenhouse produced plants shall be inspected at least two (2) times for varietal labeling, genetic purity, isolation, general physical condition and appearance of plants.
- C. At the final inspection, the number of plants (estimate) being produced of each variety must be verified by agency personnel.
- D. Transplants may be rejected at the time of inspection for non-compliance with these standards. Inspectors may also reject seedlings due to unsatisfactory appearance or any condition which prevents thorough inspection.
- E. At the time of inspection, seedlings or plants found unlabeled or inadequately labeled for varietal identification will be ineligible for certification.
- F. At the final inspection, 20 plants of each variety grown will be sampled or collected for post-control growouts or other genetic identification tests if required by agency.
- G. Certifying agency personnel may conduct additional seedling inspections as necessary to ensure certification standards are met.

III. **Plant Bed and Greenhouse Soil Mix Requirements**

- A. Hemp transplants grown for Certified classes must not be grown on plant beds which:
 - 1. In the preceding year produced a certified crop of the different variety.
 - 2. In either of the preceding 2 years produced a non-certified crop of hemp or a different variety of hemp.

B. Hemp transplants grown for Certified classes grown in greenhouses grower must have an SOP(Standard Operating Procedure) in place and follow to document that is free of any plant material from previous crop or to wait a minimum of six weeks between crops.

or
C. For greenhouse plants and transfer plants(plugs) soil mix must be new, soilless media or sanitized soil mixes.

IV. Plant Bed and Greenhouse Isolation Standards

- A. When two or more varieties are being grown in the same greenhouse or traditional outdoor plant bed or field, there must be an 18” skip (unplanted) between the varieties. Each variety must be clearly labeled in a manner approved by Agency, so that no mixing will occur.
- B. Producers must segregate varieties in a manner which will prevent the accidental or mechanical mixture of containers of different varieties.

Plant trays not labeled in a manner acceptable to Agency will be ineligible for certification.

V. Labeling Standards

- A. All certified transplants offered for sale must be labeled with official certification tags or labels. Each container of transplants must have a agency certification label firmly attached to be sold as certified seedlings. Failure to properly label seedlings at the time of sale, will revoke the certification status and will result in seedlings not being eligible for sale as a certified seedling.
- B. Grower must maintain records for the distribution of seedlings including the name and address of the buyer, as well as the variety sold, number of plants and date of sale.