



## Hemp Sampling Agent Certification Training



## Training Outline

Identification of Hemp

Biosecurity and Sampling Agent Safety

Overview of the Hemp Sampling Program

Sampling Agent Requirements  
(certification through PDA)

Sampling Agent and Producer Roles

Hemp Sampling Process

Resources for Sampling Agents



## Identification of Hemp

## Identification of Hemp

- In Pennsylvania, hemp is listed as a Controlled Plant under authority of the [Act relating to Controlled Plants and Noxious Weeds \(3 Pa.C.S.A. section 1501 et seq.\)](#).
- Hemp is defined as, “The plant *Cannabis sativa* L. and any viable part of that plant , with a delta-9 tetrahydrocannabinol (THC) concentration of not more than 0.3 percent on a dry weight basis”.
- All hemp grown in the state must be grown under a permit issued by PDA.
- Medical marijuana is regulated separately by the PA Department of Health.

## Identification of Hemp

- Hemp permit defines the area where hemp will be grown; no hemp should be growing outside that area.
- Hemp cannot be grown in and around a residence; hemp cannot be grown for personal use.
- Indoor plantings have a minimum size of 2,000 sq. foot and 200 plants, unless an exception to that minimum has been approved by PDA.
- Outdoor plantings have a minimum size of  $\frac{1}{4}$  acre and 300 hemp plants, unless an exception has been approved by PDA.



## Identification of Hemp

Hemp may be grown for

- Seedling/Clone production,
- Fiber, Seed/Grain, or Flower production, or as a
- Combination Crop.

It is important to be able to recognize what hemp looks like in any setting: fields, greenhouses, hoop houses, old cargo trailers, warehouses.

# Identification of Hemp



Fiber variety planting



CBD variety planting



CBD variety planting

# Pennsylvania Hemp Certified Sampling Agent Training



Greenhouse Planting



Outdoor Plantings



## Identification of Hemp



	Fiber	Seed	Flower
Desired Plant Material	Stalks (bast fibers and hurd/core fibers)	Dried (high in oil and protein)	Dried and cut (flower bud and floral material)
Planting Density	Dense spacing to discourage branching and flowering (35-50 plants/ft <sup>2</sup> )	Dense spacing to discourage branching and flowering (35-50 plants/ft <sup>2</sup> )	Well-spaced (typically planted 3-4 feet apart on a 3-5 foot center)
Physical Characteristics	Tall plants with small stalks and less leafy material	Plants with small stalks and less leafy material	Bushy plant with wide branching to promote flowers/buds (selecting female plants is ideal)

Table 1. Primary Hemp Crops: Fiber, Seeds, and Flowers. Defining Hemp: A Fact Sheet. Congressional Research Service.

