



New York State Hemp Plan

October 5, 2021

**New York State Department of Agriculture and Markets
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Agriculture and Markets

KATHY HOCHUL
Governor

RICHARD A. BALL
Commissioner

October 5, 2021

Mr. William Richmond
Chief, U.S. Domestic Hemp Production Program
United States Department of Agriculture
1400 Independence Avenue, SW, Stop 0237
Washington, D.C. 20250-0237

Dear Mr. Richmond,

We are pleased to submit the New York State Hemp Program Plan (Plan) for your review. The Plan is consistent with the requirements of the USDA Final Rule on the Establishment of a Domestic Hemp Production Program as adopted by the agency on March 22, 2021.

New York State first approved the growing of hemp in 2014. In 2016, the first hemp crop in more than 80 years was planted in New York, but the Industrial Hemp Agricultural Research Pilot Program at that time statutorily limited production to 10 growers. By 2017, in recognition of the potential of hemp as an agricultural crop in New York, the limit on the number of hemp grower authorizations was lifted. Today, New York State has more than 800 authorized growers in the program and over 30,000 acres approved for growing hemp. It is clear that hemp production in New York State is here to stay, and we look forward to New York's farmers realizing the full economic potential of hemp in the years to come.

In closing, I am confident the State of New York has the necessary resources in place to administer a compliant hemp production program in New York State. I certify that New York State has the resources and personnel to carry out the practices and procedures described in clauses (i) through (vi) of Sec. 297B(2)(A) of the Agricultural Marketing Act of 1946 as amended in Sec. 10113 of the 2018 Farm Bill.

We look forward to working closely with the USDA to ensure that hemp production in New York State is done within the parameters established by both state and federal law and regulations.

Sincerely,

Richard A. Ball
Commissioner

New York State Hemp Program Plan

1. Definitions.

For the purpose of the New York State Hemp Program Plan, the following terms are defined as:

“Acceptable hemp THC level” means when the application of the measurement of uncertainty to the reported total delta-9 tetrahydrocannabinol content concentration level on a dry weight basis produces a distribution or range that includes 0.3 percent or less.

“Cannabis” means a genus of flowering plants in the family Cannabaceae of which *Cannabis sativa* L is a species, and *Cannabis indica* and *Cannabis ruderalis* are subspecies.

“Commissioner” means the Commissioner of Agriculture and Markets of the State of New York.

“Conviction” means any plea of guilty or nolo contendere, or any finding of guilt, except when the finding of guilt is subsequently overturned on appeal, pardoned, or expunged. For purposes of this plan, a conviction is expunged when the conviction is removed from the individual's criminal history record and there are no legal disabilities or restrictions associated with the expunged conviction, other than the fact that the conviction may be used for sentencing purposes for subsequent convictions. In addition, where an individual is allowed to withdraw an original plea of guilty or nolo contendere and enter a plea of not guilty and the case is subsequently dismissed, the individual is no longer considered to have a conviction for purposes of this plan.

“Corrective action plan” means a plan established or approved by the Department under this plan for a licensed hemp grower to correct a negligent violation or non-compliance with this plan.

“Criminal history report” means the Federal Bureau of Investigation Identity History Summary.

“Culpable mental state greater than negligence” means to act intentionally, knowingly, willfully, or recklessly.

“Decarboxylated” means the completion of the chemical reaction that converts THC-acid (THCA) into delta-9 tetrahydrocannabinol, the intoxicating component of cannabis. The decarboxylated value is also calculated using a molecular mass conversion ratio that sums delta-9-THC and eighty-seven and seven tenths (87.7) percent of THCA ($[\text{delta-9THC}] + [0.877 * \text{THCA}]$).

“Decarboxylation” means the removal or elimination of a carboxyl group from a molecule or organic compound.

“Delta-9 tetrahydrocannabinol, Delta-9 THC or THC” means the primary psychoactive cannabinoid of cannabis.

“Department” means the New York State Department of Agriculture and Markets.

“Dispose” and any variant thereof, means any activity that transitions the non-compliant hemp, or hemp not fit for commerce due to damage from insects, disease, weather, natural disaster, or any other unforeseen occurrence, into a non-retrievable or non-ingestible form. Such activities include, plowing, tilling, or discing plant material into soil; mulching, composting, chipping, or brush mowing plant material into green manure, burning plant material into the earth and covering it with soil, or as otherwise authorized in the plan or in writing by the Department.

“Dry weight basis” means the method of determining the percentage of a chemical in a substance after removing the moisture from the substance.

“Gas Chromatography or GC” means a type of chromatography in analytical chemistry used to separate, identify, and qualify each component in a mixture. GC relies on heat for separating and analyzing compounds that can be vaporized without decomposition.

Geospatial location” means a location designated through a global system of navigation satellites used to determine the precise ground position of a place or object.

“Grower” means a person who is licensed by the Department or the United States Department of Agriculture (USDA) to grow or cultivate hemp in the State.

“Grow Location” means a contiguous land area or greenhouses, hoop houses, or buildings for indoor cultivation, registered with the Department, on or in which a licensee or applicant will conduct licensed hemp cultivation activities. Each non-contiguous grow location must be registered separately.

“Handle” means to harvest, dry, or store hemp plants or hemp plant parts prior to their introduction into commerce. Handling includes the processing of hemp only in connection with its growing and cultivation, the disposal of cannabis plants that fall outside the definition of hemp and the remediation of hemp as permitted pursuant to this plan.

“Hemp” means the plant species *Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.

“Liquid chromatography or LC” means a type of chromatography technique in analytical chemistry used to separate, identify, and quantify each component in a mixture.

LC relies on pumps to pass a pressurized liquid solvent containing the sample mixture through a column filled with a solid adsorbent material to separate and analyze compounds.

"Key participants" means a sole proprietor, a partner in partnership, or a person with executive managerial control in a business or educational entity. A person with executive managerial control includes, without limitation, persons such as a chief executive officer, chief operating officer, and chief financial officer. This definition does not include non-executive managers such as farm, field, or shift managers.

"Law enforcement agency" means any Federal, State, or local law enforcement agency.

"Lot" means a contiguous area in a field, sub-field, tract, greenhouse, or indoor growing structure containing the same variety or strain of cannabis throughout the area.

"Marijuana " means all parts of the plant *Cannabis sativa* L., whether growing or not; the seeds thereof; the resin extracted from any part of such plant; and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds, or resin. The term marijuana does not include hemp, as defined in this plan, and does not include the mature stalks of *Cannabis sativa* L, fiber produced from its stalks, oil, or cake made from its seeds and any other compound, manufacture, salt, derivative, mixture, or preparation of such mature stalks (except the resin extracted therefrom), its fiber, oil, cake, or sterilized seed incapable of germination. Except as otherwise provided by this plan, marijuana means all cannabis that tests as having a total THC concentration level of higher than 0.3 percent on a dry weight basis.

"Measurement of Uncertainty (MU)" means the parameter, associated with the result of a measurement, that characterizes the dispersion of the values that could reasonably be attributed to the quantity subject to measurement.

"Negligence" means the failure to exercise the level of care that a reasonably prudent person would exercise in complying with the provisions of this plan.

"Percentage of THC on a dry weight basis" means the percentage of THC, by weight, in a hemp plant, the segregated parts of a hemp plant, or the comingled parts of harvested hemp plants, after excluding moisture from the plant matter.

"Performance-based sampling" means a sampling approach that sets a performance objective of collecting enough samples to ensure at a confidence level of 95 percent that no more than one percent of the plants in the lot would exceed the acceptable hemp THC level. Performance-based sampling provides flexibility in the sampling approach to the extent that the approach provides an effective method at ensuring the overall acceptable hemp THC level. Performance-based sampling may be based on, among other things, the end-use categories of the plant varieties, such as fiber or grain, historical THC concentrations of varieties over time, or the characteristics and growing histories of

certain farms or producers, certified seed, or clonal varieties, some, or all of which may ensure effective criteria to ensure overall acceptable hemp THC levels and require less comprehensive sampling of hemp.

“Person” means an individual, partnership, corporation, limited liability company, association, or any business entity or institution of higher education, by whatever name designated and however formed or organized.

“Phytocannabinoid” means the cannabinoid chemical compounds found in hemp.

“Post-decarboxylation” in the context of testing methodologies for THC concentration levels in hemp, means a value determined after the process of decarboxylation that determines the total potential delta-9 THC content derived from the sum of the THC and THCA content and reported on a dry weight basis. The post-decarboxylation value of THC can be calculated by using a chromatography technique using heat, known as gas chromatography, through which THCA is converted from its acid form to its neutral form, THC. Thus, this test calculates the total potential THC in a given sample. The post-decarboxylation value of THC can also be calculated by using a liquid chromatograph technique, which keeps the THCA intact, and requires a conversion calculation of that THCA to calculate total potential THC in a given sample.

“Processing of hemp in connection with its growing and cultivation” means the growing, cultivation, harvesting, drying, curing, grinding, and trimming of hemp plants. Processing of hemp includes the remediation of hemp in conformity with the requirements of this plan.

“Produce” or “Production” means to grow hemp plants for market, or for cultivation for market in the State or the United States.

