Performance-Based Sampling Options for Hemp - *technical bulletin*

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The Michigan Department of Agriculture and Rural Development's (MDARD) Pesticide and Plant Pest Management Division's (PPPM) state plan for industrial hemp production calls for sampling and testing of every lot of hemp prior to harvest, in accordance with the U.S. Department of Agriculture's (USDA) Final Rule on domestic hemp production, 7 CFR Part 990.3, and Public Act 220 of 2020, the Industrial Hemp Growers Act. Both the Final Rule and Act allow states to develop performance-based sampling (PBS) approaches allowing for less than 100 percent of planted hemp lots to be sampled while aiming to ensure no more than one percent of the plants in a lot exceed the acceptable THC concentration. In essence, **reduced sampling and testing of hemp lots unlikely to have noncompliant THC levels will result in cost savings for hemp growers.**

Beginning in 2022, USDA approved Michigan's updated hemp production plan (PDF) allowing for PBS based on types of hemp crops, including:

- Clones and Transplants (immature plants)
- Mother Plants
- Sprouts, Microgreens, and Greens
- Certified Seed for Fiber and Grain Varieties
- College and University Hemp Research

At this time, MDARD will continue to sample hemp lots grown for cannabinoid production unless the crop type applies to one of the above categories. In the future, MDARD may also look at incorporating grower history of compliance into the PBS criteria.

Most of the PBS options below require your hemp variety(ies) to be sampled and tested by MDARD in the first year, and then if found to be compliant, subsequent plantings of those same varieties that year (in the case of clones, microgreens, etc.) or the following year (for crops planted once per year) will not need to be tested.

Examples:

- You planted a hemp fiber variety “Bialobrzeskie” from certified seed in 2022 in three lots. MDARD sampled one lot (at a minimum), and testing found the lot was compliant. You can plant that same certified seed variety in 2023 and do not need MDARD to test that until 2024.

- You grow clones of the hemp floral variety “Matterhorn” and have batches ready every 24 days. You maintain your Certificate of Analysis for the mother plants. MDARD sampled the first batch in 2022 prior to sale and it was compliant, so you do not need additional batches of that same variety sampled and tested by MDARD in 2022. You will grow the same variety in 2023, so MDARD will need to sample my first lot (at a minimum) of this variety again in 2023.

- You are a college hemp researcher. You harvest research plots and conduct research on many hemp varieties. You submitted and received approval for an alternative sampling and testing plan, so you are responsible for sampling and testing for THC compliance of plants not entering commerce.

Incorporating PBS Into Your Hemp Cultivation Program

You need to apply to MDARD for PBS approval. Please review the following sections for PBS requirements for each type of eligible hemp crop. Submittal of your request does not guarantee that approval for PBS will be granted - approval may be granted following an MDARD inspection. Approval for PBS does not prevent the State of Michigan from conducting inspections, sampling, and testing of any hemp crops at any time to ensure compliance with PA 220, the Hemp Production Plan, and your approved PBS plan. Granting PBS does not exempt a grower from following all other requirements in PA 220.

Hemp shall only be eligible for PBS consideration if the registered hemp grower maintains plant documentation showing the variety’s compliance with the acceptable THC concentration. **“Plant documentation”** means purchase receipts, seed label and labeling, Certificates of Analysis, and other documentation provided by the manufacturer or distributor about the propagative material purchased. “Plant documentation” also includes records regarding breeding and the Certificates of Analysis used to monitor THC levels for their plants.

Be advised, hemp produced from seeds saved from a previous year’s crop that was not specifically bred for reproduction must be sampled and tested per MDARD’s standing sampling protocol and is not eligible for PBS.

PBS Requirements for Hemp Clones, Transplants, Starts (immature plants for sale as propagative stock), Microgreens, Greens, and Sprouts

Summary: MDARD samples and tests at a minimum, at inspector discretion, one lot of each variety per grower per year prior to harvest. Note: “harvest” includes sale of flats, cutting of microgreens and greens, and sale/movement of clones and transplants off the grower’s premises.

Definitions

Hemp Clones/Transplants/Starts are seedlings, rooted cuttings, or immature plants produced from tissue culture, or other means of reproduction, which are not flowering and will be offered for sale or planted at a location to mature for harvesting, that is not the grower’s approved growing location.

Hemp Microgreens are immature hemp seedlings grown for human consumption that are harvested above the soil or substrate line, prior to flowering, and not more than 14 days after germination. Microgreens typically are harvested at the first true leaf stage and sold with the stem, cotyledons (seed leaves), and first true leaves attached. Hemp microgreens are typically between two and three inches in height, but not taller than five inches.

Hemp Greens are hemp leaves from immature plants, grown for human consumption, and no more than 10 inches tall and not flowering.

Hemp Sprouts are germinated hemp seeds for human consumption harvested in their entirety (seed, root, and stem), have undeveloped or underdeveloped cotyledons, and true leaves have not begun to emerge. Sprouts usually take less than one week to grow. Sprouts could also be harvested above the soil or substrate line, but in that case would be considered microgreens.