# Pennsylvania Hemp Certified Sampling Agent Training

## Identification of Hemp

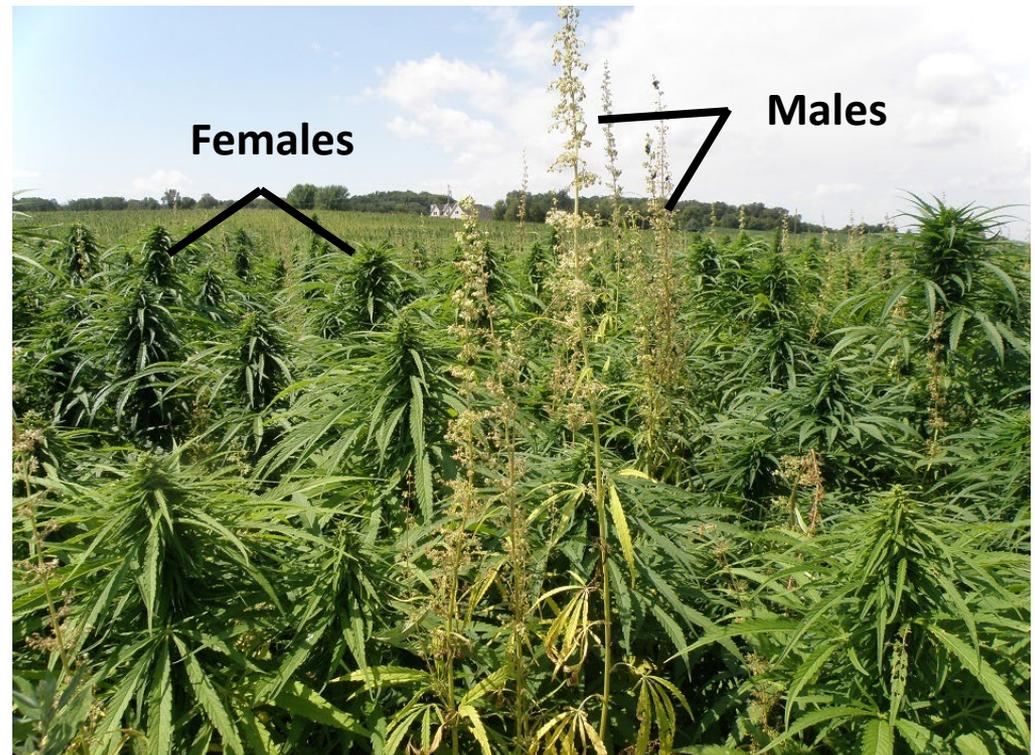


	Fiber	Seed	Flower
Harvesting Height	10-15 feet	6-9 feet	4-8 feet
Harvesting Conditions	Typically using hay equipment (mow, field retting 2-3 weeks, then roll balling)	Must be harvested within a short window due to seed scatter issues	Harvesting is highly labor intensive, in part given possible degradation of plant material related to efforts to preserve the chemical properties of the plant's flowering heads; also requires drying down to 10% moisture
Common Uses	Bast fibers used for paper, insulation, composites, and textiles; core fibers used for animal bedding, concrete, fiberboard, and oil absorbents	Foods and body products Shelled seed and fines Oil and seed cake	Extractions of plant resin (CBD, other cannabinoids) Nutraceuticals and wellness products

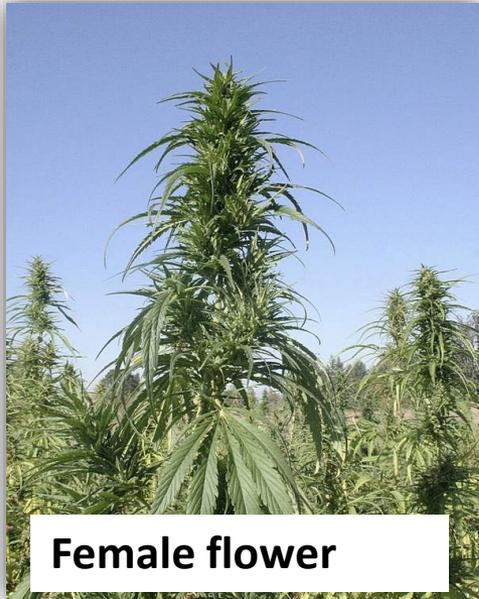
Table 1. Primary Hemp Crops: Fiber, Seeds, and Flowers. Defining Hemp: A Fact Sheet. Congressional Research Service.

## Identification of Hemp

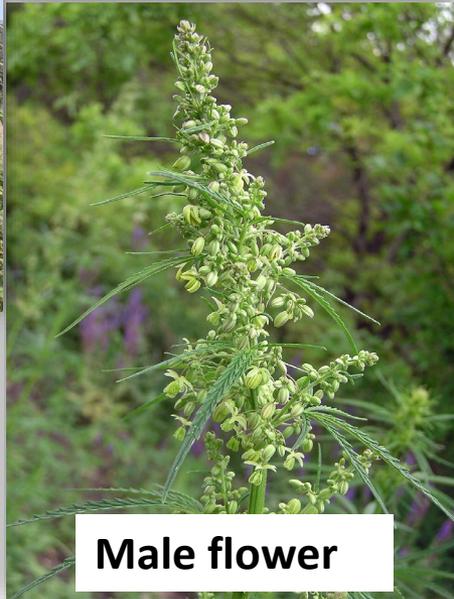
- By August, field-grown male plants (which mature first) will be yellowed, maybe even brown.
- Female plants will be fuller and deeper green.
- Male plants are much skinnier and have pollen sacs.
- You may encounter male plants in:
  - Fiber and Seed Fields
  - CBD fields should not have male plants



## Identification of Hemp



**Female flower**



**Male flower**

### Encountering Male Hemp Plants

- If sampling from a fiber or seed Field, expect to encounter male hemp plants.
- Pollen from male plants will stick to your clothes, shoes, hair, etc.