“Remediation” means the process of rendering non-compliant hemp being cultivated by a licensed hemp grower to compliant hemp as set forth in this plan. For example, remediation can be achieved by separating and destroying non-compliant flowers while retaining stalks, leaves, and seeds or by shredding the entire hemp plant to create a homogeneous “biomass” that can be retested for THC compliance.

“Research License” means the license to grow hemp issued to an institution of higher education for the purposes of conducting research.

“Sampling” means the process of collecting cuttings from hemp plants for the purposes of compliance testing.

“Sampling Agent” means a person who has been certified by the Department based on the successful completion of sampling agent training to collect regulatory hemp samples.

“Registered premises” means any facility, location, or property leased, licensed, owned, or otherwise used by a person to grow hemp that has been authorized by the Department as a site where hemp may be grown.

“State” means the State of New York.

“Total THC” means the value determined after the process of decarboxylation, or the application of a conversion factor, as set forth in this plan, if the testing does not include decarboxylation that expresses the potential total delta-9 THC content derived from the sum of the THC and THCA content and reported on a dry weight basis.

“Valid license” means a duly issued license that is unexpired, unsuspended, and unrevoked.

2. License Requirement

No person shall grow, cultivate, or handle hemp in New York State without a valid license issued by the New York State Department of Agriculture and Markets.

The State issued license is for a period of three years with the term beginning on the date of issue shown on the license.

Licenses issued by the Department authorize the growth, cultivation, and handling of hemp only on the premises listed on the license application or subsequent license amendments approved by the Department. Licenses do not authorize the processing of hemp other than processing in connection with the growth, and cultivation of hemp, e.g., harvesting, stripping, drying. Licenses do not authorize the retail sale of hemp or other activities for which other State licenses are required.

Licenses may not be sold, assigned, transferred, pledged, or otherwise disposed of, alienated, or encumbered.

Licensees shall not add or change a growing/drying location without first notifying the Department. The licensee must submit the proposed change to the Department by filing an official Department amendment form, which shall include an updated legal description, geospatial location, and map specifying the proposed changes to the registered grow location(s) and pay any required fee prior to planting. Upon Department approval of a new growing location, the grower must notify the Farm Service Agency (FSA) office within 10 days after planting at the new location.

3. Grower Application Process

Each applicant for a hemp grower’s license must submit a non-refundable application fee and an application containing the following information:

- If the applicant is an individual, the applicant’s full name, address, social security number, telephone number, and email address (if available). If the applicant is a business entity, the entity’s complete name, its principal business address, the full

name and title of key participants, their respective email addresses (if available), and the entity's employer identification number (EIN).

- A legal description of the land on which the grower will grow and handle hemp, including, the acreage for outdoor growing locations and square footage for indoor growing locations, the geospatial location (GPS coordinates) for each proposed growing, and handling site.
- The applicant must indicate their legal right to use proposed growing location(s), either through ownership or lease on the property.
- A Federal Bureau of Investigation (FBI) Identity History Summary dated within 60 days of application for all key participants. A license will not be issued if the FBI Identity History Summary indicates that the applicant has been convicted of a felony relating to a controlled substance under State or Federal law within the past ten years unless the exception provided in 7 CFR §990.20(b) applies to such applicant. An applicant is responsible for notifying the Department if the applicant, or any key participant has been convicted of a felony related to a controlled substance during the license period, or within 10 years of the date of the application. If an individual has been convicted of a felony related to a controlled substance, that individual shall be ineligible to grow hemp or otherwise participate in the hemp program for a period of 10 years following the date of such conviction.
- Applications will not be processed by the Department unless fully completed and all the required information is provided.
- Application shall be signed by:
 - the applicant if a sole proprietor
 - a managing partner if a limited liability company
 - an officer of the corporation if a corporation
 - the partners if a partnership.
- All persons signing an application shall verify the truth of the information submitted under the penalties of perjury.
- Any person who materially falsifies any information contained in an application for a license and/or provides material information known by the provider to be false or misleading shall be ineligible to be licensed.
- Upon application approval, the Department will assign a license identifier for each producer in a format prescribed by the USDA.

4. Grower Reporting

Licensees must report all plantings by variety, identifying each field or subfield on which hemp is planted including greenhouses, to their local FSA office pursuant to 7 CFR 990.7. Growers should consult with the local FSA county/regional office for acreage reporting requirements. FSA county/regional offices can be located at the following website: <https://offices.sc.egov.usda.gov/locator/app?state=ny&agency=fsa>.

The licensee must submit FSA Form 578 to the FSA no later than July 15, but the FSA strongly recommends reporting as soon as possible after planting. For hemp planted after July 15, the report to the FSA should be no more than 10 days after planting. The FSA

planting report should indicate, among other things, the intended use of the hemp being reported, e.g.:

- Fiber – used for cloth, pressed plastics, ropes, animal bedding, paper, biofuel, packaging, concrete additives, spill cleanup.
- Processing – grown for extraction of plant resin, which includes cannabidiol (CBD) and other phytocannabinoids to be extracted from the flower. Resin is used in oils, lotions, cleansers, bath, or other pharmaceutical or topical products.
- Grain – used for hemp hearts, crushed seed oil (not CBD), protein supplements (human or animal consumption).
- Seed – used for propagation stock, hybrids (non-human consumption).

The licensee must submit a Planting Report to the Department no more than 10 days after submission of an FSA 578 form to the local FSA office.

5. Grower Recordkeeping Requirements

Licensed growers shall maintain copies of all records and reports necessary to demonstrate compliance with the permit program. These records include those that support, document, or verify the information provided in the forms submitted to the Department, including:

- For each permitted location:
 - The information provided on the application for a permit.
 - Permit document received from the Department.
 - A detailed map of the permitted site.
 - For each leased location, a copy of the fully executed lease.
 - At least one label from every different lot of seed or nursery stock.
- For each individual lot:
 - Acreage (outdoor) or square footage (indoor).
 - Variety name and amount planted, cultivated, and propagated and the corresponding permit number.
 - Type of Hemp- Fiber, Grain, Seed, CBD.
 - Planting date.
 - Harvest date.
 - THC test date and results (copy of analysis report(s)).
 - The yield of the site at harvest.
 - Any factors impacting harvest, including seed pressure, irrigation, storm damage, flooding, drought, or any other issue arising).

All records, reports and documents shall be kept and maintained for a minimum of three years and made available to the Department for inspection upon request.

6. License term, form, and amendment

The Department shall issue commercial and research licenses.

All growers seeking a license to grow hemp for commercial sale or distribution shall apply for a commercial license.

Institutions of higher education seeking to engage in hemp research and that will not offer the hemp for commercial sale or distribution may seek a research license.

The effective date of the license shall commence on the date of issuance set forth on the license.

Licenses shall be issued on a form prepared by the Department, containing, among other things, the name of the grower, the grower's principal place of business, a unique license number, the license's date of issuance and expiration.

Amendment of a license is required if there is any change to the information submitted in the license application, including, among other things: the sale of a business; the growing or handling of hemp in a new location; the cessation of growing or handling of hemp at an authorized location; and/or the addition or removal key participants of the licensee.

Application for amendment of a license shall be made on a form prepared by the Department, shall provide all the requested information, and be submitted to the Department together with a nonrefundable amendment fee.

Incomplete amendment applications shall not be processed and will be returned to the applicant, unless the Department, at its sole discretion, determines it more expedient to request the information from the applicant.

The same procedures applicable to a license application shall apply to the application for an amendment.

The licensed grower shall notify the Department prior to the abandonment or closure of a hemp growing location(s). If the licensee abandons or otherwise relinquishes possession or ownership of, control over, or responsibility for their hemp crop, the hemp crop shall be destroyed or otherwise dispensed of in a manner approved by the Department.

7. License renewal

An application for the renewal of a license shall be provided by the Department to a licensee at least 90 days prior to the expiration of the licensee's current license and must be submitted to the Department by the license holder at least 30 days before the expiration of the applicant's current license, accompanied by the required fee.

Applications for renewal shall be subject to the same terms, information collection requirements, and approval criteria listed above, including the requirement to submit an FBI Identity History Summary dated within 60 days of the renewal application. However,

notwithstanding the above, no renewal license shall be issued to an applicant that does not hold a valid license at the time of the submission of the application.

8. Granting, denying, and revoking licenses

The Commissioner may decline to grant an application for a license, may decline to renew or may revoke, suspend and/or impose conditions thereon, if he or she finds, after due notice and an opportunity to be heard, that the applicant or licensee:

- is not qualified to properly conduct the business of growing hemp.
- has committed any acts injurious to the public health or welfare that are related to a grower license.
- is found to be growing cannabis exceeding the acceptable hemp THC level with a culpable mental state greater than negligence.
- has been found to have been negligently violating the provisions of this plan three times within a five-year period.
- has failed to prepare or keep required records, after notice and failure to cure.
- has failed to submit all reports required to be submitted by a licensee, after notice and failure to cure.
- has made a material misstatement in the application for license or in any statement or record made or furnished to the Department.
- the applicant or any of an applicant's key participants have been convicted of a felony under State or Federal law relating to a controlled substance, and the denial of such license is permissible under the State law, or, if required for USDA State plan approval, the applicant or any of the applicant's key participants have been convicted under State or Federal law relating to a controlled substance within the past ten years, except for those persons lawfully growing hemp under the 2014 Farm Bill research program before December 20, 2018 and whose conviction occurred before December 20, 2018. If a corporation, limited liability company, or partnership, has a person therein, in a position of control, who was responsible, in whole or in part, for any act for which a license may be denied, not renewed, or revoked.
- is not capable of complying, or has failed to comply, with the requirements set forth in this plan or is otherwise incapable, or has failed to comply, with other legal requirements related, directly or indirectly, to the growing of hemp.
- the applicant or licensee has grown or handled hemp outside the authorization granted by its license or has engaged in processing other than processing in connection with the growth and cultivation of hemp, retail sale, or other hemp related activity without a required license.
- the applicant is seeking authorization for a person whose license has been suspended, revoked, or who is otherwise ineligible to be licensed as a grower.
- the applicant is seeking authorization to grow hemp on land that is currently an authorized growing location for another licensee.

