

Standard Practice for Field Sampling of Hemp



ALABAMA DEPARTMENT OF AGRICULTURE & INDUSTRIES

Scope

- a) This practice applies to field sampling of hemp.
- b) Samples collected under this procedure are acceptable for submitting to a qualified laboratory for determination of Total Delta-9-Tetrahydrocannabinol (Δ^9 THC) in hemp.
- c) The samples collected are intended to be representative of the THC content in a stand of hemp growing in the cultivated growing area.

This practice does not purport to address all of the safety concerns, if any, associated with its use. The user of this standard shall exercise caution and follow applicable safety and health practices.

Terminology

Definitions:

- a) *sample* – a composite, representative portion of plants in a hemp plot.
- b) *department* – the Alabama Department of Agriculture and Industries
- c) *growing area* - the land area on which hemp is grown
- d) *plot* – a continuous area in a field, greenhouse, or indoor growing structure containing the same variety or strain of hemp throughout the area.
- e) *licensee* – an applicant that has been approved to grow hemp as defined in Code of Alabama 80-10-21
- f) *sample specimen* – the top 20 cm (8 inches) of the hemp plant, including inflorescence, stem, and leaves.
- g) *stand* - a group or growth of hemp
- h) *THC* – Total Delta-9-Tetrahydrocannabinol (Δ^9 THC) as defined by federal law.

Summary of Practice

This practice provides procedures for entering a growing area and collecting the minimum number of plant specimens necessary to represent a homogeneous composition of the plot that is to be sampled. An authorized representative of the Alabama Department of Agriculture and Industries (ADAI) enters a growing area, strategically examines the growing area, establishes an approach for navigating the growing area and collects individual specimens of representative plants in order to obtain a representative sample of hemp in the growing area. Because test methodology requires small amounts of material, care must be taken to provide samples that accurately reflect the entirety of the growing area.

Interferences

The time of the growing season selected for collecting the samples will impact the concentration of THC.

Equipment and Supplies

- a) Garden pruners
- b) Alcohol wipes to sanitize pruners before sampling each plot
- c) Paper sample bags
- d) 8" rule
- e) Stapler
- f) Ball point pen to write on bag
- g) Bar code stickers
- h) Smartphone or tablet with Survey 123 loaded
- i) Pre-filled notice of inspection forms, chain-of-custody forms, and blank sample collection forms (in case of problem with Survey 123)
- j) Portable printer
- k) Disposable gloves
- l) Bucket to transport bagged samples

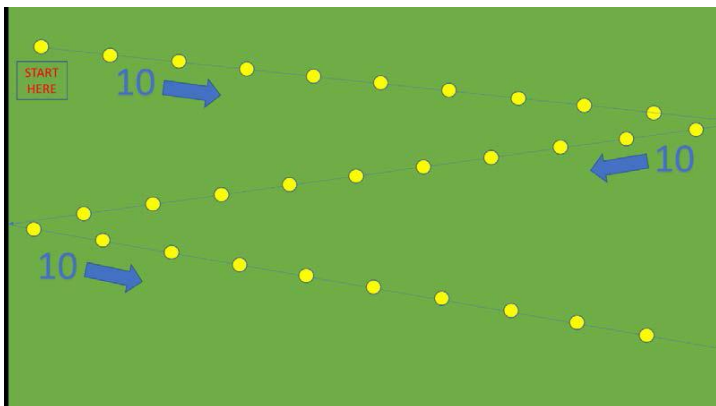
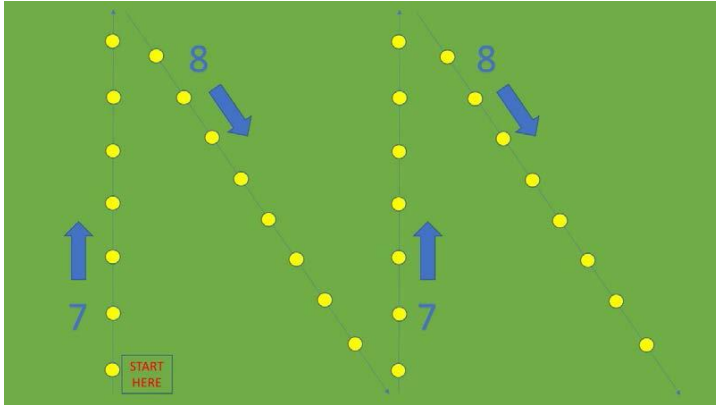
Sampling Procedures