### Follow Biosecurity Measures

- Do not enter a CBD planting after sampling from a fiber or seed planting.
- Between visits, ensure you're following biosecurity measures that may include:
  - Shower
  - Change clothes and shoes
  - Clean vehicle

# Pennsylvania Hemp Certified Sampling Agent Training



## Identification of Hemp



## Biosecurity and Sampling Agent Safety

## Biosecurity and Sampling Agent Safety



### **Communicate with the Producer**

Discuss security measures the grower may have in place (dogs, gates, etc.)

Ask where to park and where to meet

Discuss pesticide applications and Personal Protective Equipment if applicable



### **Be prepared with Personal Protective Equipment for special biosecurity situations**

Recommended COVID-19 practices and PPE for businesses

Recommended Avian Influenza practices and PPE if vehicle or agent are near poultry



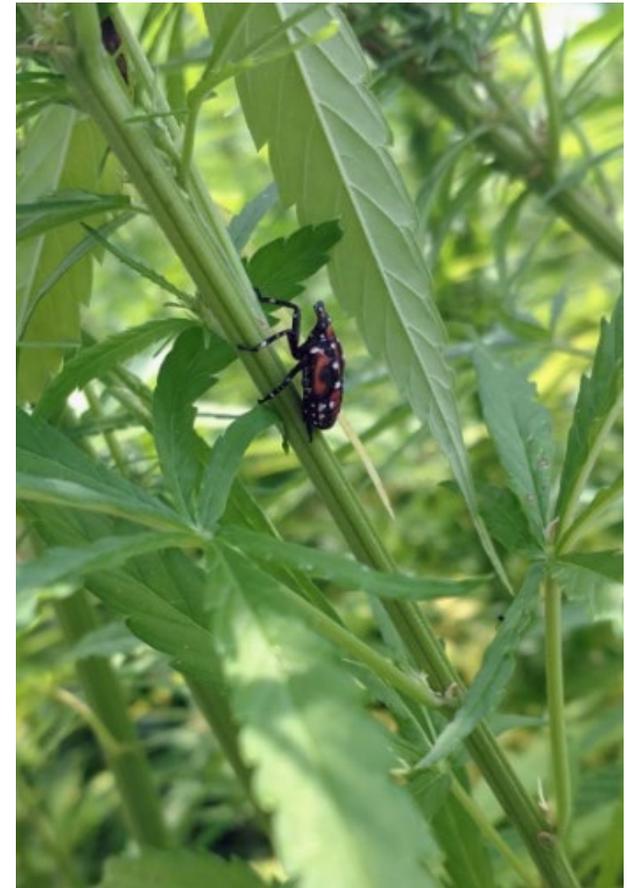
### **Know the Crop**

Discuss whether the crop is being grown for Fiber, Seed, or CBD

Due to the nature of hemp sampling, expect your clothes and general person to be sticky and smell like hemp

## Biosecurity – Compliance with Quarantine Orders

- Spotted Lanternfly (SLF) is an invasive pest originally found in PA in 2014.
- Many counties in PA are under quarantine.
- As a sampling agent you may be travelling throughout the SLF quarantine.
- You must complete the online permit process to receive certification if working or travelling in the quarantine zone.
- <https://extension.psu.edu/spotted-lanternfly-permit-training>



SLF 4<sup>th</sup> instar nymph on hemp plant



## Overview of the Hemp Sampling Program

## Overview of the Hemp Sampling Program

- Every growing location and every lot is required to be sampled.
  - The term “lot” refers to a contiguous area in a field, greenhouse or indoor growing structure containing the same variety or strain of cannabis throughout. To be defined by the producer in terms of farm location, field acreage and variety (i.e. cultivar) and to be reported as such to the Department (PDA) and the federal Farm Service Agency (FSA).
- During sampling the producer or designated representative must be physically present through the entire sampling process.