An applicant receiving an adverse determination with respect to a licensing decision may, within 30 days of the date of the sending of the determination, request a review of the

decision by submitting a written request for reconsideration, providing the basis for the person's belief that the determination was in error. The Department shall respond to the request for a review within 15 days of its receipt of the request for a review.

9. Grower Inspections

The Department shall conduct annual inspections of a random group of growers to ascertain whether, among other things, the grower's hemp is produced in conformity with State law and this plan and whether required reports, records, and documentation are properly maintained for accuracy and completeness.

The Department, in its discretion, may conduct a random sampling of growers, performance-based inspections, or employ a combination of some or all such inspection approaches.

The Department's inspections may include site visits to the farms, fields, greenhouses, storage facilities, or other locations related to the grower's operation and the review of records and documentation and may include and cover, among other things, the grower's operational procedures, regulatory compliance, documentation, record keeping, and reporting.

Growers shall provide the Department with complete and unrestricted access to the premises where hemp is cultivated and stored and where the hemp cultivation business operates, as well as unrestricted access to the books and records of the grower relating to the cultivation of hemp.

10. Sampling for Acceptable THC Levels

All hemp planted, cultivated, propagated, or growing in New York State shall be sampled and tested to determine THC concentration levels unless such hemp has been exempted from sampling based on the requirements for Performance Based Sampling. The licensee is responsible for ensuring that their hemp plants meet the acceptable THC level of .3 percent total THC on a dry weight basis, with measurements within the tolerances of the measurement of uncertainty above or below .3 percent being acceptable.

Regulatory samples must be collected by a Department-certified sampling agent or Department Horticultural Inspector. Licensed growers may not collect samples from their own growing facilities and cannot be certified sampling agents.

Samples shall be obtained from the flowering tops of plants when flowering tops are present and shall be approximately five to eight inches in length from the "main stem" (that includes the leaves and flowers), "terminal bud" (that occurs at the end of a stem), or "central cola" (cut stem that could develop into a bud) of the flowering top of the plant.

Prior to harvest, the licensee must submit a Pre-Harvest Report to the Department not more than 30 days in advance of the anticipated harvest date. The lots that will be harvested must be sampled and tested for THC level compliance.

If THC testing results are acceptable, but the harvest has not been completed within 30 days of the date the sample was taken, a second pre-harvest sample and testing of the lot shall be required.

A Chain of Custody Form developed by the Department shall be utilized by all persons authorized to take official samples.

A sample receipt shall be completed by the certified sampling agent or Department employee conducting the sampling and signed by the hemp permit holder or an authorized representative thereof, who must be present at the growing site.

No sample(s) may be removed from the permitted site prior to the chain of custody form and sample receipt being completed and signed.

It shall be the responsibility of the hemp permit holder to assure that each hemp lot described in their permit is sampled and tested.

The hemp permit holder shall hire a Department-certified sampling agent to take a representative sample of each lot of hemp planted, cultivated, propagated, or grown, to submit for testing.

It is the responsibility of the permit holder to schedule official sampling and testing prior to harvest and to be present or have an authorized representative present at the growing site at the time of sampling.

The permit holder shall designate the specific laboratory where samples will be sent for THC testing. The laboratory shall be an independent laboratory approved by the Department and able to meet all requirements for testing and reporting.

The hemp permit holder shall pay any fees charged and costs associated with sampling and testing.

A permit holder may request that the laboratory run a second test on an official sample retained by the laboratory, if the grower questions the results of that first test. The permitted grower shall pay the fees and costs of retesting.

A permit holder may request a second official pre-harvest sampling and testing if it is believed that the original results were in error. The permittee may choose to use the same or a different laboratory for the test. No more than two official samples per lot will be considered by the Department; only the final official sample will be considered by the Department when determining compliance. The permitted grower shall pay the fees and costs of resampling and retesting.

The permitted grower shall agree to the release of all official test results from the laboratory directly to the Department.

The Department may conduct random audits of hemp permit holders and take its own samples for testing.

A Department employee may take official samples to audit samples taken by a certified sampling agent. Such audits will be done on a random basis and may be done at the Department's discretion.

The Department may also take official samples pursuant to an investigation, as the result of a complaint or where an official sample tests above the acceptable hemp THC level.

11. Performance Based Sampling

The Department will use both risk-based and random approaches to select licensees to be inspected and lots to be sampled to meet its performance-based sampling goals. The Department will sample the appropriate number of plants (**Appendix 2**) to ensure, at a confidence level of 95 percent, that no more than 1 percent of the plants in the lot would exceed the acceptable hemp THC level. Risk-based determinations will be based on the grower's history including those operating under a corrective action plan as well as variety testing data to prioritize sampling higher-risk varieties. The Department will update this inspection selection and sampling model as needed to ensure 95 percent confidence in detecting non-compliant hemp in the state. Updated inspection and sampling methods will be submitted to the USDA for approval.

Hemp Growers

The Department will use the following procedures to identify growers that will be inspected and to select hemp lots for sampling each year:

Growers

The Department will compile a list of all licensees and will use the licensees' performance history to determine if inspection and/or sampling are necessary. Licensees will be assigned a risk level based on, but not limited to, the following criteria:

- Number of years in the program
 - All new growers will be inspected and sampled.
 - Growers in the program for at least two years with no history of growing non-compliant hemp may not be selected for sampling.
- Current license status
 - All growers operating under a Corrective Action Plan will be inspected and sampled.
- Number of years since last sampled
 - All growers will be inspected and sampled at least once every three years.

Varieties

The Department will compile and maintain a list of all varieties grown in New York to determine if inspection and/or sampling are necessary. (**Appendix 3**) With this historical data, each variety will be assigned a risk level based on, but not limited to, the following criteria:

- Sample size
 - Varieties with fewer than 10 samples will receive a higher risk value.
- Percent failure rate
 - Varieties with a greater than 15% failure rate will receive a higher risk value.
- Historical THC results
 - Varieties with results above 0.3% total THC will receive a higher risk value.

The Department will assign a sampling priority level to each lot based on the risk levels of both the grower and variety. High-risk growers will always be sampled. New varieties in New York will always be sampled.

Researchers and Breeders

The Department may conduct a facility and/or records inspection of all licensees of this type on an annual basis to determine compliance with requirements under this section.

Licensees are also subject to official sampling if deemed necessary as a result of the facility/records inspection. In addition to any routine inspection and sampling, the Department may inspect and take samples from any registered site during normal business hours without advance notice if they have reason to believe a violation of the program rules is occurring.

12. Regulatory THC testing

Testing Laboratories

The Department, at its discretion, may conduct its regulatory testing at a laboratory approved by the Department, at the grower's expense.

After December 31, 2022, testing for acceptable THC levels of pre-harvest samples shall be conducted only at laboratories registered with the United States Drug Enforcement Agency.

The Department shall provide a list of laboratories approved for testing.

Private laboratories performing THC testing for hemp produced under this program shall submit certified electronic copies of all test results to the Department, grower, and the USDA.

Growers shall ensure that any private testing laboratories used to test its pre-harvest samples for acceptable THC levels shall comply with USDA reporting requirements contained in Subpart F of the Domestic Hemp Production Program. The Department will provide instructions to all laboratories performing testing for New York State licensed growers on the information required to be included on the test report and the procedure to electronically submit test results to the Department and the USDA.

Testing Standards

Analytical testing for detecting the concentration level of THC in the sampled material shall meet the following standards:

- Laboratory quality assurance must ensure the validity and reliability of test results.
- Analytical method selection, validation, and verification must ensure that the testing method used is appropriate and that the laboratory can successfully perform the testing.
- The demonstration of testing validity must ensure consistent accurate analytical performance. Testing method performance specifications must ensure analytical tests are sufficiently sensitive for the purposes of the detectability requirements of this plan.

Analytical testing of samples for THC must use post-decarboxylation or other similarly reliable methods approved by the Commissioner. The testing methodology must consider the potential conversion of THC-A in hemp into THC and the test result measures the total available THC derived from the sum of the THC and the THCA content. Testing methodologies meeting this requirement include, but are not limited to, gas or liquid chromatography with detection.

The total THC concentration level shall be determined and reported on a dry weight basis, unless the Department determines that some other method is more appropriate or accurate for the substance tested.

With each test result, a measurement of uncertainty (MU) must be estimated and reported with the test results. Laboratories shall use appropriate, validated methods and procedures for all testing activities and evaluate measurement of uncertainty.