Requirements

1. The grower must have plant documentation that material used to grow the hemp lot originated from a variety of Cannabis meeting the definition of hemp. Maintain seed label/labeling, purchase receipt, and Certificate of Analysis from parent plants, seed, etc. for a minimum of five years.
2. File your crop acreage report with the USDA Farm Service Agency (FSA) after planting. Find more info on FSA reporting here.
3. Fill out MDARD's brief online request form for PBS each year. If you have hemp mother plants present, you must check off that you would like PBS for those as well.
4. Fill out MDARD's preharvest sampling request form for the first crop of each variety being grown each year. Complete the form at least 20 days prior to when you believe the lot is ready to be sampled.
5. An inspector will contact you to schedule your sampling visit. Provide information to your inspector regarding the number of additional batches you expect to produce for each variety and if additional varieties will be grown this year that will need sampling. Provide a copy of your FSA crop acreage report and requested plant documentation as listed in #1 at the inspector's request.
6. Should the grower discover plants are noncompliant, the grower must notify MDARD with a Notice of Intent to Dispose of the plants or request remediation sampling.
7. MDARD may inspect the facility at any point for visual verification that plants do not contain flowering material; microgreen lots are harvested within 14 days of planting and are no taller than five inches; lots used for cut greens are no more than 10 inches tall, and sprouts do not have true leaves present.

PBS Requirements for Hemp Mother Plants at Clone/Transplant Propagation Locations

Summary: MDARD reviews Certificate of Analyses for mother plants and may sample mother plants at any time and when cuttings produce a non-compliant lot.

Hemp Mother Plants have a THC concentration of 0.3 percent or less and are used for cloning purposes. Flowering plants are not considered mother plants by MDARD, even if they are being brought to flowering for THC testing as potential mother plants. If potential mother plants are tested as compliant by MDARD, they may be exempt from future sampling. Mother plants intended to be harvested or leave a registered growing area must be sampled by MDARD.

Requirements

1. The grower must have plant documentation showing mother plants have an acceptable THC level. Maintain purchase records, labels/labeling, and Certificates of Analysis regarding the source of your mother plants for a minimum of five years. If mother plants were developed from your own crosses, you must provide the same documentation and lineage of crosses.
2. Mother plants do not need to be reported to FSA.
3. Fill out MDARD's brief online request form for PBS. Do not request PBS for mother plants only; another crop type such as clones/transplants must be checked off.
4. Should the grower discover clones are noncompliant, the grower must notify MDARD with a Notice of Intent to Dispose of the clones and mother plants or request remediation sampling.
5. At the Department's request, the grower must supply MDARD a list of clone purchaser names, addresses, and purchase dates within 1 year of noncompliant test results. The grower must notify purchasers of those results and provide MDARD evidence of the notifications.
6. MDARD may sample mother plants if the grower does not have documentation to verify mother plants are of a hemp variety, or if mother plants are flowering.
7. An inspector will contact you to schedule your sampling visit for your non-mother plant lots and will review information about your mother plants.

PBS Requirements for Hemp Grown from Certified Seed for Fiber or Grain Varieties

Summary: MDARD will sample plants from the same fiber or grain varieties of certified hemp seed every other year.

Certified Seed - the progeny of Breeder, Foundation, or Registered seed handled to maintain satisfactory genetic purity and varietal identity; certified to Association of Official Seed Certifying Agencies (AOSCA) standards; and having an official AOSCA seed label.

Requirements

1. The grower must have plant documentation that certified seed used to grow the hemp lot originated from a variety of Cannabis meeting the definition of hemp. Maintain seed label/labeling, purchase receipt, and Certificate of Analysis for a minimum of 5 years.
2. File your crop acreage report with FSA by July 15 or within 15 days after planting.
3. Fill out MDARD's brief online request form for PBS each time a fiber/grain variety from certified seed, that is new to the grower, is planted.
4. Fill out MDARD's preharvest sampling request form 20-30 days before harvest, even if the only varieties planted are in PBS and were sampled the prior year. You will have an opportunity to select the "type of sampling you need performed" for each lot and will choose "Visit to review status of fiber/grain crops in Performance-Based Sampling" for each variety sampled and confirmed compliant the prior year.
5. An inspector will contact you to schedule your visit. Email the inspector your FSA-578 Crop Acreage Report. Have plant documentation ready for inspector review.
6. Notify inspector if new varieties will be grown this year that will need sampling.
7. Should the grower discover clones are noncompliant, the grower must notify MDARD with a Notice of Intent to Dispose of the clones and mother plants or request remediation sampling.

PBS for College and University Hemp Research

College and university researchers growing and harvesting hemp that will NOT be entering commerce can develop and submit and alternative sampling and testing plan for lots. MDARD will review the plan for conformance with the state's hemp production plan and performance-based sampling requirements for researchers. Details on plan requirements can be found in College and University Hemp Researchers – Registration, Standard Sampling, and Performance-Based Sampling (PDF).

College and university researchers growing hemp that will be entering commerce cannot utilize an alternative sampling and testing plan, but they can still take advantage of other PBS options listed in this document.

For college and university researchers wishing to submit an alternative sampling and testing plan to MDARD for consideration, email the plan at least three weeks prior to your first anticipated harvest date of the season to MDARD-IndustrialHemp@Michigan.gov. Researchers will be notified of plan approval via email within 10 business days.

More Information

MDARD may collect preharvest hemp samples for any reason, at the grower's expense, even if the grower is participating in PBS. MDARD may choose to sample more than one lot of the same variety for any reason.

ALWAYS maintain purchase records, sales records, seed labels, and other documentation about your hemp varieties. If you cannot demonstrate your lot is of the same previously tested compliant variety or you are using the same certified seed as a previously tested compliant lot (if applicable), you may be required to have MDARD sample and test your lot prior to harvest, at your expense. Should you lack sufficient plant documentation for your lots, MDARD may also collect samples for THC testing.

Commercial and private growers participating in PBS found to have lots exceeding the approved THC limit will be moved to standard preharvest sampling for two years. The grower can choose to manage the noncompliant lots by either filing an online Notice of Intent to Dispose of the lots or requesting remediation sampling online.

If you have any questions, please email MDARD-IndustrialHemp@Michigan.gov, or phone 800-292-3939.