## Overview of the Hemp Sampling Program

- The official sampling must occur 15 days or less prior to hemp harvest.
- Producer must allow sampling agent access to all hemp or hemp products and any land used for growing, handling, and storing.
- Samples will be dropped off or sent to a laboratory for post-decarboxylation testing or total THC testing.
  - The producer will choose the laboratory for THC testing.
  - It is the responsibility of the sampling agent to get the sample to the laboratory of the producer's choosing.



## Sampling Agent Requirements

## Sampling Agent Requirements

- All hemp sampling agents will be trained through the PA Department of Agriculture.
- Sampling agents must complete PDA training and successfully pass the hemp sampling agent test to be a PDA certified sampling agent.
- PDA will keep a registry of all certified sampling agents accessible to the producers.
- Recertification of sampling agents is required on a yearly basis.

## Sampling Agent Requirements

### Essential Functions

- Drive to growing sites, and have access to a vehicle that can navigate off-road situations
- Deal with potentially confrontational situations
- Complete paperwork according to PDA's procedures and expectations
- Collect samples using PDA's methods and equipment suggestions
- Collect and ship/deliver samples in a condensed timeframe
- Have access to a computer with Microsoft Office software (especially Excel) and internet capabilities
- Have access to a GPS device
- Have access to a camera

# Sampling Agent Requirements

## **Required Licenses, Registrations, Certifications:**

- Certified Pennsylvania Department of Agriculture Hemp Sampling Agent
- Valid Driver's License
- Spotted Lanternfly Permit (if operating in the current quarantine area)
- Liability Insurance is recommended

## Sampling Agent Requirements

### **Sampling Agents *Cannot*:**

- Have an active hemp permit in any state
  - Be a current employee of a hemp growing facility in any state
  - Have a financial stake in a hemp growing operation in any state
- 
- It is acceptable for a sampling agent to be associated with a university that holds a permit or with a lab that offers hemp testing.



## Sampling Agent and Producer Roles

## Sampling Agent and Producer Roles

- Permitted producer/grower (or representative) arranges for the collection of samples by a PDA-certified sampling agent during normal business hours not more than 15 days prior to harvest.
- Each lot must be sampled.
  - The term “lot” refers to a contiguous area in a field, greenhouse or indoor growing structure containing the same variety or strain of cannabis throughout. To be defined by the producer in terms of farm location, field acreage and variety (i.e. cultivar) and to be reported as such to the Department (PDA) and the Farm Service Agency (FSA).

## Sampling Agent and Producer Roles

- It is important for the sampling agent and producer to communicate with each other regarding sample collection and shipment.
- The producer is responsible for:
  - Selecting the laboratory for THC testing
  - Communicating any special laboratory procedures to the sampling agent
  - The cost of transportation and shipping sampled hemp
- The sampling agent is responsible for:
  - Physically collecting the sample
  - Physically sending/delivering the hemp sample to chosen laboratory for THC testing



## Hemp Sampling Process





## Outline of Hemp Sampling Process

1. Meet with Producer
2. Verify Lots
3. Collect Sample
4. Ship Sample
5. Send Forms

## 1. Meet With Producer

Meet with producer and show PDA-issued credentials

- This meeting will have been scheduled between the producer and sampling agent ahead of time.
- Discussion of fees and payment is recommended prior to the sampling visit, at the discretion of the sampling agent and producer.
- Identify yourself as a PDA certified sampling agent and show your credentials.
- Review the sampling process and confirm the producer/designated representative will be present throughout the sampling process.
- Discuss any special laboratory requirements that may have been communicated to the producer by the laboratory selected to receive samples.