Test results

Any sample test result exceeding the acceptable hemp THC level shall establish a prima facie case that the lot represented by the sample is not in compliance with this plan.

Lots meeting the acceptable hemp THC level may enter the stream of commerce.

Lots tested and determined to exceed the acceptable hemp THC level may not enter the stream of commerce unless remediated in a manner consistent with this plan. For lots testing above the acceptable hemp THC level and not remediated, the grower shall ensure that the lot is disposed of in a manner consistent with this plan.

Remediated crops must be retested to ensure compliance with the acceptable THC levels. Retested remediated samples that exceed the acceptable hemp THC level must be disposed of in a manner consistent with this plan.

Any grower may request additional testing of the original sample, at the grower's expense, if the grower has a good faith belief that the original THC concentration level reported in the regulatory testing results is in error.

13. Remediation of non-compliant crop

Non-compliant hemp may be remediated by either:

- disposing of flower materials and salvaging the remainder of the plant; or
- blending the entire plant by chopping or shredding all flowers, buds, trichomes, leaves, stalks, seed, and all plant parts from the non-compliant sampled lot in a manner that creates a homogenous biomass composed of all plant material of the non-compliant lot.

All remediated biomass shall be resampled and retested by the Department or a Department approved sampling agent, at the grower's expense, to ensure the material tests within the acceptable THC level for hemp.

Remediated biomass that tests above the acceptable THC level for hemp must be destroyed.

14. Disposal of non-compliant Hemp

Non-compliant hemp may be disposed of by the following means:

- Disposal off-site using a DEA-registered reverse distributor or law enforcement.
- Disposal on-site at the farm or hemp production facility using the following methods: plowing under non-compliant plants, composting into "green manure" for use on the same land, tilling, discing, burial, or burning or other disposal methods, approved by the Department, that make the product unusable, non-consumable, non-retrievable and unmarketable.
- On site disposal requires that the crop destruction be verified using one of the following methods, which shall be approved by the Department, in writing, prior to such disposal: in-person verification by a Department inspector, the taking of pictures, videos or other proof of disposal, with the prior approval of the Department.

- A grower shall dispose of and document the disposal of non-compliant hemp within five days of the delivery of notice of regulatory testing results finding that a grower's hemp is non-compliant.
- If the grower requests retesting at its own expense, the grower shall dispose of and document the disposal of the non-compliant hemp within five days of the delivery of the notice of a final determination that the hemp is non-compliant.

15. Violations of State Plan

Negligent violations occur when a grower fails to exercise the level of care that a reasonably prudent person would exercise in complying with the requirements of this plan and State and Federal law and regulations.

Producers shall not receive more than one negligent violation per growing season.

Negligent violations include:

- Failure to provide a legal description of land on which the producer produces hemp; and
- Failure to obtain a license or other required authorization from the State department of agriculture; and
- Producing cannabis exceeding the acceptable hemp THC level. A negligence violation will not be issued for samples exceeding the acceptable THC level, but testing below 1.0 percent on a dry weight basis, provided the grower can demonstrate that it has made reasonable efforts to grow compliant hemp; and
- Failing to timely dispose or otherwise handle all lots of plants determined to have a more than the accepted hemp THC level in a manner consistent with this plan and State regulations; and
- Harvesting hemp more than 30 days after the regulatory sampling date; and
- Comingling lots of harvested plant material prior to the time that the sampled lots are tested and determined not to exceed the accepted hemp THC level; and
- Failing to segregate and store the plant material from each lot subject to regulatory sampling at an approved site or such other location storage or changing its location from the location authorized by the Department until regulatory testing results demonstrate that the plant material does not exceed the accepted hemp THC level.

16. Corrective Action Plan for Negligent Violations

For each negligent violation, the Department shall issue a Notice of Violation, advising the grower of the negligent violation and providing a deadline by which the violation shall be corrected.

The issuance of a Notice of Violation may result in an assessment of a penalty or other enforcement action.

A grower may contest the noticed violation within 15 days of the date of the notice and shall be provided with an opportunity to be heard with respect to the noticed violation.

Unless the grower contests the violation, within 20 days of the date of the notice, the grower shall submit to the Department a corrective action plan for the Department's approval, which, at a minimum, shall include:

- A reasonable date by which the negligent violation shall be corrected.
- The actions to be taken by the grower to correct the violation and to ensure future compliance with the requirements that were not met; and
- A schedule for the submission of periodic reports for a period of two years, which will advise the Department of the grower's compliance with its corrective action plan.

The Department shall advise the grower whether the proposed plan is approved as submitted, or any changes or additional requirements of the Department are needed for an acceptable plan.

A grower with an approved plan shall not, as a result of the negligent violation, be subject to any criminal enforcement action by the Federal or State government.

A grower that negligently violates the requirements of this plan three times during a five-year period shall be ineligible to produce hemp for a period of five years beginning as of the date of the third violation.

The State shall conduct an inspection to determine if the corrective action plan has been implemented as submitted.

If a subsequent violation occurs while a corrective action plan is in place, a new corrective action plan must be submitted with a heightened level of quality control, staff training, and quantifiable action measures.

17. Culpable Violations

A grower, with a culpable mental state greater than negligence, that: (1) grows or cultivates hemp with a total THC level in excess of 1 percent on a dry weight basis; (2) handles such non-compliant hemp for a purpose other than ensuring its destruction pursuant to the requirements of this plan; 3) and/or introduces such non-compliant hemp into the stream of commerce, commits a culpable violation under this plan.

When the Department has reason to believe that a grower has committed a culpable violation, it shall issue a Notice of Violation, and undertake such other enforcement action it deems appropriate.

A grower may contest the noticed violation within 15 days of the date of the notice and shall be provided with an opportunity to be heard with respect to the noticed violation.

If the Department determines that a grower has committed a culpable violation, the Department shall immediately report the grower to the U.S. Attorney General and the chief law enforcement officer of the State.

18. License Suspension.

The Department may issue a notice of suspension to a grower if the Department or its agents receive credible evidence establishing that a grower has:

- Engaged in conduct violating a provision of this plan or State regulations.
- Failed to comply with a written direction from the Commissioner related to negligent conduct.

Any grower whose license has been suspended shall not handle or remove hemp from the location where the hemp was located at the time when the Department issued its notice of suspension without prior written authorization from the Department.

Any grower that has been suspended shall not harvest or otherwise dispose of the hemp without prior written authorization from the Department.

A grower that has been issued a notice of suspension may continue to cultivate the hemp it has planted pending a resolution of the issue giving rise to the suspension.

A grower that has been issued a notice of suspension may seek a review of that suspension by application to the Commissioner.

A grower whose license has been suspended may be required to complete a corrective action plan to fully restore the license.

19. Felonies

A person with a State or Federal felony conviction relating to a controlled substance may not participate in the program and may not produce hemp under the State plan for 10 years from the date of the conviction.

20. Reporting to USDA

The following information will be submitted to the USDA.

Producer report

The Department will submit a Producer Report to the USDA as required by 7 CFR § 990.70(a). The report will be submitted to the USDA on the first of each month via email in Excel spreadsheet format until such time as an online method of delivering the information is in place. The Department will submit information on new licenses issued

and changes to existing licenses for the month immediately preceding the date of submission of the required report.

If there are no new licenses or changes to existing licenses, a report indicating such will be filed.

For each new producer who is an individual, the report must include:

- Full name of the individual
- License or authorization identifier
- Employee Identification Number (EIN)
- Business address
- Telephone number
- Email address (if available)

For each new producer that is an entity, the report must include:

- Full name of the entity
- Principal business location address
- License or authorization identifier
- Full name, title, and email address of each employee for whom the entity is required to submit a criminal history report

For each producer that was included in a previous report and whose reported information has changed, the report must include the previously reported information and the new information.

Test results report

Each producer must ensure that the laboratory that conducts the test of the samples from its lots reports the test results to USDA. The test results report shall contain:

- Producer's license or authorization identifier
- Name of producer
- Business address of producer
- Lot identification number for the sample
- Name of laboratory, and when applicable, the DEA registration number of the laboratory
- Date of test and report
- Identification of pre- or post-harvest retest
- Test result

State disposal/remediation report

If a producer has produced cannabis exceeding the acceptable THC level, the cannabis must be disposed of or remediated. States must submit to USDA, by the first of each month, a report notifying USDA of any occurrence of non-conforming plants or plant

material and providing a disposal or remediation record of those plants and materials. The report must include:

- Name and address of the producer
- Producer license or authorization identifier
- Location information, such as lot number, location type, and GPS location for the production area subject to disposal or remediation
- Disposal or remediation completion date
- Total acreage

Annual report

The Department will provide the USDA with an Annual Report by December 15 of each year, as required by 7 CFR §990.70(c), with the following information:

- Total planted acreage
- Total harvested acreage
- Total acreage disposed or remediated

Appendix 1

FSA REPORTING GUIDANCE

The United States Department of Agriculture (USDA) requires that all producers must report industrial hemp production of any size to the Farm Service Agency (FSA).

The first step in completing this reporting requirement is to contact a local FSA office to set up an account if one is not already created. Use the search tool at the following link to locate the nearest office: <https://www.farmers.gov/service-center-locator>.

