



January 9, 2020

United States Department of Agriculture  
Agricultural Marketing Service, USDA Domestic Hemp Production Program  
410 L'Enfant Plaza S. W.  
Post Office Box 23192  
Washington, D.C. 20026

Re: Montana 2020 Revised Hemp Plan

Montana's Revised Hemp Plan is enclosed. In the year since we submitted our first plan, the Montana Department of Agriculture has worked with nearly 300 hemp growers to create a program that rationally regulates over 50,000 acres of hemp cultivation. The Montana State Hemp Program sensibly develops and regulates both the crop and the industry. We urge the United States Department of Agriculture (USDA) to approve this plan to allow our farmers to continue to thrive without undue federal interference.

Our revisions include updates to laws and rules to reflect their current status ([Attachment A](#) and [Attachment B](#)); creates a new section to operate within USDA Interim Final rule (IFR) requirements ([Attachment C](#)); and updates forms that are currently used pertaining to disposal protocols, lab qualifications, and sampling procedures ([Attachment H](#)).

Please reach out to the department with questions or concerns regarding Montana's revised plan.

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Cort Jensen, Chief Legal: (406) 444-5402, [cojensen@mt.gov](mailto:cojensen@mt.gov)

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## State of Montana Hemp Plan

Montana law requires the Montana Department of Agriculture (hereafter Department) to license hemp growers in the state and provides broad rulemaking authority to create a functional hemp regulatory plan. The Department believes its current plan meets requirements set forth in the 2018 Farm Bill and seeks approval from the United States Department of Agriculture (USDA). Farm Bill requirements are numbered below with the Department's response following each.

**1. How will the Department show a practice to maintain relevant information regarding land on which hemp is produced in the State or territory of the Indian tribe, including a legal description of the land, for a period of not less than 3 calendar years?**

- (Department Response) Montana Law ([Attachment A](#)) requires a license to grow hemp. Our Hemp License Application form, for both the two years (2018 and 2019) of the pilot program and moving forward with the USDA program, requires the legal description of the land or the longitude and latitude from which the legal description can be obtained. We have updated our forms to be consistent with the proposed USDA forms. The current form is [Attachment F](#). We maintain all governmental records for a minimum of three years and a minimum of 7 years for information such as this.

**2. Does the Department have a procedure for testing, using post-decarboxylation or other similarly reliable methods, delta-9 tetrahydrocannabinol concentration levels of hemp produced in the State or territory of the Indian tribe?**

- (Department Response) Montana has an Analytical Chemistry Lab which has applied for DEA approved status and expects to obtain it soon ([Attachment G](#)). The plan performs two tests:
  1. Determination of Delta-9-Tetrahydrocannabinol ( $\Delta^9$ -THC) and Delta-9-Tetrahydrocannabinolic Acid ( $\Delta^9$ -THCA) in Hemp Using Liquid Chromatography-Electrospray/Mass Spectrometry;
  2. Determination of Total Moisture in Forages using a Two-Step Procedure.

**3. Does the Department have a procedure for the effective disposal of plants, whether growing or not, that are produced in violation of this subtitle; and products derived from those plants?**

- (Department Response) The Department has legal authority over hemp and hemp processing. See [Attachment A](#) (Laws) and [Attachment B](#) (Rules). The disposal procedure is outlined in [Attachment E](#).

**4. Does the Department have a procedure to comply with the enforcement procedures under the 2018 amendments to the Agricultural Marketing Act of 1946 Section 297A subsection (e)?**

- (Department Response) We are adopting procedures to mirror by reference the Farm Bill enforcement actions by rule ([Attachment B](#)). The Department has the ability by state law to adopt additional rules as needed or required by the USDA. All enforcement actions will be conducted with proper due process as guaranteed by Montana law. The Agricultural Marketing Act of 1946 Section 297A subsection (e) is adopted by reference. The Department plans to utilize the DEA procedures and policies including "DEA Internal Directive Regarding the Presence of Cannabinoids in



Products and Materials Made from the Cannabis Plant (May 22, 2018)” when taking compliance actions.

**5. Does the Department have a procedure for conducting annual inspections of, at a minimum, a random sample of hemp producers to verify that hemp is not produced in violation of the limits on THC found in the Farm Bill?**

- (Department Response) The Department adopted rules ([Attachment B](#), [Attachment C](#)) that include sampling and inspection procedures. Random compliance checks on paperwork and procedures are planned annually for a random number of growers. The schedule for this is 20 percent per year. Our proposed sampling protocol is found in [Attachment H](#) and our inspection schedule is found in [Attachment I](#).

**6. Does the Department have a procedure for submitting the information described in the Agricultural Marketing Act of 1946 Section 297C(d)(2), as applicable, to the Secretary not more than 30 days after the date on which the information is received?**

- (Department Response) The Department already collects required information as part of its state hemp program and will share information based on the schedule specified by the USDA including on a monthly and yearly basis as indicated. See [Attachment C](#).

