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HEMP PRE-HARVEST SAMPLE COLLECTION

Performed by the licensed grower at the licensed grower's expense



HEMP PRE-HARVEST SAMPLING PROCEDURES

- Connecticut Department of Agriculture has created the Hemp Pre-Harvest Sampling Procedures document
- Includes:
 - Definitions
 - Sampling Timeline and Grower Responsibilities
 - Equipment
 - Before Pre-Harvest Sampling
 - Pre-Harvest Sampling Procedures
 - Transporting Sample to Laboratory
 - Choosing a Laboratory
 - Sample Results-Pass/Fail
 - Records
 - Failure to Harvest within the 15 days
 - Harvested Hemp



Hemp seedling in field Photo Credit: Colorado Department of Agriculture

HEMP PREHARVEST SAMPLING PROCEDURES

DEFINITIONS

A few definitions:

“Certificate of analysis” means a certificate from a laboratory describing the results of the laboratory’s testing of a sample

“Plot” means a contiguous area in a field, greenhouse or indoor growing structure containing the same variety or strain of hemp throughout the area

“Pre-harvest sample” means a composite, representative portion from plants in a hemp plot collected in accordance with the procedures established by the commissioner

HEMP PREHARVEST SAMPLING PROCEDURES

SAMPLING TIMELINE AND GROWER RESPONSIBILITIES

1. A completed Harvest Report Form from the grower shall be provided to DOAG at least 15 days prior to the expected harvest date and include the date and time of sample collection.
2. The grower will follow the sampling procedures and submit a representative sample of the plot to be harvested at least fifteen (15) days prior to intended harvest date.
3. DOAG reserves the right to inspect, sample and test all hemp crop produced by any grower at any time. Inspectors shall 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 hemp and other cannabis plants.

HEMP PRE-HARVEST SAMPLING PROCEDURES

SAMPLING TIMELINE AND GROWER RESPONSIBILITIES

4. The grower shall not harvest hemp until the DOAG receives the pre-harvest sample results from the laboratory, and authorizes the harvest in writing to the grower.

5. Upon receipt of DOAG's authorization to harvest, the grower shall harvest the crop not more than fifteen (15) days following the date of sample collection by the grower. Unless an extension of the fifteen (15) day period is authorized in writing by the DOAG. See the "Failure to Harvest with 15 days" section of this document.

HEMP PRE-HARVEST SAMPLING PROCEDURES

EQUIPMENT

- Forms
- Pruning shears
- Alcohol wipes or bleach solution (according to bottle) to clean shears before each sample
- Paper sample bags
- Stapler
- Sharpie marker to write sample ID on sample bag
- Bucket to transport bagged samples in (don't put the sample bags on the ground)
- Tamper proof seal (sticker, tape or something to determine if the sample was tapered with)
- Food Scale (to weigh samples)

HEMP PRE-HARVEST SAMPLE PROCEDURES BEFORE PRE-HARVEST SAMPLING

A licensed grower shall submit a complete and current Harvest Report form to DOAG at least fifteen (15) days prior to intended harvest date and include the date and time information of the scheduled sampling. DOAG inspector may be present at the growing site during the grower's scheduled sample collection.