At this meeting, expect to provide the following information to FSA staff:

1. Producer registration number
2. Street address
3. Geospatial location(s) of each lot or greenhouse where industrial hemp will be produced
4. Acreage of greenhouse or indoor square footage dedicated to the production of industrial hemp
5. Once an account is set up, report the amount of industrial hemp planted to FSA.
6. Acreage of industrial hemp planted. Generally reporting for planting must be completed by July, but FSA strongly recommends reporting as soon as possible after planting.

Consult with the local FSA office to confirm reporting requirements as these dates may vary depending on many factors including continuous cultivation and participation in USDA programs such as NRCS, insurance, or loans.

Registered Producers shall maintain evidence of completed reporting, such as a copy of the completed FSA-578 form, in their records for three years. These records will be reviewed by Department staff upon inspection or request.

Hemp Grown in a Greenhouse, Warehouse, or Similar Indoor Facility

Growers who plant hemp in a greenhouse or indoor facility with the intention of transplanting or propagating the plant into an outdoor field before harvest are not required to report the initial indoor planting. The crop must only be reported when it is moved and planted in the field. A producer growing, managing, and harvesting the crop in a greenhouse or indoor facility must follow the same guidance as a traditional grower. The hemp must be reported by location, subfield(s), and planting date(s) for all varieties and end-uses. A producer growing the crop for propagation purposes to sell to other producers will report the crop using SE as the intended use when it is seeded in the greenhouse or similar facility. Because the producer will not be growing the crop to harvest and testing may not be required, the crop may be reported using the same method as a research grower

Research Lots

Hemp may be grown for research purposes only. Because the crop will never be sold commercially, the acreage report is not required to be broken down by lots. If the field was planted over several days, growers will report the average planting date.

Note: The Farm Service Agency (FSA) is not a part of the New York State Department of Agriculture and Markets and producer information cannot be transferred between the agencies. This USDA-FSA reporting requirement is separate from other reporting required by the Department.

Appendix 2: Tables showing the sample size required based on acreage of the lot. For lots with 20 acres or less, use Table 1. For lots with 21 acres or more, use Table 2.

Table 1

Acres	Sample Size
≤1	5
>1 and ≤5	10
>5 and ≤20	20

Table 2

Number of acres	Sample Size "n"	Number of acres	Sample Size "n"	Number of acres	Sample Size "n"	Number of acres	Sample Size "n"
		40	36	75-76	61	119-120	86
		41-42	37	77	62	121-122	87
		43	38	78-79	63	123-124	88
		44	39	80-81	64	125-126	89
		45-46	40	82	65	127-128	90
		47	41	83-84	66	129-130	91
		48	42	85-86	67	131-132	92
		49-50	43	87	68	133-134	93
		51	44	88-89	69	135-136	94
		52	45	90-91	70	137-138	95
21	20	53-54	46	92	71	139-140	96
22	21	55	47	93-94	72	141-143	97
23	22	56	48	95-96	73	144-145	98
24	23	57-58	49	97-98	74	146-147	99
25-26	24	59	50	99	75	148-149	100
27	25	60-61	51	100-101	76	150-152	101
28	26	62	52	102-103	77	153-154	102
29	27	63-64	53	104-105	78	155-156	103
30	28	65	54	106-107	79	157-157	104
31-32	29	66-67	55	108	80	159-161	105
33	30	68	56	109-110	81	162-163	106
34	31	69-70	57	111-112	82	164-166	107
35	32	71	58	113-114	83	167-168	108
36	33	72-73	59	115-116	84	169-170	109
37-38	34	74	60	117-118	85	171-173	110
39	35						

Appendix 3: This data is a summary of all the THC test results from all hemp samples collected under the New York State Industrial Hemp Pilot Program from 2016 to 2021. Level 1 varieties are low risk, Level 2 varieties are medium risk, and Level 3 varieties are high risk. The Department will use this historical data in conjunction with grower compliance history to determine hemp sampling using a performance-based method. This data will be updated every year as new results are received.

Variety Reported	Type	Total Samples	Average	Standard Dev	Below 0.3%	0.3% to 0.5%	0.5% to 1%	1% to 5%	Over 5%	Min THC	Max THC	Percent Above	Above 0.5%	Level
#5	CBD/CBG	2	0.40%	0.15%	1	0	1	0	0	0.29%	0.51%	50.00%	Yes	Level 3
17GHF1	CBD/CBG	3	0.31%	0.03%	1	2	0	0	0	0.27%	0.32%	66.67%		Level 3
A1	CBD/CBG	1	0.42%		0	1	0	0	0	0.42%	0.42%	100.00%		Level 3
A2-R4	Unknown	1	0.11%		1	0	0	0	0	0.11%	0.11%	0.00%		Level 2
Abacus	CBD/CBG	4	0.43%	0.10%	1	2	1	0	0	0.29%	0.55%	75.00%	Yes	Level 3
Abacus x C4	Cross	1	1.34%		0	0	0	1	0	1.34%	1.34%	100.00%	Yes	Level 3
AC/DC	CBD/CBG	2	0.14%	0.10%	2	0	0	0	0	0.07%	0.21%	0.00%		Level 2
AC/DC Watermelon Zekial	CBD/CBG	1	0.10%		1	0	0	0	0	0.10%	0.10%	0.00%		Level 2
AC/DC X OTTO II	Cross	1	0.11%		1	0	0	0	0	0.11%	0.11%	0.00%		Level 2
Acid Rock	Unknown	1	0.07%		1	0	0	0	0	0.07%	0.07%	0.00%		Level 2
Amy	Unknown	1	0.44%		0	1	0	0	0	0.44%	0.44%	100.00%		Level 3
Anka	Fiber/Grain	8	0.09%	0.04%	8	0	0	0	0	0.02%	0.13%	0.00%		Level 1
Authentic	Unknown	5	0.35%	0.36%	4	0	1	0	0	0.14%	0.97%	20.00%	Yes	Level 3
Auto Tsunami	CBD/CBG	1	0.21%		1	0	0	0	0	0.21%	0.21%	0.00%		Level 2
Auto Tune	CBD/CBG	1	0.27%		1	0	0	0	0	0.27%	0.27%	0.00%		Level 2
Autofem -A	CBD/CBG	1	0.30%		1	0	0	0	0	0.30%	0.30%	0.00%		Level 2
Autoflower	CBD/CBG	1	0.31%		0	1	0	0	0	0.31%	0.31%	100.00%		Level 3
Autopilot 1.0	CBD/CBG	3	0.13%	0.09%	3	0	0	0	0	0.06%	0.22%	0.00%		Level 2
B11	Unknown	1	0.15%		1	0	0	0	0	0.15%	0.15%	0.00%		Level 2
BB x T1	Cross	1	0.19%		1	0	0	0	0	0.19%	0.19%	0.00%		Level 2
BD-2	Unknown	1	0.34%		0	1	0	0	0	0.34%	0.34%	100.00%		Level 3
Berry Blossom	CBD/CBG	15	0.27%	0.13%	9	6	0	0	0	0.09%	0.46%	40.00%		Level 3
Blue	CBD/CBG	1	0.33%		0	1	0	0	0	0.33%	0.33%	100.00%		Level 3
Blushing Sisters	CBD/CBG	1	0.07%		1	0	0	0	0	0.07%	0.07%	0.00%		Level 2
BOAX	CBD/CBG	9	0.25%	0.11%	7	2	0	0	0	0.11%	0.42%	22.22%		Level 2
Boax Hybrid	CBD/CBG	1	0.26%		1	0	0	0	0	0.26%	0.26%	0.00%		Level 2
Boax x Otto 2	Cross	1	0.49%		0	1	0	0	0	0.49%	0.49%	100.00%		Level 3
Boax-L1	CBD/CBG	1	1.13%		0	0	0	1	0	1.13%	1.13%	100.00%	Yes	Level 3
Boax-L2	CBD/CBG	1	0.94%		0	0	1	0	0	0.94%	0.94%	100.00%	Yes	Level 3