- a) The Licensee or designated employee shall accompany the state inspector throughout the sampling process.
- b) The inspector shall present credentials and have the licensee or designated employee sign a notice of inspection. (The inspector should print out this form prior to the sampling visit.)
- c) The inspector shall verify the GPS coordinates of the growing area as compared with the GPS coordinates submitted by the licensee.
- d) The inspector shall estimate the average height, appearance, approximate density, condition of the plants, and degree of maturity of the inflorescences.
- e) The inspector shall visually establish the homogeneity of the stand to establish that the growing area is of like variety.
- f) Any concerns of stand homogeneity shall be immediately reported to Montgomery hemp staff. Samples and photos shall be taken of individual plants differing from the norm.
- g) Individual plants that appear significantly different from the plot average shall be sampled individually. The sample shall be put in a separate bag and labeled as a plant of concern. Seal and label the bag as directed in p) through u) below.
- h) Time of Sampling

The licensee shall notify ADAI of the selected harvest date 14 calendar days prior to harvest by submitting a completed Harvest/Destruction form. The ADAI hemp program staff will assign an inspector to that licensee. The inspector shall schedule the sample date as close to the designated harvest date and notify the licensee of the designated sample date and time. The licensee shall verify that they will be present at their hemp plot on that day and time.
- i) Each variety or cultivar will be sampled separately.
- j) The pruners used to clip samples must be cleaned with alcohol wipes between plots.
- k) Disposable gloves shall be worn to take hemp samples. These shall be discarded after each plot is sampled.

- l) When feasible, avoid sampling plants within 3 meters (10 feet) of the plot edge.

- m) 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.



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

n) The sample size (number of clippings) to be taken according to the plot size, in acres:

<i>N</i> - Growing Area, in acres	<i>number of plants</i>
1	4
2	4
3	4
4	4
5	6
6	6
7	8
8	8
9	10
10	10
15	16
20	18
25	24
30	28
35	32
40	36
45	40
50	44
75	60
100	76
160 and over	104

- o) No matter how small the plot is, take cuttings from at least four (4) hemp plants within the plot.
- p) Clip the entire top 20 cm (8 inches) of the hemp plant's primary stem.
- q) Samples shall be secured in a paper bag.
- r) Place the entire composite sample in a paper bag. Seal the bag by folding over the top once and stapling the bag shut with at least two staples.
- s) A separate sample must be taken from each non-contiguous plot of a given variety.
- t) A separate sample must be taken of each variety.
- u) Place a bar code sticker on the sample bag. The number shown on the sticker is the field sample number. Enter bar code number on the Chain of Custody form.

- v) In large fields from which the entire composite sample will not fit in one bag, label additional sample bags with the number for the bar code assigned to that field, and the number of bags. Use a ballpoint pen (NO permanent markers!). Enter bar code number on the Chain of Custody form.

Example: In a 20-acre field, you will take 18 cuttings per the table above. It will require 3 bags to contain that many samples. On the first sample bag, place the bar code sticker (Number xxxxx), and write 1 of 3 with a ballpoint pen. On the other two bags, write xxxxx (number from bar code) and 2 of 3, and xxxxx and 3 of 3.

- w) The inspector shall review the hemp sample form with the responsible party and obtain signatures of responsible party. The completed form will automatically upload to Plant Protection in Montgomery. The signed form will be emailed to the inspector, lab, and licensee or designated employee.
- x) Samples must be stored in a cool, dry area that is locked and secure.
- y) The sample shall be transported to ADAI for drying and analysis within 24 hours.
- z) Samples should be taken to the ADAI Food and Drug Lab. To maintain the chain of custody, inspectors will need to drive their samples to the lab within 24 hours. Samples should be delivered to the lab weekdays between 8:30 and 4:00.
- aa) Use the chain of custody form when passing samples off to another ADAI staff member for transport. Draw a single diagonal line through empty fields, and put your initials and the date on the line.

Example:

	Variety Name	Number of Cuttings	Number of Bags
Variety 1	Franklin	8	1
Variety 2		<i>CFS 6/25/19</i>	
Variety 3			

- bb) The samples will be turned over to;
 - Food and Drug Lab Personnel
 - Food and Drug Laboratory
 - Alabama Department of Agriculture and Industries
 - 1445 Federal Drive
 - Office (334) 240-7267