## 2. Verify Lots

- Take picture of growing site of each hemp lot - this picture will be sent to PDA along with other required documents
- Confirm with grower lot delineation and size – size determines the number of sample cuttings
- GPS coordinates of each lot location must be taken – will later be verified with permit records submitted to PDA and FSA

# Sampling Supplies

- ✓ Camera- take a photo of the growing site of each lot
- ✓ GPS capable device- confirm location of sites
- ✓ Paper bags- use one bag per lot sample
- ✓ Scissors- to cut hemp samples
- ✓ Marker- to record sample number on bag
- ✓ Tape- clear packing tape to seal bag
- ✓ Disposable gloves- change gloves between lots
- ✓ Disinfectant- used to clean scissors prior to and following each sample

Examples: bleach, rubbing alcohol, etc.

## 3. Collect Sample

Collect a representative sample of each lot

- Sampling agent will collect a representative sample of no less than 10 primary cuttings from 10 individual plants.
- The sample will be a composite of female flower material collected from random plants from representative quadrants of each lot.
- Field quadrants will be determined by dividing the lot into 10 sections of similar size.
- Effort should be made to collect a similarly sized representative sample of material from each quadrant.
- Effort should be made to collect phenotypically similar varieties and avoid sampling off-types.

# Sample Size

For lots up to 4.99 acres (this includes most indoor plantings) the sampling agent will collect a minimum of 10 cuttings from 10 separate plants

For lots of 5-21.99 acres the sampling agent will collect a minimum of 20 cuttings from 20 separate plants

For lots of 22 to 173 acres follow USDA Sampling Table on the next slide

## USDA Sampling Table

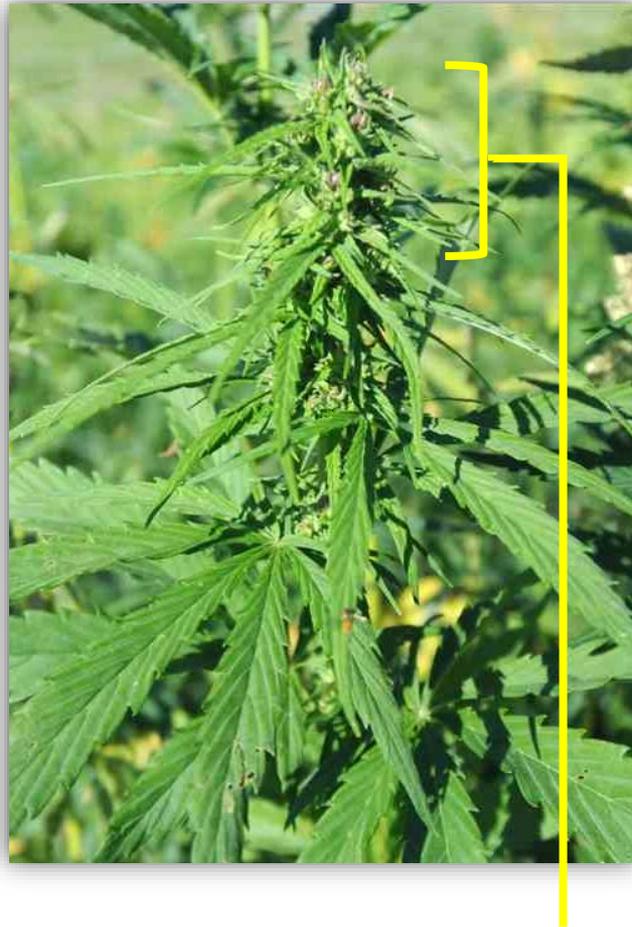
Number of acres	Sample Size "n"						
		40	36	75-76	61	119-120	86
		41-42	37	77	62	121-122	87
		43	38	78-79	63	123-124	88
		44	39	80-81	64	125-126	89
		45-46	40	82	65	127-128	90
		47	41	83-84	66	129-130	91
		48	42	85-86	67	131-132	92
		49-50	43	87	68	133-134	93
		51	44	88-89	69	135-136	94
		52	45	90-91	70	137-138	95
		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						