Boring 'ol Hemp #2	CBD/CBG	1	0.26%		1	0	0	0	0	0.26%	0.26%	0.00%		Level 2
Boring 'ol Hemp #3	CBD/CBG	1	0.24%		1	0	0	0	0	0.24%	0.24%	0.00%		Level 2
Box Wine	CBD/CBG	3	0.28%	0.10%	2	1	0	0	0	0.17%	0.38%	33.33%		Level 3
Bristol Blonde	CBD/CBG	2	0.20%	0.01%	2	0	0	0	0	0.19%	0.21%	0.00%		Level 2
Buddha's Hand	CBD/CBG	1	0.26%		1	0	0	0	0	0.26%	0.26%	0.00%		Level 2
C4	CBD/CBG	3	1.37%	0.97%	0	1	0	2	0	0.34%	2.28%	100.00%	Yes	Level 3
Canda	Fiber/Grain	2	0.02%	0.01%	2	0	0	0	0	0.01%	0.03%	0.00%		Level 1
Carolina Peach	CBD/CBG	1	0.25%		1	0	0	0	0	0.25%	0.25%	0.00%		Level 2
Cascade	CBD/CBG	2	0.13%	0.09%	2	0	0	0	0	0.06%	0.19%	0.00%		Level 2
Cascade OG	CBD/CBG	1	0.21%		1	0	0	0	0	0.21%	0.21%	0.00%		Level 2
Cat Lady	CBD/CBG	2	0.56%	0.12%	0	1	1	0	0	0.48%	0.65%	100.00%	Yes	Level 3
CBD Dawg	CBD/CBG	0												Null
CBD Hash	CBD/CBG	1	0.24%		1	0	0	0	0	0.24%	0.24%	0.00%		Level 2
CBD Haze	CBD/CBG	1	0.42%		0	1	0	0	0	0.42%	0.42%	100.00%		Level 3
CBD-1	CBD/CBG	4	0.25%	0.37%	3	0	1	0	0	0.07%	0.80%	25.00%	Yes	Level 3
CBD OG	CBD/CBG	1	0.18%		1	0	0	0	0	0.18%	0.18%	0.00%		Level 2
CBG-1	CBD/CBG	1	0.20%		1	0	0	0	0	0.20%	0.20%	0.00%		Level 2
Ceiba	CBD/CBG	1	0.40%		0	1	0	0	0	0.40%	0.40%	100.00%		Level 3
Chardonnay	CBD/CBG	2	0.30%	0.28%	1	1	0	0	0	0.10%	0.50%	50.00%		Level 3
Charlotte's Gift	CBD/CBG	1	0.49%		0	1	0	0	0	0.49%	0.49%	100.00%		Level 3
Cherry	CBD/CBG	6	0.29%	0.39%	5	0	0	1	0	0.06%	1.08%	16.67%	Yes	Level 3
Cherry Blonde	CBD/CBG	1	0.33%		0	1	0	0	0	0.33%	0.33%	100.00%		Level 3
Cherry Blossom	CBD/CBG	6	0.30%	0.09%	3	3	0	0	0	0.15%	0.41%	50.00%		Level 3
Cherry Bomb	CBD/CBG	1	0.52%		0	0	1	0	0	0.52%	0.52%	100.00%	Yes	Level 3
Cherry Bubblegum	CBD/CBG	1	0.23%		1	0	0	0	0	0.23%	0.23%	0.00%		Level 2
Cherry Clone	CBD/CBG	1	0.16%		1	0	0	0	0	0.16%	0.16%	0.00%		Level 2
Cherry Cobbler	CBD/CBG	1	0.19%		1	0	0	0	0	0.19%	0.19%	0.00%		Level 2
Cherry Dwarf	CBD/CBG	1	0.25%		1	0	0	0	0	0.25%	0.25%	0.00%		Level 2
Cherry HD	CBD/CBG	2	0.44%	0.01%	0	2	0	0	0	0.43%	0.45%	100.00%		Level 3
Cherry Max	CBD/CBG	1	0.39%		0	1	0	0	0	0.39%	0.39%	100.00%		Level 3
Cherry Soda	CBD/CBG	1	0.25%		1	0	0	0	0	0.25%	0.25%	0.00%		Level 2
Cherry Strike (Cherry OO)	CBD/CBG	1	0.27%		1	0	0	0	0	0.27%	0.27%	0.00%		Level 2
Cherry Wine	CBD/CBG	18	0.22%	0.14%	14	3	1	0	0	0.06%	0.57%	22.22%	Yes	Level 3
Cherry Wu	CBD/CBG	1	0.16%		1	0	0	0	0	0.16%	0.16%	0.00%		Level 2

Cherry WULF	CBD/CBG	1	0.19%		1	0	0	0	0	0.19%	0.19%	0.00%		Level 2
Cherry x Otto II Sweetened	Cross	1	0.20%		1	0	0	0	0	0.20%	0.20%	0.00%		Level 2
Cherry X Otto Sweetened	Cross	1	0.11%		1	0	0	0	0	0.11%	0.11%	0.00%		Level 2
Cherry X Sulf	Cross	1	0.12%		1	0	0	0	0	0.12%	0.12%	0.00%		Level 2
Cinderella Story	CBD/CBG	1	0.30%		1	0	0	0	0	0.30%	0.30%	0.00%		Level 2
Citrus Fire	CBD/CBG	1	0.24%		1	0	0	0	0	0.24%	0.24%	0.00%		Level 2
Classic Rock	Unknown	1	0.16%		1	0	0	0	0	0.16%	0.16%	0.00%		Level 2
Cloud Berry	CBD/CBG	1	0.32%		0	1	0	0	0	0.32%	0.32%	100.00%		Level 3
Cobbler	CBD/CBG	2	0.27%	0.10%	1	1	0	0	0	0.20%	0.33%	50.00%		Level 3
Colorado Cherry	CBD/CBG	4	0.12%	0.09%	4	0	0	0	0	0.05%	0.26%	0.00%		Level 2
Colorado Gold	CBD/CBG	1	0.29%		1	0	0	0	0	0.29%	0.29%	0.00%		Level 2
Dank A	Unknown	0												Null
Dank B	Unknown	0												Null
Deadlights	CBD/CBG	1	0.19%		1	0	0	0	0	0.19%	0.19%	0.00%		Level 2
Deshutes	CBD/CBG	1	0.30%		1	0	0	0	0	0.30%	0.30%	0.00%		Level 2
Early Abacus	CBD/CBG	1	0.29%		1	0	0	0	0	0.29%	0.29%	0.00%		Level 2
Early SR1	CBD/CBG	1	0.48%		0	1	0	0	0	0.48%	0.48%	100.00%		Level 3
Elektra	CBD/CBG	12	0.33%	0.22%	5	4	3	0	0	0.00%	0.77%	58.33%	Yes	Level 3
EXPL13	Unknown	13	0.13%	0.06%	13	0	0	0	0	0.04%	0.21%	0.00%		Level 2
F1	Unknown	1	0.17%		1	0	0	0	0	0.17%	0.17%	0.00%		Level 2
Fedora	CBD/CBG	1	0.10%		1	0	0	0	0	0.10%	0.10%	0.00%		Level 2
Felina 32	Fiber/Grain	5	0.06%	0.03%	5	0	0	0	0	0.04%	0.10%	0.00%		Level 1
Feral	Unknown	1	0.97%		0	0	1	0	0	0.97%	0.97%	100.00%	Yes	Level 3
Ferimon	CBD/CBG	0												Null
Fractal Boxes	CBD/CBG	1	0.28%		1	0	0	0	0	0.28%	0.28%	0.00%		Level 2
Franklin	CBD/CBG	1	0.10%		1	0	0	0	0	0.10%	0.10%	0.00%		Level 2
Fresh Start	CBD/CBG	1	0.15%		1	0	0	0	0	0.15%	0.15%	0.00%		Level 2
Frost	CBD/CBG	1	0.26%		1	0	0	0	0	0.26%	0.26%	0.00%		Level 2
Frosted Lime	CBD/CBG	3	0.34%	0.08%	1	2	0	0	0	0.25%	0.41%	66.67%		Level 3
Futura 75	Fiber/Grain	9	0.05%	0.02%	9	0	0	0	0	0.03%	0.10%	0.00%		Level 1
Golden Kush	CBD/CBG	1	0.37%		0	1	0	0	0	0.37%	0.37%	100.00%		Level 3
Goliath	CBD/CBG	1	0.25%		1	0	0	0	0	0.25%	0.25%	0.00%		Level 2
Green	CBD/CBG	1	0.45%		0	1	0	0	0	0.45%	0.45%	100.00%		Level 3

