

# INDUSTRIAL HEMP

## 2021-2022 Michigan Industrial Hemp Report: Program Summary

Michigan Department of Agriculture and Rural Development  
Pesticide and Plant Pest Management Division

Phone: 800-292-3939

Online: [www.Michigan.gov/HempGrowing](http://www.Michigan.gov/HempGrowing)

Email: [MDARD-IndustrialHemp@Michigan.gov](mailto:MDARD-IndustrialHemp@Michigan.gov)

This document contains summary information from the first two years of managing hemp cultivation under Michigan's Hemp Production Plan and discusses program history and evolution, grower registration, acreage data, inspection, and sampling activities. [Michigan's Hemp Production Plan](#) is administered by the Michigan Department of Agriculture and Rural Development's (MDARD) Pesticide and Plant Pest Management Division (PPPM).

### Legislative and Approval History

In 2019 and 2020, MDARD managed the state's Agricultural Pilot Program for hemp cultivation as allowed for in the 2014 U.S. Farm Bill. The bill authorized colleges, universities, and state departments of agriculture to grow, cultivate, and market hemp as part of research and development pilot program.

- The 2018 U.S. Farm Bill legalized hemp cultivation in the U.S. and prescribed requirements for licensing and testing.
- To bring the hemp program under state authority, MDARD's Pesticide and Plant Pest Management Division submitted a Hemp Production Plan for approval by the U.S. Department of Agriculture (USDA) in accordance with their interim rule on domestic hemp production.
- On December 1, 2020, MDARD's hemp production plan was approved under the interim rule.
- USDA approved the final rule, 7 CFR Part 990, which became effective on March 22, 2021.
- MDARD worked with the Michigan legislature to update state law (PA 220 of 2020 - Industrial Hemp Growers Act), and subsequently the state hemp production plan, to bring the law and the plan into compliance with the final rule.
- MDARD sought approval by USDA for performance-based sampling, which was approved on June 16, 2022, and subsequently added to the state's hemp production plan.

### 2021-2022 Accomplishments

Over the span of two short years and amid a pandemic, PPPM moved from a pilot program focusing on licensing (referred to as "registration" in Michigan) and grower submittal of hemp samples for THC compliance testing, to the state's first comprehensive hemp cultivation regulatory program. PPPM developed processes for inspector collection of samples, staff training, data collection and reporting, grower education, compliance assistance and enforcement, and management of noncompliant lots via disposal observation or remediation and resampling to its list of hemp-related activities.

In two years, program development resulted in:

- 100% of sampling requests were collected in a timely manner according to procedure.
- A six-module training series was developed for inspection and sampling processes.
- 99.7% of the collected samples arrived at the MDARD Geagley Laboratory through inspector delivery or careful coordination with U.S. Postal Service (USPS) post offices. Additional coordination with the U.S. Postal Inspection Service prevented packages from being confiscated by post offices in all but one instance.
- Close interaction with USPS resulted in the ability for inspectors to generate shipping labels with shipping billed directly to the state.
- 43 inspectors became certified as sampling agents.
- 68 policies, procedures, and forms were developed.
- 15 compliance assistance documents were generated to facilitate understanding of law requirements for the regulated community.
- Data from registration, lab analyses, grower reporting, disposals, and remediations were uploaded monthly to USDA’s online hemp licensing and lab data tracking system.
- 73 enforcement actions (primarily warning letters) were taken, including one administrative fine, five corrective action plans, and numerous cease and desist orders.
- Performance-based sampling was instituted, allowing hemp researchers and commercial growers with certain types of crops such as fiber or grain grown from certified seed, to participate in a reduced or modified sampling and testing process.

### Registration and Sampling Numbers

As seen with most state’s cultivation programs, the number of hemp growers nationwide dropped significantly in 2021 and 2022 as the market for cannabinoids became saturated starting in the spring of 2019. Michigan’s numbers mirrored this trend.

Program Alignment	Year	Registered Growers	% Grower Change from Prior Year	Samples Collected	% Sample Change from Prior Year
2014 Farm Bill	2019	572	NA	847	NA
2014 Farm Bill	2020	631	10.3%	916	8.2%
2018 Farm Bill	2021	175	-72.3%	274	-70.1%
2018 Farm Bill	2022	92	-47.4%	112	-59.1%

### Hemp Processor-Handler Licenses

MDARD issued Hemp Processor-Handler Licenses from 2019 through April 12, 2022. Authority to manage hemp processing was transferred to the Michigan Cannabis Regulatory Agency (CRA) via Governor Whitmer’s [Executive Order 2022-1](#) on April 13, 2022.