**7. Can the Department certify that the State or Indian tribe has the resources and personnel to carry out the practices and procedures described in 1 through 6 above?**

- (Department Response) The Department has proven its capability to do so over the course of the last three years while operating its hemp pilot program. Montana laws and rules allow us to raise fees as needed to pay for costs incurred. [Attachment B](#) includes the Department’s rules that include fees for additional work required by the 2018 farm bill. The Department plans to have two full-time employees in the program and utilize additional staff during the pre-harvest season sampling. The Department certifies that it can, has, and will continue to perform all the duties outlined herein and required in the 2018 Farm bill.

**8. Has the Department included any other practice or procedure established by a State or Indian tribe, as applicable, to the extent that the practice or procedure is consistent with this subtitle?**

- (Department Response) The Department has included all portions of its current program in the attachments that follow. The Department views failure to obtain a required license as an intentional violation and not a negligence violation.

**9. Who are the Department’s contacts for this program?**

- Andy Gray  
Hemp Program Coordinator  
(406) 444-0512  
[AnGray@mt.gov](mailto:AnGray@mt.gov)
- Cort Jensen  
Chief Attorney  
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Helena, MT 59601



## **List of Attachments**

[Attachment A – Montana Law](#)

[Attachment B - Current Rules](#)

[Attachment C – USDA Compliance Procedures](#)

[Attachment D - Proposed Rules](#)

[Attachment E – Disposal Protocols](#)

[Attachment F – Current Form](#)

[Attachment G – Lab Qualifications](#)

[Attachment H - Sampling Policy](#)

[Attachment I - Inspection Schedule](#)



## Attachment A

### Hemp Laws of Montana (MCA)

80-18-101 Definitions

80-18-102 Hemp authorized as agricultural crop

80-18-103 Hemp -- licensing

80-18-104 and 80-18-105 reserved

80-18-106 Hemp production -- notification requirements

80-18-107 Rulemaking authority

80-18-108 and 80-18-109 reserved

80-18-110 Disposition of fees

80-18-111 Affirmative defense for possession or cultivation of marijuana

**80-18-101. Definitions.** As used in this part, the following definitions apply:

(1) "Hemp" means all parts and varieties of the plant *Cannabis sativa* L. containing no greater than 0.3% tetrahydrocannabinol.

(2) "Marijuana" means all plant material from the genus *Cannabis* containing tetrahydrocannabinol (THC) or seeds of the genus capable of germination.

**80-18-102. Hemp authorized as agricultural crop.** Hemp that has no more than 0.3% tetrahydrocannabinol is considered an agricultural crop in this state. Upon meeting the requirements of [80-18-103](#), an individual in this state may plant, grow, harvest, possess, process, sell, or buy hemp if the hemp does not contain more than 0.3% tetrahydrocannabinol.

**80-18-103. Hemp -- licensing.** (1) An individual growing hemp for commercial purposes shall apply to the department for a license on a form prescribed by the department.

(2) The application for a license must include the name and address of the applicant and the legal description of the land area to be used for the production of hemp.

(3) The licensing requirements of this part do not apply to employees of the agricultural experiment station or the Montana state university-Bozeman extension service involved in research and extension-related activities.

**80-18-106. Hemp production -- notification requirements.** (1) Each licensee shall file with the department:

(a) documentation showing that the seeds planted are of a type and variety certified to have no more than 0.3% tetrahydrocannabinol; and

(b) a copy of any contract to grow hemp.

(2) Each licensee shall notify the department of the sale or distribution of any hemp grown by the licensee, including the name and address of the person receiving the hemp.

**80-18-107. Rulemaking authority.** The department shall adopt rules that include but are not limited to:

(1) testing of the hemp during growth to determine tetrahydrocannabinol levels;

(2) supervision of the hemp during its growth and harvest;

(3) assessment of a fee that is commensurate with the costs of the department's activities in licensing, testing, and supervising hemp production; and

(4) any other rules and procedures necessary to carry out this part.

**80-18-110. Disposition of fees.** All fees assessed as provided in [80-18-107](#) must be deposited with the state treasurer to the credit of the state special revenue fund for the use of the department for administering and enforcing this part.



**80-18-111. Affirmative defense for possession or cultivation of marijuana.** (1) It is an affirmative defense to a prosecution for the possession or cultivation of marijuana under [45-9-102](#), [45-9-103](#), and [45-9-110](#) that:

- (a) the defendant was growing hemp pursuant to this part;
- (b) the defendant had valid applicable controlled substances registrations from the United States department of justice, drug enforcement administration; and
- (c) the defendant fully complied with all of the conditions of the controlled substances registration.

(2) This section is not an affirmative defense to a charge of criminal sale or distribution of marijuana.