- For lots growing on 22 to 173 acres follow this USDA sampling table
- Where “n” is the number of cuttings (each from an individual plant) to be collected for the official sample

### 3. Collect Sample – cut top 2-3 inches of female flower shoot, one cutting/plant



Side shoots may be sampled from a CBD planting





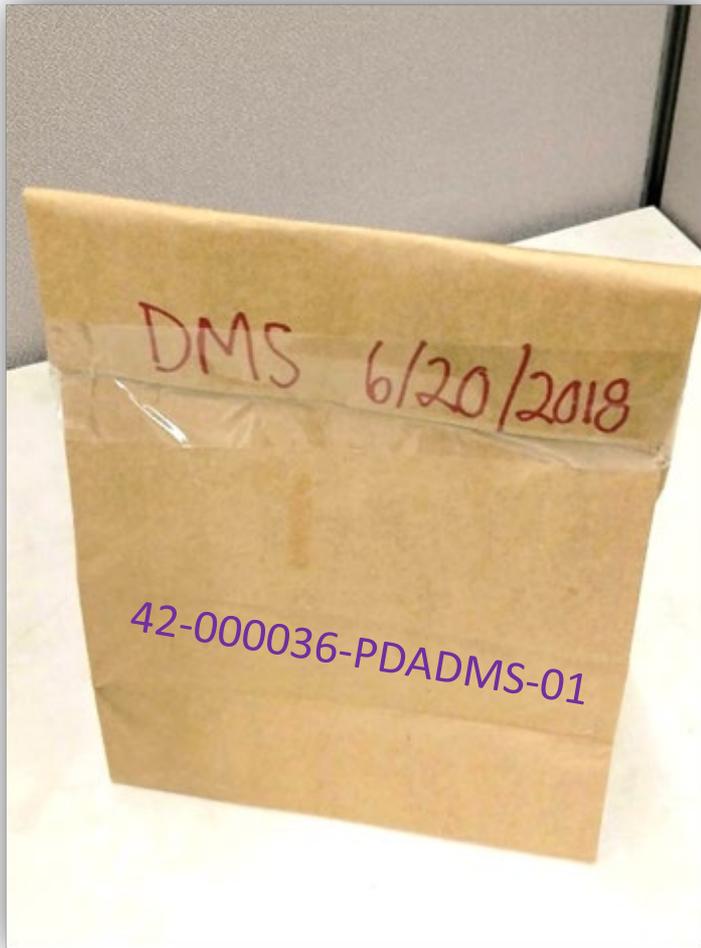
## 3. Collect Sample

- Samples will be taken by cutting the top 2-3 inches of the plant with minimal stem material
  - Only female flower buds clipped from the terminal points of the plant should be sampled
  - Terminal side shoot buds may be used.
- Samples will be placed directly into a new paper sample bag unless otherwise specified by the testing laboratory

## 3. Collect Sample

Sample bags will be closed and sealed by the following process:

- Folding down the top with at least two folds
- Write initials (first middle last) and date on the last fold and tape bag closed with clear packing tape over top of the initials and date, securing the entire folded edge to the bag



## 3. Collect Sample - Labeling

- Sampling agent will also label the sample bag using the following format: PDA Hemp Permit# (8 digits) – Sampling Agent Unique Identifier – Sample Number
- Sample # Example: 42-000024-PDARJM-01
  - Includes the Permit# (42-000024)
  - Sampling agent unique ID to use for labeling samples, assigned by PDA (PDARJM)
  - Sample # will be a number tracked by sampling agent (first sample collected from a location = 1, second sample collected from location = 2, etc.) (01) This number will be associated with a specific lot.

## Notes on Transporting Samples

When transporting hemp samples from the producer's address to a mail facility or lab:

- Samples should always be in sealed bags
- Samples should be placed in a secondary container, such as a box or cooler, and placed in trunk or back of vehicle.
- If questioned by Law Enforcement:
  - Show your PDA-issued hemp sampling agent credential
  - Offer PDA telephone number for officer to call and confirm your identity: 717-787-4392

## 4. Ship Sample

Complete a ***Chain of Custody/Sample Shipment Form*** listing all samples in a shipment.