HEMP PRE-HARVEST SAMPLING PROCEDURES

PRE-HARVEST SAMPLING PROCEDURES

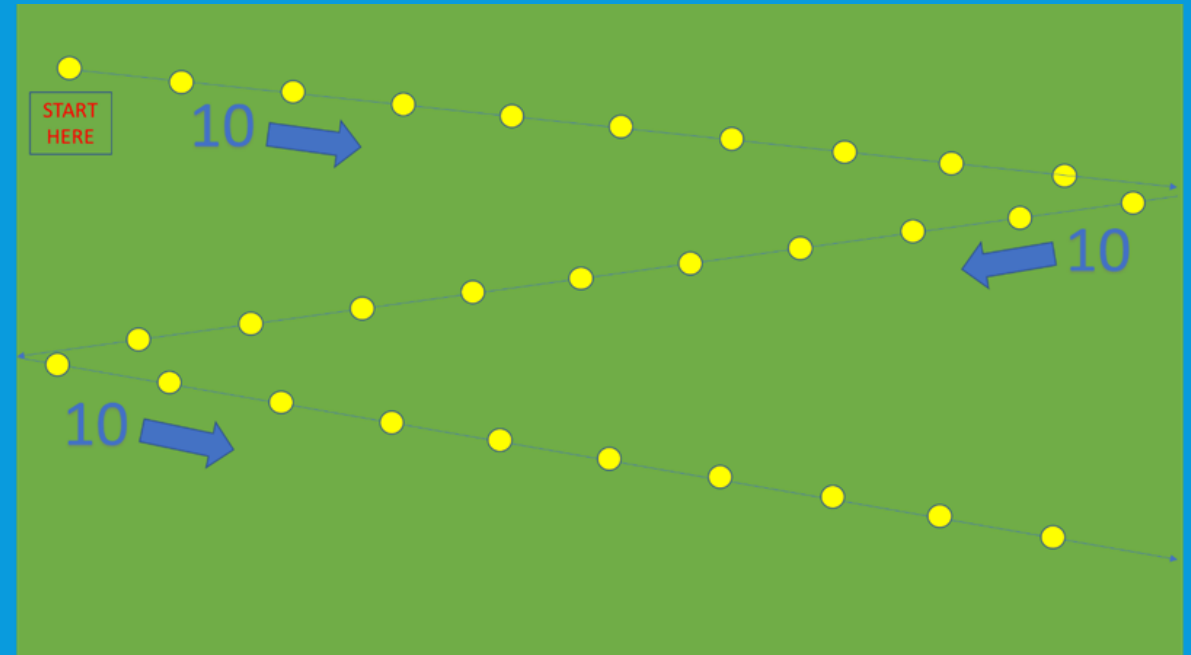
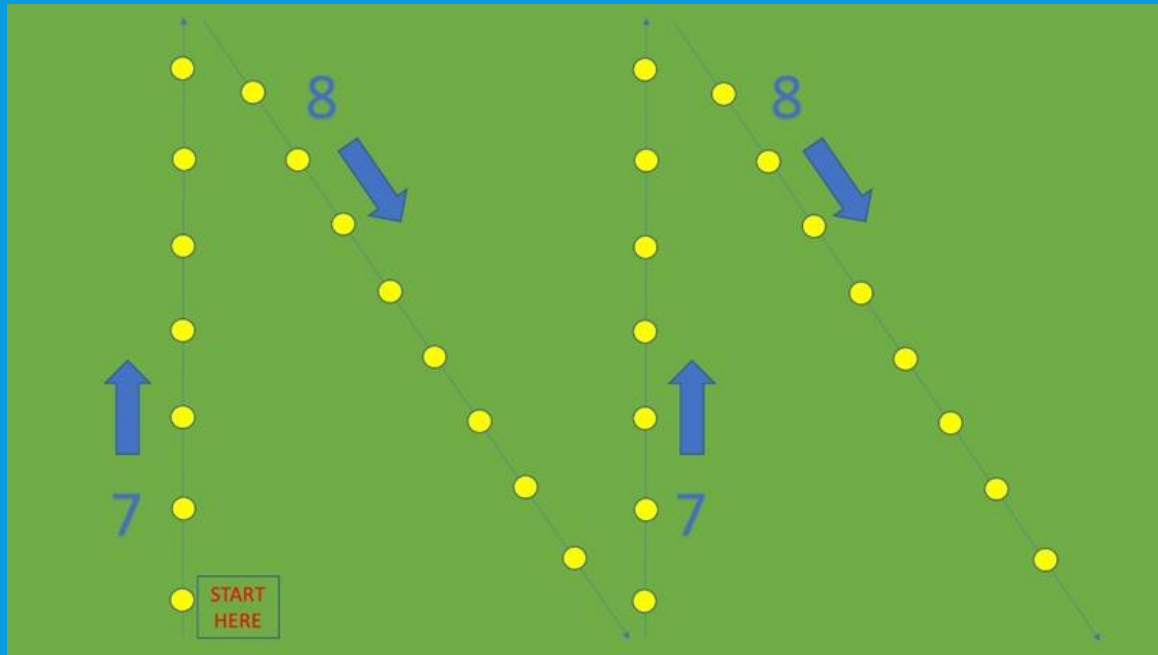
1. The sampler must be trained.
2. Material selected for Pre-Harvest Sampling must be a representative sample of the plot.
3. Sampling equipment (pruning shears, etc.) must be cleaned before and after sampling each plot with either alcohol wipes or a bleach solution (using the diluting instructions on the bleach package) to prevent cross contamination between plots.
4. The sampler must choose one of the patterns most suitable for the field to be sampled (Figure 1 and Figure 2). The sampler must sample according to the pattern to the extent possible but may deviate from the pattern as necessary to account for particular field conditions and to ensure that all parts of the field are adequately and proportionately sampled to produce a representative sample. For small fields or when sampling from a known number of plants the Hypergeometric Table shall be used.