**Attachment B**

**Current Hemp Rules of Montana**

<p align="center"><b><u>Subchapter 1</u></b>  <b><u>Hemp Definitions and License Applications</u></b></p>			
<a href="#"><u>4.19.101</u></a>	DEFINITIONS		8/24/2019
<a href="#"><u>4.19.102</u></a>	APPLICATION FOR MONTANA STATE HEMP PROGRAM LICENSE		5/11/2019
<a href="#"><u>4.19.103</u></a>	MONTANA STATE HEMP PROGRAM		5/11/2019
<a href="#"><u>4.19.104</u></a>	FEEES		5/11/2019
<a href="#"><u>4.19.105</u></a>	LAB TESTING FEES		5/11/2019
<a href="#"><u>4.19.1e06</u></a>	PENALTIES OR REVOCATIONS		5/11/2019
<a href="#"><u>4.19.107</u></a>	HEMP VARIETY		5/11/2019
<a href="#"><u>4.19.108</u></a>	HEMP VARIETY CATEGORIES		5/11/2019
<a href="#"><u>4.19.109</u></a>	PROHIBITION ON GROWING BOTH HEMP AND MEDICAL MARIJUANA		5/11/2019
<a href="#"><u>4.19.110</u></a>	HEMP SAMPLING		5/11/2019
<p align="center"><b><u>Subchapter 2</u></b>  <b><u>Hemp Processing Definitions and License Applications</u></b></p>			
<a href="#"><u>4.19.201</u></a>	HEMP PROCESSING LICENSE AND FEE		8/24/2019
<a href="#"><u>4.19.202</u></a>	HEMP PROCESSING FOR A COMMODITY DEALER		8/24/2019



## **Attachment C**

### **USDA Compliance Policy**

The Montana Department of Agriculture will utilize the following internal policies and procedures when emulating the USDA approved state hemp plan. The Department would like to state that this in no way waives or abridges the sovereignty of the State of Montana. The USDA is limited in what it can require of states by the language of the 2018 Farm Bill and the US Constitution. These implementations are provided in the spirit of cooperation, with consistency between levels of government, and to create straightforward compliance for our farmers. The Department asks for the USDA's careful consideration before imposing additional requirements not included in the Farm Bill. Our ability to work with the USDA and the FDA is codified in our hemp rules at [ARM 4.19.103\(b\)](#).

#### **A. Reporting to the USDA, AMS, and FSA**

1. The Department will comply with USDA reporting requirements and will provide ("real-time") data on hemp licensees and compliance actions utilizing the fields and formats requested by the USDA. The Department respectfully asks that the USDA consider revising the required field to include only those needed as opposed to those desired (such as emails).
2. Reports will include any changes to the status of producers and the implementation of a license number consistent with the USDA format.
3. The Department will work with growers and the AMS and FSA to create formats that allow for ease of data sharing and consistent labeling to allow for ease of use of federal and state programs.
4. Materially false statements on required forms is prohibited by Montana law and is grounds for denying an applicant participation in the Montana State Hemp Program and may also trigger action from law enforcement.

#### **B. Sampling/Testing Additions**

1. The producer or their representative will be present at the growing site for sampling unless a compelling and documented reason is provided by the grower and the Department consents.
2. The Department will have access to samples and inspect any and all cannabis in the hemp program or claimed as hemp by a grower. This is not meant to create or imply jurisdiction or responsibility over medical marijuana.
3. The Department's sampling procedure is pre-harvest sampling.
4. Montana's Analytical Chemistry Lab is in the process of attaining its DEA license and expects to receive it before the 2020 testing season.
5. The Department will utilize the Measurement of Uncertainty in a manner consistent with the USDA. The Department urges the USDA show similar flexibility and practicality in sampling variations and procedures.

#### **C. How to Handle a "Hot" Hemp Violation**

1. The Department will work with the USDA, DEA, and local law enforcement to ensure that non-compliant hemp is prohibited from entering the stream of commerce or being replanted. This will be accomplished consistently with the "DEA Internal Directive Regarding the Presence of Cannabinoids in Products and Materials Made from the Cannabis Plant" (May 22, 2018), focus on rendering plants unable to replant, and isolate and destroy THC consistent with DEA policies when feasible.



- This will also allow for some portions of the crop to be utilized if rendered DEA complaint. A negligent violation would apply as well. The Department's forms and procedures for doing so are found in [Attachment E](#) and [Attachment F](#).
2. Procedures for all violations are consistent with the 2018 Farm Bill and incorporate the federal law, including timeframes and corrective action plans, into the Montana Hemp Rule in [ARM 4.19.106](#).

**D. Compliance Inspections**

The Department incorporated a five-year random rotation of compliance inspections into its Inspection Schedule ([Attachment I](#)).

**E. Montana Procedures not listed in the Federal Plan but consistent with it**

1. Montana views failure to obtain a hemp license as an intentional violation (instead of negligent) of the act and does not provide any protection in that case should law enforcement view this as criminal action.



## **Attachment D**

### **Proposed Rule Changes**

*The rule changes listed below are in a draft format and have not yet been proposed. New matter is underlined and deleted matter is interlined in ARM 4.19.104.*

- 4.19.104 FEES** (1) The fee for a Montana State Hemp License is \$450.  
(2) The planting fee is \$400 per Montana State Hemp License plus:  
(a) an additional \$250 for ~~Category C seed varieties~~ for all tests required by the USDA IFR or rule.

Reason: In order to comply with the U.S. Domestic Hemp Production Program, set forth by USDA, all crops must be tested. Fees were previously based on the Department's risk-based Hemp Variety Categories (see ARM 4.19.108) which required 100% testing of category C variety crops only. Testing fees listed in 4.19.104(2)(a) apply to all tests submitted for inspection and are necessary to operate the Montana State Hemp Program.