Collected hemp samples must be shipped or hand-delivered to a lab to test for THC levels.

- Labs must use post-decarboxylation testing or total THC testing, but may do additional testing as requested by grower
- PDA recommends trackable shipment methods
- Sampling agent mails or e-mails copies of ***Receipt for Sample*** and ***Chain of Custody/Sample Shipment Form*** to PDA [RA-plant@pa.gov](mailto:RA-plant@pa.gov)

## 4. Ship Sample

Shipping can be handled at the discretion of the producer and sampling agent. PDA highly recommends:

- Trackable shipping methods and those that take 1-2 days for delivery - based on time constraints such as the 15-day harvest window, shipment timing, and laboratory testing
  - Package sample before arriving at shipment facility. To avoid condensation within sample bag, do not use cold packs or place sample bag inside of another plastic bag.
  - To save time, arrange to have the shipping label printed prior to arrival at shipment facility.
- 
- ***Chain of Custody/Sample Shipment Form*** is to accompany sample inside shipping box or maintained with hand-delivered samples

## 5. Send Forms - Receipt for Sample

PENNSYLVANIA DEPARTMENT OF AGRICULTURE PENNSYLVANIA HEMP PROGRAM RECEIPT FOR SAMPLE	
HEMP PERMIT NUMBER:	
NAME OF PERMIT HOLDER:	ADDRESS:
NAME OF REPRESENTATIVE (if different from permit holder):	TITLE:
WAS PERMITTEE/REPRESENTATIVE PRESENT DURING THE ENTIRE SAMPLING? YES <input type="checkbox"/> NO <input type="checkbox"/>	
ADDRESS OF GROWING SITE SAMPLED:	
TOTAL NUMBER OF LOTS SAMPLED:	WAS A PHOTOGRAPH TAKEN OF THE GROWING SITE OF EACH LOT? YES <input type="checkbox"/> NO <input type="checkbox"/>
SAMPLE NUMBER(S):	
SAMPLE DESCRIPTION: Sample consists of a minimum of 10 clippings from female flowers, contained in a sealed paper bag which has been labeled according to protocol.	
ACKNOWLEDGEMENT The certified hemp sample(s), as specified above, were collected to fulfill federal and state sampling requirements of the Pennsylvania Department of Agriculture's Hemp Program, operated under the authority of the PA Hemp Controlled Plant General Permit of 2020 (published under The Act relating to Controlled Plants and Noxious Weeds (3 Pa.C.S.A. § 1502 et seq.)), and official collection of the sample(s) is hereby acknowledged.	
PERMITTEE/REPRESENTATIVE SIGNATURE	DATE
NAME OF SAMPLING AGENT	
SIGNATURE OF SAMPLING AGENT	DATE
*Only if sampling agent is a PDA Regional Inspector, use this space to record payment information* Check # _____ Check Amount \$ _____	
A COPY OF THIS FORM MUST BE GIVEN TO THE PERMIT HOLDER OR DESIGNATED REPRESENTATIVE.	
A COPY OF THIS FORM, AND ALL PHOTOGRAPHS TAKEN OF LOT GROWING SITES, MUST BE MAILED OR E-MAILED TO: PA Department of Agriculture - Hemp Program, 2303 N. Cameron St., Harrisburg, PA 17120 -or- RA-plant@pa.gov	

- **Receipt for Sample** is signed by producer or designated representative
- Checkbox that indicates grower / representative was present entire sampling process
- Checkbox that indicates whether a picture of the lot was taken
- Sampling agent is responsible for providing one copy to grower and sending a copy of this form to PDA via mail or e-mail: [RA-plant@pa.gov](mailto:RA-plant@pa.gov)