Hypergeometric Table for Random Sampling

Total number of plants plants	Randomly select this number of plants	Sample all plants
1-13		
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	

HEMP PRE-HARVEST SAMPLING PROCEDURES

PRE-HARVEST SAMPLING PROCEDURES



These are typical sawtooth survey patterns starting in the corner of the field. The yellow dots indicate the approximate locations to collect samples.

HEMP PRE-HARVEST SAMPLING PROCEDURES

PRE-HARVEST SAMPLING PROCEDURES

5. Clip the top 8 inches (20.32cm) of hemp plant's primary stem, including the female floral material. A sample shall be obtained from flowering tops when flowering tops are present and shall be approximately 8 inches (20.32cm) in length. Samplers should avoid sampling dead, diseased, or mechanically injured plants. A sample shall consist of no more than one sample per plant, randomly chosen from the harvest lot.

6. The total weight of the sample shall be no less than four (4) ounces (0.25lbs.)

HEMP PRE-HARVEST SAMPLING PROCEDURES

PRE-HARVEST SAMPLING PROCEDURES

7. Place each sample in a paper sample bag. Since the samples are a measure of the entire harvest lot, all samples from the harvest lot may be collected in a single bag. (If the samples of hemp do not fit in one bag then each bag must be labeled with identical information)
8. Seal the bag by folding over the top at least once and stapling the bag shut.
9. Seal the sample with a tamper evident seal.

HEMP PRE-HARVEST SAMPLING PROCEDURES

PRE-HARVEST SAMPLING PROCEDURES

11. The sample shall be labeled, at a minimum:

- the date and time the sample was collected
- grower name
- license number
- Plot ID and location where the sample originated
- sample identification number or laboratory accession number.

Example: #1 Hemp Farm 1 Main St Anytown, USA License#
Sample Date June 1, 2019 10am, Sample# 01, Plot# 00000

HEMP PRE-HARVEST SAMPLING PROCEDURES

PRE-HARVEST SAMPLING PROCEDURES

12. Samples shall be kept in a secure, dry place until and during transportation to the lab.
13. A chain of custody form shall be completed.



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HEMP PRE-HARVEST SAMPLING PROCEDURES

CHAIN OF CUSTODY FORM


Each sample must be documented on the Chain of Custody form.

Must include:

- Sample number
- Date of sample collection
- Time of sample collection
- Location (address where sample originated)
- Assigned Plot ID number
- Sample Description


EVERY time custody of a sample is relinquished to another person, it MUST be documented on the bottom of this form. Will begin with the sample collector and end with the laboratory.

This form must accompany the samples at all times including transportation.



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CTGrown.gov

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Hemp Sample Chain of Custody Form

License Holder:	Grower License#:
Name of Signing Authority (if Business):	
Email:	Phone#:

Complete this Chain of Custody form for each sample. Multiple samples can be listed on one form. Fill in the boxes with the appropriate information. Each time the official sample is transferred to another person the signature of the current sample custodian must be documented in the appropriate box along with the date and time.

Note: This form must be completed and accompany the sample at all times.

Sample Number	Date of sample collection	Time of sample collection	Location (address) where sample originated	Plot ID where sample originated	Sample Description

Relinquished by (Signature):	Date & Time	Relinquished by (Signature):	Date & Time	Relinquished by (Signature):	Date & Time

HEMP SAMPLES AND TRANSPORTING HEMP



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The hemp sample in route to the laboratory must:

- Sealed with a taper evident seal;
- Labeled with all of the required information;
- Original chain of custody form; and
- A copy of the grower license.

CHOOSING A LABORATORY

It is the licensed grower's responsibility to pay and transport the samples to the THC testing laboratory.

Acceptable laboratories include, laboratories registered with the Department of Consumer Protection to conduct analysis of controlled substances pursuant to section 21a-246 of the general statutes, or the University of Connecticut laboratory, or any laboratory accredited to the International Organization for Standardization (ISO) 17025

The laboratory must use a scientifically validated method for the measurement of total delta 9 THC, including but not limited to post-decarboxylation or other similarly reliable methods.