**NEW RULE | FSA REPORTING COMPLIANCE** (1) All producers must register their land use with the FSA in order to participate in the Montana Hemp Program.

Reason: The U.S. Domestic Hemp Production Program requires producers to submit information to the USDA's Farm Service Agency. The Montana Department of Agriculture must require reporting in order for its hemp program to be federally compliant.



## **Attachment E**

### **Disposal Protocol**

Throughout this protocol the term “owner” is defined as the grower of the hemp crop, or the owner of hemp product, under the jurisdiction of the Montana Department of Agriculture.

1. If the hemp tests positive for a prohibited amount of THC during sampling, in an inspection, or by self-disclosure of a grower, the Department may notice the owner and either retest the second half of a sample or take a second sample for testing.
2. The owner will receive notice of the non-compliant crop and be issued a stop movement order (other than harvest) and the right to appeal (formally or informally) under the Montana Administrative Procedures Act.
3. The Department will work with the owner to create a plan of action to either destroy the non-compliant hemp or render it compliant.
4. The USDA will also receive notice of the non-compliant hemp and be asked if a remediation plan will be allowed (See 6) or whether destruction will be required.
5. If destruction is required by the USDA, the Department will work with the owner to find a methodology to safely destroy the hemp consistent with state law and any safety concerns present. This may result in the crop being harvested prior to destruction. The owner is responsible for all costs of the destruction. The USDA will then be informed of how and when the hemp was destroyed.
6. If the USDA allows a remediation plan to dilute or eliminate the THC present, the Department will require the owner to sign a consent order and will retest the hemp post-remediation to assure compliance. The order and retest will be sent to the USDA.
7. The owner may be subject to additional regulatory scrutiny (including more frequent testing) during the five years post positive test by the Department or the USDA.



## **Attachment F**

### **Current Forms**

Links are provided to the location of application, reporting, compliance and destruction forms to ensure our USDA counterparts can access current versions of documents. Inspection and sampling forms are included in [Attachment H](#).

#### **Application and Licensing Forms:**

[MT Hemp License Application, Stage 1, 2020](#)

[MT Hemp Planting Report, Stage 2, 2020](#)

[MT Planting License Certificate](#)

[MT Production License Certificate](#)

#### **Compliance documents:**

[MT Hemp Sample Test Results Report](#)

[MT Hemp Sample Results Informational letter](#)

[MT Hemp Sample Results Affidavit letter](#)

[MT Hemp Sample Results Affidavit](#)

[MT Hemp Sample Results Corrective Action Plan letter](#)

[MT Hemp Sample Results Destruction letter](#)

[MT Hemp Sample Results Destruction form](#)

[MT Mitigation Guidance Document](#)

#### **Reporting documents:**

[MT 2019 Annual Hemp Harvest Report](#)



## **Attachment G**

### **Analytical Lab**

The Department utilizes the Montana State University Analytical Lab located in Bozeman, MT and calculates Total Delta9-THC on a dry weight basis ( $\% \text{Total delta9-THC} = \% \text{Delta9-THC} + (\% \text{Delta9-THCA} \times 0.8772)$ ). The 2018 Farm Bill requires testing methodology that utilizes post decarboxylation, which includes THCA.

Contact information and qualifications are provided below. The lab has provided regulatory work for our internal use for decades and has completed contract work for both the federal government and other states. The Analytical Lab's DEA license was applied for in November 2019 and this attachment will be updated once it is received.

#### **Jona Verreth**

##### **Laboratory Bureau Chief**

**Phone** : (406) 994-6408

**E-mail** : [JVerreth@mt.gov](mailto:JVerreth@mt.gov)

McCall Hall, Montana State University

PO Box 173620

Bozeman, MT 59717-3620

#### **ISO/IEC 17025**

The laboratory is accredited to ISO/IEC 17025 for the specific tests listed on A2LA Certificate Number 2694.01

#### **Certification**

The laboratory is certified in forage analysis by NFTA.

#### **Proficiency Testing**

The laboratory participates in the following proficiency testing programs every year:

- § National Forage Testing Association (NFTA)
- § Association of American Feed Control Officials (AAFCO)
- § Magruder (Fertilizer)
- § EPA pesticide residues in soil and plant tissue



## **Attachment H**

### **Sampling Protocols**

The Department will post its current sampling protocols on its website to stay current with the requirements of the USDA, DEA, and the Industry. The sampling protocol provided is the most current version, as of January 1, 2020. The Department has proposed its guidance document for sampling and testing of hemp which outlines the internal procedures the Department will use to guide sampling and testing protocol. These procedures are in draft form and are subject to change at the discretion of the Department. Licensed hemp growers are encouraged to review this document in preparation of having their crop sampled and for guidelines on self-testing.

[Procedure Guidance for Sample Collection, Sample Prep and Delivery](#): includes all inspection and sampling forms.