## 5. Send Forms - Chain of Custody/Sample Shipment Form

PENNSYLVANIA DEPARTMENT OF AGRICULTURE PENNSYLVANIA HEMP PROGRAM CHAIN OF CUSTODY / SAMPLE SHIPMENT FORM				
<b>PERMIT HOLDER INFORMATION</b>				
PA HEMP PERMIT NUMBER:		PHONE NUMBER:		
BUSINESS NAME:		EMAIL:		
CONTACT NAME:				
STREET ADDRESS:				
CITY, STATE, ZIP CODE:				
<b>SAMPLING AGENT INFORMATION</b>				
NAME:		PHONE NUMBER:		
EMPLOYER:		EMAIL:		
STREET ADDRESS:				
CITY, STATE, ZIP CODE:				
<b>HEMP SAMPLE INFORMATION</b>				
SAMPLE DESCRIPTION: Sample consists of a minimum of 10 clippings from female flowers, contained in a sealed paper bag which has been labeled according to protocol.				
TOTAL NUMBER OF LOTS SAMPLED:		GROWING SITE ADDRESS:		
SAMPLE NUMBER <small>(# of 200mm Plastic #)</small>	LOT NUMBER	VARIETY NAME	LOT SIZE	GPS Point <small>(# 12345, 76.5432 Latitude, Longitude)</small>
NAME OF LABORATORY RECEIVING SAMPLES:				
ADDRESS OF LABORATORY RECEIVING SAMPLES:				
NAME OF SHIPPING COMPANY HANDLING SAMPLES:				
DATE SENT:		NUMBER OF CONTAINERS USED TO SHIP SAMPLE(S):		
TRACKING INFORMATION OF SAMPLE PACKAGE(S):				
Were samples hand-delivered to laboratory by sampling agent? YES <input type="checkbox"/> NO <input type="checkbox"/> Date Delivered:				
<small>The enclosed are certified hemp samples, as specified above, collected to fulfill federal and state sampling requirements of the Pennsylvania Department of Agriculture's Hemp Program, operated under the authority of the Pa Hemp Controlled Plant General Permit of 2020 established under The Act relating to Controlled Plants and Noxious Weeds (P.S. 1301.1-1301.10). With the signature on this form, the permit holder acknowledges that the Certificate of Analysis will be sent directly to the Department of Agriculture.</small>				
<small>A COPY OF THIS FORM MUST ACCOMPANY SAMPLES TO THE LAB (in shipping container or hand-delivered with sample). SAMPLE RESULTS AND A COPY OF THIS FORM MUST BE MAILED - or - EMAILED TO: PA Department of Agriculture - Hemp Program, 2303 N. Cameron St., Harrisburg, PA 17110 - or - RA-plant@pa.gov</small>				
QUESTIONS: PA Hemp Program Staff, Phone: 717-787-4843 Email: RA-plant@pa.gov				
NAME OF PERMITTEE/REPRESENTATIVE		TITLE:		
PERMITTEE/REPRESENTATIVE SIGNATURE		DATE:		
NAME OF SAMPLING AGENT		DATE:		
SIGNATURE OF SAMPLING AGENT		DATE:		

- This form provides sample tracking information
- One copy accompanies the samples to the laboratory.
- The agent is also responsible for sending a copy of this form to PDA via mail or e-mail: [RA-plant@pa.gov](mailto:RA-plant@pa.gov)



## Resources for Sampling Agents

## Resources for Sampling Agents



USDA AMS Hemp Site

<https://www.ams.usda.gov/rules-regulations/hemp>



PDA Hemp Program

[https://www.agriculture.pa.gov/Plants\\_Land\\_Water/industrial\\_hemp/Pages/default.aspx](https://www.agriculture.pa.gov/Plants_Land_Water/industrial_hemp/Pages/default.aspx)



Penn State's Hemp Site

<https://extension.psu.edu/hemp>



Cornell University

<https://hemp.cals.cornell.edu/>



University of Kentucky

<https://hemp.ca.uky.edu/>



# Resources for Sampling Agents

## PDA Hemp Program Contacts

Email: [RA-plant@pa.gov](mailto:RA-plant@pa.gov)

Phone: 717-787-4392

Mail: PDA - Hemp Program, 2301 N Cameron St, Harrisburg, PA  
17110

Thank you for reviewing this training.

We are not currently accepting applications for the hemp sampling agent program.