Green Mountain	CBD/CBG	1	0.24%		1	0	0	0	0	0.24%	0.24%	0.00%		Level 2
Green MTM	CBD/CBG	1	0.21%		1	0	0	0	0	0.21%	0.21%	0.00%		Level 2
H1	CBD/CBG	1	0.24%		1	0	0	0	0	0.24%	0.24%	0.00%		Level 2
Harlem Valley Kush	CBD/CBG	1	0.76%		0	0	1	0	0	0.76%	0.76%	100.00%	Yes	Level 3
Hawaiian Haze	CBD/CBG	14	0.39%	0.32%	6	4	4	0	0	0.00%	0.97%	57.14%	Yes	Level 3
Hawaiian Haze Purple	CBD/CBG	1	0.12%		1	0	0	0	0	0.12%	0.12%	0.00%		Level 2
Hemp Kush	CBD/CBG	1	0.04%		1	0	0	0	0	0.04%	0.04%	0.00%		Level 2
Hempress 1	CBD/CBG	2	0.39%	0.19%	1	0	1	0	0	0.26%	0.53%	50.00%	Yes	Level 3
Hempress 3	CBD/CBG	1	0.57%		0	0	1	0	0	0.57%	0.57%	100.00%	Yes	Level 3
Henola	Fiber/Grain	1	0.02%		1	0	0	0	0	0.02%	0.02%	0.00%		Level 1
HK08	CBD/CBG	1	0.30%		0	1	0	0	0	0.30%	0.30%	100.00%		Level 3
Hot Blonde	CBD/CBG	1	0.30%		1	0	0	0	0	0.30%	0.30%	0.00%		Level 2
HTXCW	Unknown	1	0.21%		1	0	0	0	0	0.21%	0.21%	0.00%		Level 2
Hurricane Florence	CBD/CBG	1	1.73%		0	0	0	1	0	1.73%	1.73%	100.00%	Yes	Level 3
Jazz the Glass	CBD/CBG	1	0.41%		0	1	0	0	0	0.41%	0.41%	100.00%		Level 3
Jet Fuel	CBD/CBG	1	0.32%		0	1	0	0	0	0.32%	0.32%	100.00%		Level 3
Joey	Fiber/Grain	2	0.02%	0.01%	2	0	0	0	0	0.01%	0.02%	0.00%		Level 1
Jupiter	CBD/CBG	3	0.23%	0.05%	3	0	0	0	0	0.17%	0.27%	0.00%		Level 2
Kayagene KG9201	CBD/CBG	1	0.17%		1	0	0	0	0	0.17%	0.17%	0.00%		Level 2
Kayagene KG9202	CBD/CBG	1	0.17%		1	0	0	0	0	0.17%	0.17%	0.00%		Level 2
KLR #3 Orange Peel	CBD/CBG	1	0.46%		0	1	0	0	0	0.46%	0.46%	100.00%		Level 3
Koda Lime	CBD/CBG	1	0.38%		0	1	0	0	0	0.38%	0.38%	100.00%		Level 3
Late Sue Domestic	CBD/CBG	1	0.11%		1	0	0	0	0	0.11%	0.11%	0.00%		Level 2
Lifter	CBD/CBG	12	0.49%	0.23%	3	4	5	0	0	0.23%	0.96%	75.00%	Yes	Level 3
Logan	CBD/CBG	1	0.04%		1	0	0	0	0	0.04%	0.04%	0.00%		Level 2
Lucy	CBD/CBG	1	0.44%		0	1	0	0	0	0.44%	0.44%	100.00%		Level 3
Magic Bullet	CBD/CBG	1	0.78%		0	0	1	0	0	0.78%	0.78%	100.00%	Yes	Level 3
Med-B	Unknown	1	0.43%		0	1	0	0	0	0.43%	0.43%	100.00%		Level 3
Melon Boax	CBD/CBG	2	0.23%	0.05%	2	0	0	0	0	0.20%	0.27%	0.00%		Level 2
Merlot	CBD/CBG	6	0.30%	0.22%	3	2	1	0	0	0.05%	0.58%	50.00%	Yes	Level 3
Midwest	CBD/CBG	3	0.25%	0.04%	2	1	0	0	0	0.22%	0.30%	33.33%		Level 3
Mother Mary	CBD/CBG	1	0.02%		1	0	0	0	0	0.02%	0.02%	0.00%		Level 2
Mountain Mango	CBD/CBG	3	0.31%	0.07%	1	2	0	0	0	0.22%	0.36%	66.67%		Level 3
Murphy's Medley	CBD/CBG	2	0.27%	0.08%	1	1	0	0	0	0.21%	0.32%	50.00%		Level 3

Naked Lady	CBD/CBG	1	0.35%		0	1	0	0	0	0.35%	0.35%	100.00%		Level 3
Nebraska	Fiber/Grain	1	0.22%		1	0	0	0	0	0.22%	0.22%	0.00%		Level 1
NG Soothe	CBD/CBG	0												Null
NWG - 331	Fiber/Grain	2	0.05%	0.01%	2	0	0	0	0	0.04%	0.06%	0.00%		Level 1
NWG - Elite	Fiber/Grain	2	0.07%	0.05%	2	0	0	0	0	0.04%	0.11%	0.00%		Level 1
NY Cherry	CBD/CBG	1	0.06%		1	0	0	0	0	0.06%	0.06%	0.00%		Level 2
O2	CBD/CBG	1	0.72%		0	0	1	0	0	0.72%	0.72%	100.00%	Yes	Level 3
OC	CBD/CBG	1	0.20%		1	0	0	0	0	0.20%	0.20%	0.00%		Level 2
OGCS1	CBD/CBG	1	0.53%		0	0	1	0	0	0.53%	0.53%	100.00%	Yes	Level 3
Old Fashioned	CBD/CBG	2	0.32%	0.02%	0	2	0	0	0	0.31%	0.34%	100.00%		Level 3
Orange	CBD/CBG	1	0.44%		0	1	0	0	0	0.44%	0.44%	100.00%		Level 3
Oregon Bush	CBD/CBG	2	0.13%	0.07%	2	0	0	0	0	0.08%	0.18%	0.00%		Level 2
Oregon CBD	CBD/CBG	1	0.20%		1	0	0	0	0	0.20%	0.20%	0.00%		Level 2
Original Cherry	CBD/CBG	1	0.70%		0	0	1	0	0	0.70%	0.70%	100.00%	Yes	Level 3
Otto	CBD/CBG	1	0.14%		1	0	0	0	0	0.14%	0.14%	0.00%		Level 2
Otto 2 x Baox x Wife	Cross	1	0.06%		1	0	0	0	0	0.06%	0.06%	0.00%		Level 2
Otto Franklin	CBD/CBG	1	0.10%		1	0	0	0	0	0.10%	0.10%	0.00%		Level 2
Otto II	CBD/CBG	1	0.10%		1	0	0	0	0	0.10%	0.10%	0.00%		Level 2
Otto II Franklin	CBD/CBG	1	0.07%		1	0	0	0	0	0.07%	0.07%	0.00%		Level 2
Otto II Stout	CBD/CBG	1	0.08%		1	0	0	0	0	0.08%	0.08%	0.00%		Level 2
Otto Stout	CBD/CBG	1	0.07%		1	0	0	0	0	0.07%	0.07%	0.00%		Level 2
Otto Sweeter	CBD/CBG	1	0.06%		1	0	0	0	0	0.06%	0.06%	0.00%		Level 2
Peach Mint Kush	CBD/CBG	2	0.38%	0.12%	1	1	0	0	0	0.29%	0.47%	50.00%		Level 3
Pewter River	Fiber/Grain	1	0.43%		0	1	0	0	0	0.43%	0.43%	100.00%		Level 3
Pine Berry	CBD/CBG	3	0.21%	0.13%	2	1	0	0	0	0.07%	0.30%	33.33%		Level 3
Pine Walker	CBD/CBG	1	0.10%		1	0	0	0	0	0.10%	0.10%	0.00%		Level 2
Pine Walker Seedless	CBD/CBG	1	0.17%		1	0	0	0	0	0.17%	0.17%	0.00%		Level 2
Pink Panther	CBD/CBG	1	0.46%		0	1	0	0	0	0.46%	0.46%	100.00%		Level 3
Portugal	Fiber/Grain	1	0.37%		0	1	0	0	0	0.37%	0.37%	100.00%		Level 3
Purple	CBD/CBG	1	0.32%		0	1	0	0	0	0.32%	0.32%	100.00%		Level 3
Purple Boax	CBD/CBG	6	3.16%	4.83%	3	1	0	0	2	0.12%	11.46%	16.67%		Level 3
Queen Dream	CBD/CBG	1	0.34%		0	1	0	0	0	0.34%	0.34%	100.00%		Level 3
Queen of Hope	CBD/CBG	1	0.34%		0	1	0	0	0	0.34%	0.34%	100.00%		Level 3
R4	CBD/CBG	1	0.22%		1	0	0	0	0	0.22%	0.22%	0.00%		Level 2