## **Attachment I**

### **Inspection/Sampling Schedule**

1. The Department will always prioritize inspections by complaints of non-compliance.
2. The Department will strive to minimize the number of inspections needed to avoid unnecessary expense or burden on farmers.
3. To the extent required by the USDA, the Department will inspect 100% of all fields.
4. The Department will collect paperwork and conduct procedure inspections on 20% of growers each year to ensure compliance and the growers' understanding of program requirements.

# Montana State Hemp Program

## Procedure Guidance for Sample Collection, Sample Prep and Delivery

March 4, 2020 - V12

### Authority

Title 80, Chapter 18-101 - 111, Montana Code Annotated, the Administrative Rules of Montana, Chapter 19.101 - 106, and the Agriculture Improvement Act of 2018.

### Scope

To document the proper procedures for the sampling of hemp plants for the tolerance level of THC within Montana's State Hemp Program to ensure compliance with relevant state and federal regulations.

Hemp growing conditions in Montana vary tremendously, including acreage, varieties, plant densities and irrigation. Additionally, the geographic size of Montana makes it difficult to sample such a large crop in a short period of time. As such, the department will implement more than one option of sampling hemp for THC, depending on the circumstances of variety, harvest timing, resources, weather, acreage, plant density and travel.

### TABLE OF CONTENTS

1. Definitions
2. Testing by Category of Variety
3. Sampling Timeline
4. Equipment and Sanitation
5. Sampling Protocol
6. Sample Identification
7. Grower Submitted samples
8. Sample Prep, Storage and Delivery
9. Chain of Custody
10. Sample Forms and Reporting
11. Appendices
  - Hypergeometric Table
  - Hemp Document of Inspection
  - Hemp Inspection Field Summary
  - Hemp Sample Collection Report / Sample Receipt
  - Hemp Lot/Field Map
  - Sample Log / Chain of Custody

## 1. Definitions

- (1) Field - means a contiguous area not separated by any fence, drainage, road or waterway, regardless of Township, Range or Section.
- (2) Lab - means the Department's Analytical Lab (MSU, McCall Hall, Bozeman, MT).
- (3) Lot - means a contiguous or immediate adjoining area of a field or fields, greenhouse, or indoor growing structure containing the same variety of hemp throughout the area and having a harvest date within 3-weeks.
- (4) Lot ID - The official Lot ID will be the Lot/field ID number as recorded in the hemp database, regardless if the grower has a separate Lot ID. Lots must be tracked by the grower from planting through harvest and until the plant is no longer in a raw, unaltered state. If applicable, the Grower Lot ID may change after harvest as long as it is traceable to the previous Lot ID.
- (5) Official sample - means a composite, representative sample of hemp plants or plant parts from a designated Lot collected in accordance with official procedures as outlined herein.
- (6) Sample - means a sample collected from hemp plants while the plant is growing
- (7) Processing - means heating, mixing, grinding, separating, extracting, cutting, freezing or otherwise physically or chemically altering hemp plants or plant parts from a raw, unaltered state.
- (8) Split Sample - means one of two equivalent portions of a whole composite sample identified as such with the same information as the official sample, collected at the same time in the same manner and randomly divided after the composite is collected.
- (9) Sub-sample - consist of 1 bud randomly selected.
- (10) THC - means Total  $\Delta 9$ -THC on a dry matter basis  
(% Total  $\Delta 9$ -THC = %  $\Delta 9$ -THC + (%  $\Delta 9$ -THCA x 0.877))

## 2. Testing and Frequency

The department will make efforts in good faith to test all varieties and lots at the level required by USDA. However, the department will continue to advocate for a risk-based random sampling protocol based on hemp variety categories established in administrative rule ([ARM 4.19.108](#)).

## 3. Inspection and Sampling Overview

- (1) The department may require the planting date and the estimated harvest date prior to issuance of the Production license certificate so it can estimate timing and work load requirements.
- (2) Each sampling event will include an inspection to verify proper licensure, sampled material including Lot ID, and Lot location. Additionally, random annual audits will be conducted of 20% of all license holders to verify compliance with state and federal regulations pertaining to hemp. These audits will include verification of compliance for seed source, proper seed documentation pertaining to the Montana Seed Act, harvest date as it relates to sampling, and all product entering commerce.
- (3) Official samples collected by the department will be collected within 15 days of harvest.

- (4) The inspector will give the grower at least 24-hours, preferably 48-hour notice of the inspection date to set up time and location.
- (5) The license holder or an authorized representative is encouraged to be present at the growing site during inspection and be available by phone prior to or during the inspection. The landowner on record can be an authorized representative if granted by the license holder. Authorization for entrance to and inspection of property and collection of hemp samples for testing is granted by signature of the licensee as a part of the licensing process. If neither the license holder or an authorized agent can be present during the inspection/sampling event, prior communications with the license holder will occur to assure both the licensee and the inspector are aware of the Lots to be sampled, the location of said Lots, and any other information pertinent to the inspection process.
- (6) Inspectors will be provided with complete and unrestricted access to all industrial hemp and other cannabis plants, whether growing or harvested, and all land, buildings, and other structures used for the cultivation and storage of all industrial hemp and other cannabis plants.
- (7) Harvested lots must maintain their identity, not be commingled and be traceable until official results indicate the legality of the lot.
- (8) Lots must be sampled, as outlined in this plan, prior to harvest.
- (9) Non-compliant Lots will be quarantined with the licensee investigated and subject to enforcement actions outlined in the State Plan.
- (10) The department's goal is to notify license holders of official sample test results within 7-business days of sampling. The test results will determine the eligibility to transport or process the harvested materials.