The numbers of licensees are shown below:

- 2019 - 433
- 2020 - 517
- 2021 – 297
- 2022 - 215 by MDARD through April 12, 2022; 250 final

### Planned Growing Locations

The table below shows the breakdown of the acres/square footage applied for and permitted during the registration process. Michigan has no end-date to receive applications each year but does charge renewing

applicants a late fee of \$250 if renewing after January 31. The permitted acreage applied for is often much higher than the actual acreage planted.

Year	Permitted Indoor Locations	Permitted Indoor Sq Footage	% Change Permitted Indoor Sq Footage from Prior Year	Permitted Outdoor Locations	Permitted Outdoor Acreage	% Change Permitted Outdoor Acreage from Prior Year	Total Permitted Area in Acres
2019	130	3,814,877	NA	367	6,730	NA	6,818
2020	425	11,765,220	208.0%	967	15,008	123.0%	15,278
2021	158	1,413,833	-88.0%	262	3,905	-74.0%	3,938
2022	64	1,609,920	13.9%	152	2,481	-36.5%	2,518

### National Data Reporting

Hemp production data is collected via several routes. Michigan's PA 220 mirrors USDA's final rule by requiring hemp growers to submit annual reporting data to MDARD by November 30 each year detailing indoor vs. outdoor plantings, intended use, and acreage or square footage planted, harvested, and disposed of due to THC non-compliance. Growers are also required to report planting and agronomic data to USDA's Farm Service Agency (FSA). In addition, 2021 was the first year hemp growers were asked to voluntarily report hemp cultivation and economic value data for hemp flower, grain for human consumption, fiber, seed, and transplant production to USDA's National Agricultural Statistics Service (NASS).

[National Hemp Reports](#) are available from February 17, 2022 and April 19, 2023 and can provide perspective of where Michigan ranks in hemp production nationwide. [NASS raw data on hemp](#) is pulled from several sources including the voluntary grower survey and therefore does not always align with state-collected data.

In addition, [FSA provides reported data for all crops](#).

- In 2021, 1,188 acres of hemp were planted in Michigan.
- In 2022, 255 acres of hemp were planted in Michigan.

### Michigan Annual Reporting and Inspector-Collected Data

Hemp growers are required to report planting and harvest data directly to MDARD by November 30 of each year. This requirement is independent of data reporting directly to FSA and NASS. MDARD must then provide the data to USDA in accordance with its state plan. In 2021, this data was collected by growers entering information into an online form. In 2022, PPPM inspectors collected data from all registered hemp growers, whether they planted hemp or not.

Total Acreage of Hemp Planted, Harvested, and Disposed:

Year	Planted Acres Reported to MDARD	Harvested Acres Reported to MDARD	Acres Disposed of Reported to MDARD
2019	3,689	Not available	Not available
2020	2,340	1,924	358 (all causes)
2021	2,284	1,005	19 (due to THC only)
2022	225	207	0.3 (due to THC only)

Data about the reason for disposal if not related to THC was also collected. Common causes for disposal in 2019 and 2020 included labor shortage, pandemic-related issues, crop failure, and low return on investment. In 2021, growers reported cost vs. return and crop failure due to disease or drought as significant issues.

### Intended Use of Crops

The table below shows trends in growers' intended use of their crops. Empty cells are categories of data not collected in the respective year. Data from the Ag Pilot Program was self-reported, while data from 2021-2022 was collected by inspectors during preharvest sampling. Despite market declines, hemp cultivation for CBD or other cannabinoids via extraction or smokable flower continued to dominate in Michigan; 89% and 80% of growers in 2021 and 2022, respectively, grew hemp for this purpose (as derived from sampled hemp lots).