R4 X WIFE X Industrial	Cross	1	0.07%		1	0	0	0	0	0.07%	0.07%	0.00%		Level 2
R4X WIFE	Cross	1	0.60%		0	0	1	0	0	0.60%	0.60%	100.00%	Yes	Level 3
Red	CBD/CBG	1	0.08%		1	0	0	0	0	0.08%	0.08%	0.00%		Level 2
Red Bordeaux	CBD/CBG	2	0.56%	0.31%	0	1	1	0	0	0.34%	0.77%	100.00%	Yes	Level 3
Relief	CBD/CBG	2	0.13%	0.03%	2	0	0	0	0	0.11%	0.15%	0.00%		Level 2
Relief Now	CBD/CBG	5	0.14%	0.06%	5	0	0	0	0	0.06%	0.23%	0.00%		Level 2
Remission	CBD/CBG	0												Null
River Rock	CBD/CBG	1	0.10%		1	0	0	0	0	0.10%	0.10%	0.00%		Level 2
RN13	CBD/CBG	2	0.35%	0.22%	1	1	0	0	0	0.19%	0.50%	50.00%		Level 3
RN13A	CBD/CBG	9	0.11%	0.04%	9	0	0	0	0	0.09%	0.19%	0.00%		Level 2
RNA Auto Flower	CBD/CBG	1	0.30%		1	0	0	0	0	0.30%	0.30%	0.00%		Level 2
Rocky Hemp	Fiber/Grain	1	0.62%		0	0	1	0	0	0.62%	0.62%	100.00%	Yes	Level 3
Rogue	CBD/CBG	1	0.16%		1	0	0	0	0	0.16%	0.16%	0.00%		Level 2
Rosella	CBD/CBG	1	0.34%		0	1	0	0	0	0.34%	0.34%	100.00%		Level 3
Royal NY	Unknown	1	0.40%		0	1	0	0	0	0.40%	0.40%	100.00%		Level 3
Sangria	CBD/CBG	1	0.42%		0	1	0	0	0	0.42%	0.42%	100.00%		Level 3
SC-1	Fiber/Grain	1	0.37%		0	1	0	0	0	0.37%	0.37%	100.00%		Level 3
Schiavi Seed	Fiber/Grain	1	0.08%		1	0	0	0	0	0.08%	0.08%	0.00%		Level 1
Schoolhouse Red	CBD/CBG	1	0.36%		0	1	0	0	0	0.36%	0.36%	100.00%		Level 3
Shaolin Gleaux	CBD/CBG	1	0.46%		0	1	0	0	0	0.46%	0.46%	100.00%		Level 3
Silver	Unknown	1	0.50%		0	1	0	0	0	0.50%	0.50%	100.00%		Level 3
Siskiyou Gold	CBD/CBG	2	0.36%	0.01%	0	2	0	0	0	0.36%	0.37%	100.00%		Level 3
Sisters	CBD/CBG	1	0.07%		1	0	0	0	0	0.07%	0.07%	0.00%		Level 2
Sisters F3	CBD/CBG	1	0.36%		0	1	0	0	0	0.36%	0.36%	100.00%		Level 3
Skip	CBD/CBG	1	0.21%		1	0	0	0	0	0.21%	0.21%	0.00%		Level 2
Sour CBG	CBD/CBG	1	0.06%		1	0	0	0	0	0.06%	0.06%	0.00%		Level 2
Sour Elektra	CBD/CBG	1	0.49%		0	1	0	0	0	0.49%	0.49%	100.00%		Level 3
Sour Hawaiian Haze	CBD/CBG	1	0.34%		0	1	0	0	0	0.34%	0.34%	100.00%		Level 3
Sour Lifter	CBD/CBG	1	0.56%		0	0	1	0	0	0.56%	0.56%	100.00%	Yes	Level 3
Sour Lifter Seedless	CBD/CBG	1	0.41%		0	1	0	0	0	0.41%	0.41%	100.00%		Level 3
Sour Space Candy	CBD/CBG	9	0.37%	0.22%	4	2	3	0	0	0.15%	0.82%	55.56%	Yes	Level 3
Sour Special Sauce	CBD/CBG	2	0.49%	0.10%	0	1	1	0	0	0.42%	0.57%	100.00%	Yes	Level 3
SOUR TSU	CBD/CBG	1	1.25%		0	0	0	1	0	1.25%	1.25%	100.00%	Yes	Level 3
Southern Cat Daddy	CBD/CBG	2	0.38%	0.04%	0	2	0	0	0	0.35%	0.41%	100.00%		Level 3

Southern OG	CBD/CBG	1	0.42%		0	1	0	0	0	0.42%	0.42%	100.00%		Level 3
Space Candy	CBD/CBG	1	0.37%		0	1	0	0	0	0.37%	0.37%	100.00%		Level 3
Special Sauce	CBD/CBG	9	0.31%	0.18%	4	4	1	0	0	0.12%	0.70%	55.56%	Yes	Level 3
Spectrum	CBD/CBG	1	0.19%		1	0	0	0	0	0.19%	0.19%	0.00%		Level 2
Stem Cell CBG	CBD/CBG	1	0.13%		1	0	0	0	0	0.13%	0.13%	0.00%		Level 2
Sterling Gold	Fiber/Grain	1	0.46%		0	1	0	0	0	0.46%	0.46%	100.00%		Level 3
Stormy Daniels	CBD/CBG	3	0.30%	0.11%	1	2	0	0	0	0.17%	0.37%	66.67%		Level 3
Stray Cat	CBD/CBG	2	0.33%	0.12%	1	1	0	0	0	0.24%	0.41%	50.00%		Level 3
Sunbeam Haze	CBD/CBG	6	0.39%	0.32%	4	0	2	0	0	0.17%	0.96%	33.33%	Yes	Level 3
Super Cherry	CBD/CBG	1	0.20%		1	0	0	0	0	0.20%	0.20%	0.00%		Level 2
Super Sour Space Candy	CBD/CBG	1	0.28%		1	0	0	0	0	0.28%	0.28%	0.00%		Level 2
Superwoman	CBD/CBG	1	0.50%		0	0	1	0	0	0.50%	0.50%	100.00%	Yes	Level 3
Suver Haze	CBD/CBG	15	0.39%	0.16%	4	9	2	0	0	0.07%	0.68%	73.33%	Yes	Level 3
Suzy's Gift	CBD/CBG	2	0.28%	0.10%	1	1	0	0	0	0.21%	0.35%	50.00%		Level 3
Sweet Wife	CBD/CBG	1	0.41%		0	1	0	0	0	0.41%	0.41%	100.00%		Level 3
Sweetened	CBD/CBG	3	0.21%	0.07%	3	0	0	0	0	0.15%	0.29%	0.00%		Level 2
Swift	Fiber/Grain	2	0.13%	0.02%	2	0	0	0	0	0.12%	0.14%	0.00%		Level 1
T1	CBD/CBG	9	0.18%	0.16%	7	1	1	0	0	0.03%	0.52%	22.22%	Yes	Level 3
T2	CBD/CBG	0												Null
T-5	Unknown	1	0.18%		1	0	0	0	0	0.18%	0.18%	0.00%		Level 2
Tangerine Domestic	CBD/CBG	6	0.19%	0.12%	5	1	0	0	0	0.12%	0.43%	16.67%		Level 2
Terp Town	CBD/CBG	2	0.18%	0.18%	1	1	0	0	0	0.06%	0.31%	50.00%		Level 3
Terpy Hemp	CBD/CBG	1	0.17%		1	0	0	0	0	0.17%	0.17%	0.00%		Level 2
The Wife	CBD/CBG	1	0.46%		0	1	0	0	0	0.46%	0.46%	100.00%		Level 3
Therapy	CBD/CBG	1	0.44%		0	1	0	0	0	0.44%	0.44%	100.00%		Level 3
Trump	CBD/CBG	1	0.06%		1	0	0	0	0	0.06%	0.06%	0.00%		Level 2
Trump X	CBD/CBG	1	0.08%		1	0	0	0	0	0.08%	0.08%	0.00%		Level 2
Tygra	Fiber/Grain	1	0.09%		1	0	0	0	0	0.09%	0.09%	0.00%		Level 1
Ultra Rich CBD #1	CBD/CBG	1	0.67%		0	0	1	0	0	0.67%	0.67%	100.00%	Yes	Level 3
Ultra Rich CBD #2	CBD/CBG	1	0.16%		1	0	0	0	0	0.16%	0.16%	0.00%		Level 2
Ultra Rich CBD #3	CBD/CBG	1	0.08%		1	0	0	0	0	0.08%	0.08%	0.00%		Level 2
Ultra Rich CBD #4	CBD/CBG	1	0.66%		0	0	1	0	0	0.66%	0.66%	100.00%	Yes	Level 3
Ultra Rich CBD #5	CBD/CBG	1	1.11%		0	0	0	1	0	1.11%	1.11%	100.00%	Yes	Level 3
Ultra Rich CBD #6	CBD/CBG	1	1.32%		0	0	0	1	0	1.32%	1.32%	100.00%	Yes	Level 3

Ultra Rich CBD #7	CBD/CBG	1	0.90%		0	0	1	0	0	0.90%	0.90%	100.00%	Yes	Level 3
Umpqua	CBD/CBG	3	0.28%	0.16%	2	1	0	0	0	0.18%	0.47%	33.33%		Level 3
Unknown	Unknown	7	0.72%	1.12%	4	0	1	2	0	0.00%	3.09%	42.86%	Yes	Level 3
Valerie 16	CBD/CBG	1	0.30%		1	0	0	0	0	0.30%	0.30%	0.00%		Level 2
Valley Kush	CBD/CBG	1	0.50%		0	0	1	0	0	0.50%	0.50%	100.00%	Yes	Level 3
Vermont Sauces	CBD/CBG	1	0.24%		1	0	0	0	0	0.24%	0.24%	0.00%		Level 2
Vortex A-1	CBD/CBG	1	0.28%		1	0	0	0	0	0.28%	0.28%	0.00%		Level 2
VT CHERRY	CBD/CBG	1	0.24%		1	0	0	0	0	0.24%	0.24%	0.00%		Level 2
VT Kush	CBD/CBG	1	0.43%		0	1	0	0	0	0.43%	0.43%	100.00%		Level 3
Watermelon Baox	CBD/CBG	0												Null
White	CBD/CBG	1	0.26%		1	0	0	0	0	0.26%	0.26%	0.00%		Level 2
White CBG	CBD/CBG	4	0.10%	0.06%	4	0	0	0	0	0.05%	0.15%	0.00%		Level 2
Wild Horse	CBD/CBG	1	0.23%		1	0	0	0	0	0.23%	0.23%	0.00%		Level 2
Wu5	CBD/CBG	1	0.38%		0	1	0	0	0	0.38%	0.38%	100.00%		Level 3
WULF	CBD/CBG	1	0.12%		1	0	0	0	0	0.12%	0.12%	0.00%		Level 2
Wyld Stallyns	CBD/CBG	1	0.31%		0	1	0	0	0	0.31%	0.31%	100.00%		Level 3
X-59	Fiber/Grain	6	0.02%	0.01%	6	0	0	0	0	0.00%	0.03%	0.00%		Level 1
YoungSim 10	CBD/CBG	1	1.01%		0	0	0	1	0	1.01%	1.01%	100.00%	Yes	Level 3