#### **4. Equipment**

The equipment required for conducting an inspection and the collection of hemp samples are as follows:

- Coveralls (single use)
- Vinyl gloves
- Pruning shears
- Composite sample collection container (washable bag for carrying shears and sub-sample when collecting the sample)
- Composite sample bags (breathable paper, approximately 12"x 6"x4")
- Tamper-proof security bags for shipping the sample
- Permanent black marker for sample ID
- Alcohol wipes
- Document of Inspection
- Hemp Sample Collection Report/Sample Receipt form
- Field Summary form
- Sample Log/Chain-of-Custody form
- Transport cooler
- Shipping coolers
- Ice-packs

Sanitation of equipment is as follows:

- Clean all sampling equipment with appropriate disinfectant after each composite sample.
- Change gloves after each composite sample and properly dispose of used gloves.
- Properly dispose of single-use coveralls after each inspection.

## 5. Sampling Protocol

Prior to beginning sampling, the inspector must review with the license holder all grow locations, Lots and Lot IDs, Variety(s) and Category(s) to determine the number of lots to sample. The inspector must consider all grow locations, even if across county or district lines, of the license holder before determining which lots require sampling. If a Lot in a different District requires sampling, coordinate with the inspector in that area. Any form information that can be completed prior to sample collection should be done at the planning stage at the office or with the grower.

Each variety must be sampled separately. However, the variety category testing frequency should be considered. Different lots of the same variety and the same license holder do not have to be sampled but can be at the discretion of the inspector if he/she observes differing varietal characteristics or differing growing conditions. The location(s), variety(s) and materials sampled are determined by the inspector with information provided by the license holder. All samples are property of the department and will be properly disposed of by the lab according to laboratory procedures.

### Sampling

Depending on plant spacing, the department will utilize two separate pre-harvest sampling protocols designated as Field Crop and Orchard. See examples for the minimum number of sub-samples to collect under Appendix A - Hypergeometric Table.

- (1) Field Crop (0.05 acre (e.g., 50' x 40') or more planted at approximately 15 - 30 lbs seed per acre)
  - a. From review of map, Lot size and growing conditions, determine the sub-sample rate within the Lot.
  - b. If sampling a non-registered Lot, log the latitude/longitude of the Lot. For registered Lots, review the coordinates to assure compliance. Record any necessary updates on the inspection form.
  - c. Sample the field in an 'M' pattern beginning in the lower corner of the field and ending in the opposite lower corner. Multiple 'M' patterns may be required if a lot contains more than one field.
    - i. If the plant density is too thick to navigate the 'M' pattern across a large Lot, collect the sub-samples around the perimeter of the field by navigating into the field as far as possible at random but equal distances around the field. Record the sampling procedure conducted if different than the normal 'M' pattern.

- ii. For Lots greater than 100 acres or consisting of multiple fields, the sampling pattern may be altered as long as the Lot is consistent in planting date, variety, plant size and maturity, and harvest date, and the sample is representative of the entire Lot.
  - d. Collect random sub-samples at uniform distances throughout the field pattern.
    - i. The number of sub-samples depends on bud size and weight. The approximate sample size, on an 'as collected' basis is 100 grams. The will convert to approximately 25 grams (on an oven-dried basis), the preferred sample size for the lab to analyze and retain a portion for subsequent testing.
    - ii. The composite sample should consist of material from similarly mature female plants only. It should not contain material from male, dead, diseased or injured plants.
    - iii. A sub-sample is collected by randomly cutting 1 bud from each single plant sampled. Each sub-sample collected should be from a different location on the plant so that the composite sample represents the entire crop.
  - e. Deposit the sub-samples into the composite sample paper bag.
  - f. Using a permanent marker, ID the composite sample bag and fold over.
  - g. Place the composite sample bag into an evidence security bag and ID with permanent marker following procedures outlined herein.
  - h. Place the security bag in transport cooler with ice.
- (2) Orchard (any size field or greenhouse where plants are grown in pots or the in-ground spacing is greater than 18" apart)
- a. For areas 1/10 acre (50'x100') or larger, use the Field Crop sampling method above.
  - b. If sampling a non-registered Lot, log the latitude/longitude of the Lot. For registered Lots, review the coordinates to assure compliance. Record any necessary updates on the inspection form.
  - c. For lots or areas less that 50'x100', use the Hypergeometric Table in Appendix A to determine the minimum number of sub-samples to collect. Use a similar 'M' pattern to sample the growing area.
  - d. Collect the appropriate number of random sub-samples at uniform distances throughout the sampling pattern.
    - i. The number of sub-samples depends on bud size and weight. The approximate sample size, on an 'as collected' basis is 100 grams. The will convert to approximately 25 grams (on an oven-dried basis), the preferred sample size for the lab to analyze and retain a portion for subsequent testing.
    - ii. The composite sample should consist of material from similarly mature female plants only. It should not contain material from male, dead, diseased or injured plants.
    - iii. A sub-sample is collected by randomly cutting 1 bud from each single plant sampled. Each sub-sample collected should be from a different location on the plant so that the composite sample represents the entire crop.
  - e. Deposit the sub-samples into the composite sample paper bag.
  - f. Using a permanent marker, ID the composite sample bag and fold over.