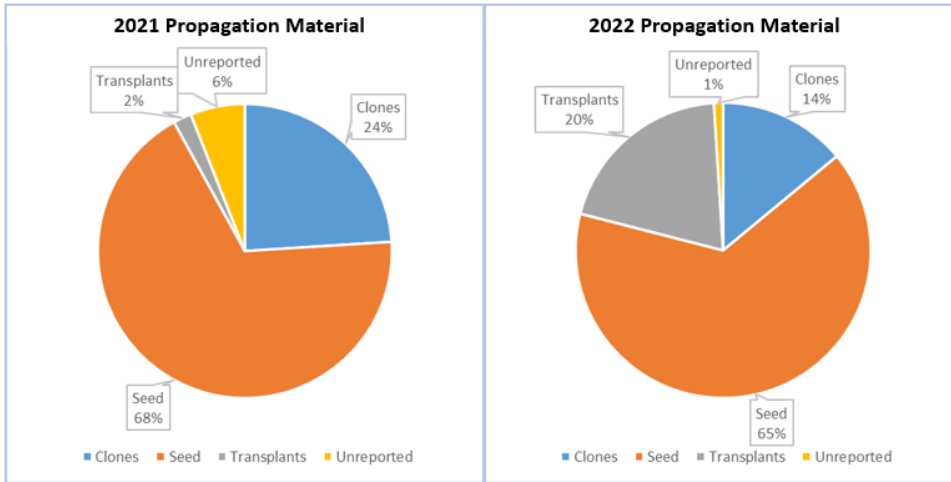
Intended Use	Percentage of Respondents			
	2019	2020	2021	2022
Cannabinoids- Extraction		70	62	54
Cannabinoids- Smokable Flower		3	18	11
Both Extraction and Smokable Flower	45	0	9	15
Fiber	6	6	2	4
Grain	7	4	4	3
Both Fiber and Grain			0	13
Microgreens			0.4	0
Seed (for propagation)	11	6	3	0
Clones/Transplants	0	1	0	0
Other/Unreported/R&D	31	10	1	0

### Sources of Propagation Material

In 2021, most growers planted from seed. Inspection data from sampling events showed growers obtained propagative material from 80 suppliers in 18 states and Canada. Most growers sourced propagative material from Colorado (14%), Michigan (38%), and Oregon (15%).

In 2022, seed remained the top source of propagative material. Growers obtained propagative material from 32 suppliers spanning nine states, Canada, China, and the Ukraine. Most growers sourced propagative material again from Colorado (18%), Michigan (26%), and Oregon (33%). In 2022 only, MDARD collected information on seed certification; 33% of growers confirmed certified seed was planted. Michigan's seed certification program, which is administered by the Michigan Crop Improvement Association, does not currently offer hemp seed certification.

A breakdown of the 2021 and 2022 propagation material is shown below:



### Staff Training

2021 was the first year PPPM collected hemp samples to ensure compliance with THC requirements. To collect the samples, PPPM inspectors had to undergo USDA-required training to become certified sampling agents. A six-module training series, virtual and in-person, at a grower/processor site, was developed to train inspectors on the history of hemp regulation, agronomy, sampling, remediation, and disposal regulatory activities. In total, 43 inspectors from across PPPM became certified sampling agents. With the reduction in registration numbers for 2022, only plant health inspectors were utilized to provide the required sampling.

Training continued in 2022 and is ongoing. Trainings also cover PA 220 requirements and grower inspections, performance-based sampling, enforcement, data management, and post-harvest inspection procedures.

### Sampling for THC Compliance

In accordance with Michigan’s state plan, sampling agents (MDARD inspectors) are required to sample hemp lots prior to harvest. Samples are hand-delivered or sent via USPS (after providing advance notice to USPS) to MDARD’s Geagley Laboratory for testing. The lab tests the samples for total THC and CBD and reports the results directly to the grower through email.

In 2021, only 23 of 274 inspector-collected samples were noncompliant with respect to THC level. This represents a 56.3% improvement from the number of hot lots in 2020 and a 46.1% improvement from 2019. In 2022, 10 lots of 112 samples were noncompliant, continuing a trend of high compliance.