The laboratory performing the analysis must notify the licensed grower and DOAG via email of the final test results within twenty-four (24) hours of completion of the analysis using AGR.Hemp@ct.gov

The laboratory must provide a certificate of analysis to the licensed grower and a copy must be kept with the hemp crop at all times.

CHOOSING A LABORATORY

Final Report from the Laboratory shall include:

- The total delta 9 THC as a percentage of dry weight
- Date the sample was taken
- The date of the report
- The date of completed analysis
- Grower supplied sample identification number
- Laboratory assigned accession number
- The name and address of the person who submitted the sample
- The name, address and license number of the hemp grower or processor from which the sample was obtained
- The lot or plot identification number that the sample represented

At the request of the Department, the laboratory's uncertainty estimate for the THC values reported

SAMPLE RESULTS-PASS

1. The testing laboratory will send a copy of the results to the DOAG via email.
2. The grower shall not harvest the crop until DOAG receives and approves the pre-harvest sample test results, and notifies the licensed grower in writing to proceed with the harvest.
3. The grower shall harvest the crop not more than 15 days following the date of sample collection unless specifically authorized in writing by DOAG.

FAILURE TO HARVEST WITHIN 15 DAYS

If the grower fails to complete the harvest within fifteen (15) days of the date of the pre-harvest sample, the grower shall immediately report such fact to DOAG. The report shall include the reason for failure to timely harvest such hemp and their intentions for that crop.

1. The grower may voluntarily destroy such plot. The grower shall submit the Destruction Report prior to destroying the plot. DOAG will review the destruction report prior to authorization of the destruction.
2. The grower may request permission from DOAG to harvest.
 - Another pre-harvest sample will be taken by the grower, and if the THC is below 0.3% then the grower may request permission to harvest; or
 - The grower may request DOAG conduct a post-harvest sample inspection and test, provided the grower maintains control of the harvested crop and pays the fifty (\$50.00) dollar resampling inspection fee, plus the costs of the test. The sample results from the sample taken by DOAG will be final.

FAILURE TO HARVEST WITHIN 15 DAYS

3. If a grower fails to request permission to harvest then DOAG shall order the grower to destroy all hemp from the unharvested plot. The grower shall submit the Destruction Report prior to destroying the plot.
4. In the event the grower fails to destroy all hemp from the plot within the specified time, such grower's license may be suspended and the grower shall not offer any hemp or hemp product for sale.

SAMPLE RESULTS - FAIL

1. A sample fails THC testing if the test report indicates that the sample contains a total delta 9 THC concentration greater than 0.3% on a dry weight basis.
2. The grower may voluntarily destroy the plot or lot represented by the sample, at the grower's expense. A Destruction Report must be submitted.
3. The grower may request permission from DOAG to harvest and for DOAG to conduct a post-harvest sample, provided the grower maintains control of the harvested crop represented by the sample, and pays the fifty dollar (\$50.00) resampling inspection fee, plus the costs of the test.
4. The grower may request permission from DOAG to salvage non THC bearing parts of the hemp crop, even with a failed test.
5. If the grower fails to request a post-harvest retest or to pay the resampling inspection fee within fifteen (15) days of pre-harvest results being received by DOAG, then the pre-harvest sample test results shall stand, and DOAG shall order the grower to destroy all hemp or other cannabis from the plot.
6. If the grower fails to destroy all hemp or other cannabis from the plot within the specified time, the grower shall be subject to sanctions pursuant to Public Act 19-3

RECORDS

It is the grower's obligation to keep records for a minimum of 3 years after harvest/ destruction of a crop which demonstrate that each harvested lot was sampled and tested.



Industrial Hemp Trial - Rodale Institute

HARVESTED HEMP



Harvested hemp may be commingled with other hemp harvests from other plots, provided the plot ID for each location is maintained in the licensed grower's records.

Transporting Harvested Hemp

Whenever hemp is in transit within the state, the licensed grower is required to keep the following documents with the hemp at all times:

- A copy of the grower license
- A certificate of analysis for the hemp being transported
- If the harvested hemp is above 0.3% THC a copy of written permission from DOAG to harvest

CONTACT CT DOAG

AGRICULTURAL COMMODITIES DIVISION-HEMP PROGRAM

Hemp Program

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QUESTIONS?



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