- g. Place the composite sample bag into an evidence security bag and ID with permanent marker following procedures outlined herein.
  - h. Place the security bag in transport cooler with ice.
- (3) For operations that have **15 plants or less in a single Lot**, collect 1 or more buds as necessary from each plant, but no less than a minimum of 60 grams (on an 'as collected' basis), randomly from the available plants.
  - (4) The absolute minimum sample size the labs needs for testing is 15 grams, on a dry matter basis.
  - (5) If harvest has started or been completed for a specific Lot prior to sampling without prior approval from the department, record the harvested quantity on the inspection form as a non-compliance. Additionally, collect samples of both harvested and non-harvested material accordingly and label according to procedures outlined herein.

\* Sub-sample Procedures

- (1) Buds (dry)
  - a. Grab a single bud by hand.
- (2) Plants (hanging dry) harvested from a horticultural setting
  - a. Randomly cut 1 bud from each single plant. Each sub-sample collected should be from a different location on the plant so that the composite sample represents the entire crop.

## 6. Sample Identification

Label the composite sample container with the sample ID that corresponds with the Lot sampled.

The sample ID shall include:

- the four-digit sequential inspection number with the preceding 'H-', and
- the sample letter designation.

Example: "H-0001-A"

The security bag should be labeled as "H-####-X" with inspector initials and inspection date.

## 7. Sample Prep, Storage and Delivery

The moisture content of samples will vary depending on growing conditions, maturity of plant and whether collection is conducted pre- or post-harvest. Sample moisture can affect sample integrity. As such, samples must be placed in coolers on ice as soon as possible after the composite sample is collected and prior to leaving the inspection. Multiple samples can be contained and shipped in the same cooler.

### Storage

Any time samples are stored prior to sending to the lab, keep samples in a locked vehicle or locked room in a cooler with ice.

### Delivery to the Lab

The cooler and enclosed sample(s) will be sent to the MDA Analytical Lab. Hand-delivery is the preferred method of delivery. However, mailed samples are allowed. Mailed samples must be sent by FedEx using the department's FedEx account. Mail samples should:

- be sent overnight (if possible), or 2-day delivery at a minimum,
- not be mailed on Friday (not reach destination on the weekend),
- use the FedEx tracking system,
- be placed in standard FedEx overnight packaging,
- not require insurance or self-certification for mailing hemp,
- utilize temperature-control methods to assure sample environment does not exceed 140°F.

### Mailed Samples

The samples will be mailed to the Analytical Lab in a shipping cooler with freshly frozen ice packs. The shipping cooler must be sealed. The Sample Collection Report, the Chain of Custody and the return shipping label (so the lab can return the cooler) must be placed inside the cooler in a plastic bag.

## **8. Chain of Custody**

Regardless of storage or delivery options, Chain of Custody measures must be maintained, and the proper documentation completed throughout the process. Proper Chain of Custody measures include:

- Tamper-proof security packaging
- Proper sample identification
- Samples contained in locked vehicle, office space or storage building when not occupied

## **9. Sample Forms and Reporting**

For specific instructions on completing the forms required for sampling hemp, see the designated Form SOPs. The 4 forms required are:

- Hemp Document of Inspection (Form DOI)
- Hemp Sample Collection Report/Sample Receipt (Form CR/SR)
- Hemp Inspection Field Summary (Form HFS)
- Hemp Lot/Field Map (Form HLM)
- Hemp Sample Log / Chain of Custody (Form SL/CoC)

The Hemp DOI form is used to document the inspectional observations and findings of license holder's operation and to serve as license holder's acknowledgement of the inspection information.

The Field Summary form is to document any changes or additions of the operation's Lot(s), including location, size, variety, or category; and to collect the grower's signature verifying the updated information. If there are no changes or additions, the Field Summary form is not required, simply note on the DOI that all Lots are as registered in the database. To review the

grower's Lot information on record, print a copy of their Lot Report from the database. Attach the copy of the Field Summary form (if applicable) and the Lot Report you reviewed with the grower to the inspection documentation and send to Helena.

The Sample Collection Report/Sample Receipt form is to document the samples collected, to initiate the chain of custody for the samples, serve as a Collection Report to be sent with the sample(s) to the lab, and serve as acknowledgement of the license holder that the sample collection was conducted.

The Hemp Lot Map form is available only if needed for documenting a new field that is not already registered.

The Hemp SL/CoC form documents the tracking and custody of sample(s) from the collection site to the lab.

Each form must be completed accurately, and copies must be provided to interested parties as outlined in the SOPs. Electronic copies of these documents and the data within will be maintained on department servers.