Program Alignment	Year	Fee	THC Compliance Rate	% Samples Noncompliant	Noncompliant Lot Disposition
2014 Farm Bill; Grower Sampling	2019	\$125/sample	84.4%	15.6% > 0.3% 10.7% > 0.5%	Disposal Only
2014 Farm Bill; Grower Sampling	2020	\$125/sample	80.5%	19.2% > 0.3% 9.1% > 0.5%	Disposal Only
2018 Farm Bill; MDARD Sampling	2021	\$150/site visit; \$125/sample	91.3%	8.7% > 0.3% 3.3 > 0.5%	22 Disposals 1 Remediation
2018 Farm Bill; MDARD Sampling	2022	\$150/site visit; \$125/sample	89.7%*	0.10% > 0.3% 0.02% > 0.5%	5 Disposals 6 Remediations

Approximately 156 different varieties were sampled in 2021. 22 non-compliant lots grown by 14 registered growers were disposed of, and all but one were grown for cannabinoid extraction or smokable flower. “ChinMa” was the single fiber crop testing as non-compliant. Results are posted at <https://www.michigan.gov/mdard/plant-pest/industrial-hemp/hemp-sample-testing>.

In 2022, 67 varieties were sampled. Ten lots from seven growers were found to be noncompliant, and all but two were grown for cannabinoids. “Yuma” and “JinMa” fiber crop varieties tested as noncompliant.

### **100% Success with Remediation**

When the THC level of an intended hemp lot is non-compliant, the grower must choose to dispose of or remediate the lot within 30 days of receipt of the test results. Growers have chosen disposal due to costs, labor, or time to remediate, and often with smaller lots. In all instances where remediation has been attempted, the resampled material has been compliant, regardless of whether remediation was accomplished via creation of biomass of the entire lot on site (a viable choice for cannabinoid extraction material) or following field retting for fiber lots, where floral material and leaf matter decomposes prior to resampling.

### **Inspections**

MDARD staff conduct detailed inspections with registered firm to ensure growers understand and comply with PA 220 requirements:

- 2021: Inspectors completed 74 grower inspections, covering requirements such as registration, noncompliant lot options, posting, and recordkeeping. MDARD began issuing warning letters or corrective action plans in 2022 for deficiencies identified in 2021 inspections. Three investigations in response to complaints were issued. MDARD issued one administrative fine, 46 warning letters, and five corrective action plans.
- 2022: Inspectors completed 63 grower inspections. MDARD issued 16 warning letters, one administrative fine, and one corrective action plan. Inspectors also assisted growers with the state and federal required year-end cultivation data reporting while following up to ensure crops were harvested within the 30-day window following compliant sampling as required by PA 220. Inspectors collected information on area planted, harvested, and disposed of due to non-compliant THC, along with intended uses and indoor/outdoor locations in Post-Harvest Inspection reports. Data from a total of 145 lots was collected.

### **Law Updates**

- On January 15, 2021, the USDA released its final rule on hemp production, which became effective on March 22, 2021. In response, MDARD worked with Senator Dan Lauwers’ office on Senate Bill 186 (PA 4 of 2021) to align the hemp grower law with USDA’s final rule on hemp production. MDARD also updated its state hemp plan and received USDA approval on October 21, 2021.
- On October 11, 2021, HB 4517 (PA 56 of 2021) modified the definitions of hemp, THC, and marijuana in the Michigan Regulation and Taxation of Marihuana Act (MRTMA, 2018 IL 1) to remove “delta-9” language and allow for regulation of products with any derivative or isomer of THC. The change also allowed Michigan’s Marijuana Regulatory Agency (MRA) to set a total THC limit for human and animal consumable hemp products. HB 4741 updated the growers act and HB 4744 updated the processor act accordingly. PPM and the Geagley Laboratory provided comments for these updates initiated by the MRA.
- MDARD began discussions with MRA in 2021 regarding the most effective means for the state to regulate cannabinoid production and products, specifically because intoxicating compounds such as delta-8 THC were being manufactured from hemp-derived, legal CBD. On February 11, 2022, Executive Order 2022-1, signed by Governor Whitmer, moved the hemp processing regulatory authority to, and updated the name of, Michigan’s Cannabis Regulatory Agency (CRA).
- In 2021, MDARD participated in lobbyist-led initiatives to eliminate the need for a license for marketing hemp products and allow for cannabinoids in food and supplements. With the move of processing to CRA, MDARD’s Food and Dairy Division continues to work closely with CRA to regulate hemp and cannabinoids in food.
- MDARD provided proposed updates to Public Act 220 to the legislature in 2021. The amendments were to address minor changes needed to be in alignment with USDA’s final rule and to introduce a viable industrial hemp supplier license option which would regulate those wishing to sell hemp seed and other

propagative material such as clones and transplants. MDARD continues to pursue these regulatory updates in coordination with CRA in instances of overlap with the hemp processing law.