## 10. Appendices

### Appendix A

**Hypergeometric Table for Random Sampling**

Total number of inspectional units:	Randomly select this number of units to inspect:
1-13	Inspect all units
14-15	13
16-17	14
18-19	15
20-22	16
23-25	17
26-28	18
29-32	19
33-38	20
39-44	21
45-53	22
54-65	23
66-82	24
83-108	25
109-157	26
158-271	27
272-885	28
886-200,000	29

Examples (assuming only one variety):

- a) A one tenth acre field planted at field crop spacing (25 lbs. per acre) has approximately 67,500 plants (inspectional units). A composite sample would include **30 sub-samples (assuming the minimum sample weight is achieved)**.
- b) A one-acre field planted at horticultural spacing (3' x 5') has approximately 3,000 plants (inspectional units). A composite sample would include **30 sub-samples (assuming the minimum sample weight is achieved)**.
- c) A one tenth acre field planted at horticultural spacing (3' x 5') may have approximately 300 plants (inspectional units). A composite sample would include **28 sub-samples (assuming the minimum sample weight is achieved)**.
- d) A 20' x 40' greenhouse (800 sq. ft.) planted at horticultural spacing (3' x 5') may have approximately 55 plants (inspectional units). A composite sample would include **23 sub-samples (assuming the minimum sample weight is achieved)**.
- (6) For operations that have **15 plants or less in a single Lot**, collect 1 or more buds as necessary from each plant, but no less than a minimum of 60 grams (on an 'as collected' basis), randomly from the available plants.
  - a. The absolute minimum sample size the labs needs for testing is 15 grams, on a dry matter basis.



Appendix C - Hemp Lot Summary form



**Hemp Inspection  
Lot Summary**

License Holder Name: \_\_\_\_\_

Inspection Number: **H** - \_\_\_\_\_

License Number: \_\_\_\_\_

Inspection Date: \_\_\_\_\_

Field / Lot ID	Grower Field ID	On-site Lat/Long	Lot Size	Variety	Category	Field Reg.	Estimated Harvest Date
1		Lat Long	ac. sq'			Yes No	
2		Lat Long	ac. sq'			Yes No	
3		Lat Long	ac. sq'			Yes No	
4		Lat Long	ac. sq'			Yes No	
5		Lat Long	ac. sq'			Yes No	
6		Lat Long	ac. sq'			Yes No	
7		Lat Long	ac. sq'			Yes No	
8		Lat Long	ac. sq'			Yes No	
9		Lat Long	ac. sq'			Yes No	
10		Lat Long	ac. sq'			Yes No	
11		Lat Long	ac. sq'			Yes No	
12		Lat Long	ac. sq'			Yes No	
13		Lat Long	ac. sq'			Yes No	
14		Lat Long	ac. sq'			Yes No	
15		Lat Long	ac. sq'			Yes No	

Inspectee's Initials:	Inspector's Initials:
-----------------------	-----------------------

Appendix D - Hemp Sample Collection Report/Sample Receipt form

**Hemp Inspection  
Sample Collection Report / Sample Receipt**

License Holder Name: \_\_\_\_\_ Inspection Number: **H** - \_\_\_\_\_

License Number: \_\_\_\_\_ Inspection Date: \_\_\_\_\_

Sample ID	THC Analysis	Number of Sub-samples	Comments	Pre-harvest Sample	Post-harvest Sample	Sample Reason	Field / Lot ID
A	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
B	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
C	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
D	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
E	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
F	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
G	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
H	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
I	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
J	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
K	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	
L	Yes No			___ Field ___ Hort	___ Biomass ___ Flowers ___ Buds ___ Whole Plants ___ Stalks ___ Other	___ Routine ___ Survey ___ Complaint	

Inspector's Initials: \_\_\_\_\_

Appendix E - Hemp Lot/Field Map form

	<b>Hemp</b>	Inspection #: H- _____
	<b>Lot / Field Map</b>	License #: _____
MONTANA DEPARTMENT OF AGRICULTURE AGRICULTURAL SCIENCES DIVISION PO Box 200201 – Helena, MT 59620 Phone: (406) 444-3730		

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Draw a diagram showing relative field shape, field characteristics, the sampling pattern and any distinguishable field references.

Field / Lot ID: \_\_\_\_\_ Field Irrigation: \_\_\_\_\_ Plant Spacing: \_\_\_\_\_ Acres: \_\_\_\_\_

+

↑  
N

Inspector Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Appendix F - Sample Log / Chain of Custody form



| **Hemp**  
**Sample Log / Chain-of-Custody Report**

AGRICULTURAL SCIENCES DIVISION  
 PO Box 200201  
 Helena, MT 59620-0201  
 (406) 444-3730 – agr@mt.gov

**Sample Log**

Lab Number	Inspection Number	Sample ID	District	Comments	License Holder	
					Field / Lot ID	
General Comments						

Number of samples submitted: \_\_\_\_

**Chain of Custody**

	Name	Signature	Date	Time of Possession		Time Relinquished	
Inspector 1			Ship Date:				am pm
Inspector 2					am pm		am pm
Transporter 1					am pm		am pm
Transporter 2					am pm		am pm
Receiver / Lab					am pm		