## **Outreach and Education 2021-2022**

- The Hemp Program generated 15 technical bulletins, posted online to assist growers in learning about hemp program requirements. Find them at [www.Michigan.gov/HempLaws](http://www.Michigan.gov/HempLaws).
- The Hemp Program issued 32 group email updates, three interviews, and four press releases. Multiple email announcements were produced to keep growers and processors informed of activities.
- [www.Michigan.gov/IndustrialHemp](http://www.Michigan.gov/IndustrialHemp) was updated to [www.Michigan.gov/HempGrowing](http://www.Michigan.gov/HempGrowing) in collaboration with CRA ([www.Michigan.gov/HempProcessing](http://www.Michigan.gov/HempProcessing)). MDARD's website was enhanced with compliance assistance documents, FAQs, GovDelivery updates, web resources, and other-division resources in 2021 and 2022.
- Numerous meetings and presentations to educate internal and external partners about hemp as an agricultural commodity were held with MDARD's Food and Dairy, Ag Development, and Environmental Stewardship divisions; PPPM Feed Safety and Fertilizer Section; the Michigan Department of Environment, Great Lakes and Energy (EGLE); the Michigan Economic Development Corporation (MEDC); DTE; Michigan Farmers Market Association; the United States Postal Inspection Service; USPS; Michigan State Policy Marijuana and Tobacco Investigation Section, the Michigan Environmental Health Association, and numerous registered growers and licensed processors.
- The Hemp Program participated in the cannabinoid subcommittee with the U.S. Cannabis Regulators Association (CANNRA), national State Regulators calls, monthly meetings with CRA, USDA state regulator virtual meetings, and monthly touchpoint meetings with MDARD divisions.
- The Hemp Program participated in 2022's iHemp Expo, Align Agro Field Day, Michigan Hemp Farmers Association hemp day, and Cannacon.

## **Trends**

Forecasted in 2019, states nationwide began to see the CBD market plummet in response to oversupply in 2020. Despite this, over 80% of the growers who planted hemp continued to do so for cannabinoid production and/or smokable flower in Michigan. Like most states, Michigan saw significant reductions in grower registration, planned and planted acreage, and processor licensing. While the market forced many growers out of the industry, a number held on and saw profits, most often when vertically integrated and able to offer processing services in addition to cultivation. Nationwide, the fiber, and grain side of hemp is slowly advancing as the industry pushes to establish supply chains and manufacturers, increase use of Generally Recognized As Safe (GRAS) seed in human food, allow for hemp products in animal feed, and exempt fiber and grain crops from the same requirements as cannabinoid crops. Industry consultants have advised clients the "early boom is over" and recommends growers look to on-farm processing to create and sell their own products, provide processing as a service for other growers, develop artisanal small batch products and diversify product lines, rotate hemp with other successful crops, and watch for opportunities with phytoremediation.

## **Looking Forward**

Like many states, MDARD continues to evaluate the feasibility of maintaining the program in house or modifying how the program is implemented, along with sampling and testing fees and inspection frequency. Should the program continue, PPPM intends to:

- Continue working with the legislature for PA 220 updates.
- Consider creation of a hemp advisory panel with industry, researchers, EGLE, CRA, and other partners.
- Move reporting into web-based software.
- Continue coordination and cooperation with CRA, Michigan State Police (MSP), and EGLE to address crossover issues.
- Identify funding sources.
- Investigate sampling and testing prepayment.
- Continue facilitating discussion regarding hemp and cannabinoids in animal feed.

- Encourage integration of hemp in grant programs and environmental discussions.
- Further coordinate with EGLE regarding environmental impacts and disposal compliance with state laws.

MDARD-PPPM thanks you for participating in the hemp program in 2021 and 2022 and looks forward to growing the hemp industry in Michigan. Please do not hesitate to contact us with questions or concerns at 800-292-3939 or [MDARD-IndustrialHemp@Michigan.gov](mailto:MDARD-IndustrialHemp@Michigan.gov).