

Frequently Asked Questions:

Wisconsin's Industrial Hemp Pilot Research Program

Updated March 13, 2019

As you probably know, we have received many questions about growing and processing industrial hemp in Wisconsin. Bear in mind that we are authorized to regulate hemp only up to the point where it's been found to comply with the 0.3 percent THC level and harvested. After that, it is an ingredient or a fiber, and comes under regulations, if any, for the products containing it.

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General

What is industrial hemp?

Under the 2014 Farm Bill and s. 94.55, Wis. Stats, industrial hemp is defined as the plant with the Latin species name *Cannabis sativa* L., with a delta-9-THC concentration of 0.3 percent or less in all parts of the plant when it has been dried.

Under the 2018 Farm Bill, federal law removed the word "industrial", and now defines hemp as "the plant *Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis."

Will I need a license to grow industrial hemp?

Yes. You will need a one-time license and an annual registration to grow any amount of hemp in Wisconsin, including hemp starter plants and any hemp that may be grown for personal use.

Will I need a license to process industrial hemp?

You will need a one-time license and annual registration to process industrial hemp in Wisconsin. Processing industrial hemp includes transporting, warehousing and converting the industrial hemp to a marketable form. A processor license is also needed if you will be packaging and labeling raw industrial hemp for retail sale. If you will be processing only industrial hemp that you grow, and won't be accepting it from other licensed growers, you will not need a processor license.

Do I need any other licenses as a processor?

Depending on what you are doing with the industrial hemp you process, you may need additional licenses from the department or other departments. For example, any industrial hemp processors who will be using hemp or hemp extracts in food products will need a license from the DATCP Division of Food Safety. Please contact the Division of Food

Safety and Recreation at 608-224-4923 or <mailto:datcpdfslicensing@wisconsin.gov> for more information about those licensing requirements.

How does growing industrial hemp affect my FSA and/or federal crop insurance contracts or program participation?

The 2018 Farm Bill recently defined hemp as an agricultural commodity, so federal agencies no longer consider hemp to be a controlled substance. Farmers should now be able to get federal crop insurance for an industrial hemp crop as long as you hold a current hemp grower license and registration from DATCP. If you are thinking of planting industrial hemp, you should check with your local FSA service center to see if your access to federal crop support programs might be affected by growing hemp.

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Licensing, registration and fees

How do I apply to grow hemp?

To **grow** industrial hemp you must:

- Apply for a one-time license using the forms provided by the Department of Agriculture, Trade and Consumer Protection
- Pay a one-time license application fee (\$150 for 0-30 acres, \$5/acre for 31-199 acres, or \$1000 for 200 acres or more)
- Undergo a background check
- Provide field or greenhouse locations and GPS coordinates

You also must register with the department every year that you plan to grow hemp, including the first year that you receive your license. When you register each year, you must also submit:

- An annual registration fee of \$350
- GPS coordinates and maps of your fields
- A research plan
- A signed research agreement

How do I apply to process hemp?

To **process** industrial hemp you must:

- Apply for a one-time license using the forms provided by the Department of Agriculture, Trade and Consumer Protection
- Undergo a background check

You also must register with the department every year that you plan to process hemp, including the first year that you receive your license. When you register each year, you must also submit:

- An annual registration fee of \$100
- GPS coordinates and maps of your processing location
- A research plan
- A signed research agreement

When can I apply for my license and registration?

Licensing and registration for the 2019 growing season is now closed. Licensing and registration for 2020 will open in the fall.

How did you come up with the fees?

The license fees are specified in s. 94.55, Wis. Stats. The law also allows DATCP to set annual registration fees that do not exceed the actual costs of administering the hemp program. We established the fees after calculating the department's costs for program administration and reviewing other states' fees. As most states are doing, DATCP will invoice growers the actual costs of sampling and testing.

How long does my license last?

The pilot program license is permanent. However, you must re-register each year you want to grow or process industrial hemp.

Am I required to do anything else if I participate in the industrial hemp pilot program?

You must allow us access to your hemp fields to inspect and sample, submit a planting report, and submit a final report. You must maintain a variety of records. You should take reasonable measures to prevent theft or diversion of your industrial hemp plants and seed, and cooperate with law enforcement if necessary. Licensees who fail to pay their invoiced fees or submit their required reports for the previous growing season may have their license suspended, and will not have their registrations approved to grow in the following year.

Can I see a list of industrial hemp growers or industrial hemp processors licensed in the state?

Pilot participants' personally identifiable information and field location data are confidential under state law. DATCP will not provide this information, although growers or processors may release it themselves.

Who is the operations manager?

If you apply for a license as a business, the operations manager is the person who the background check is conducted on, and who is legally responsible for the hemp operations. A business may also designate other points of contact for the hemp operation if it desires to do so.

What type of convictions disqualify me in the background check?

An applicant or an operations manager may not have a conviction for a criminal violation of the Federal Controlled Substances Act under 21 USC 801 to 971, the Uniform Controlled Substances Act under Chapter 961, or any controlled substances law of another state. If you are unsure if your conviction violates this standard, please check with an attorney.

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Research plans

Why is a research agreement required?

The 2014 farm bill allowed universities and state departments of agriculture to conduct industrial hemp research and pilot programs. The research agreements extend the department's research program to individual farmers, allowing them to do applied research throughout the state of Wisconsin under a variety of growing conditions.

What do you mean by a research plan?

After a 70-year absence from Wisconsin's agricultural landscape, industrial hemp is considered a new crop here. Research topics may include planting, harvesting and processing techniques; seed varieties; nutrient requirements; markets; storage; non-chemical pest and weed control; or other topics that participants choose. A concise research plan may be submitted on the forms provided by the department, or a more detailed plan may be attached.

What do I do with the research plan?

You will use it as your guide to gather and record your findings. We will supply forms for reporting agronomic data and research results, so you will need to gather this data throughout the growing season and report your research findings every year. We will prepare an annual summary report of all research conducted as part of the program, so everyone can benefit from the information.

We will not register you for succeeding seasons if you have not filed your reports.

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THC and testing

How do you know my crop's THC content?

Participants must notify the department 30 days before they want to harvest. A department inspector will sample each field and variety grown and deliver the samples to our laboratory for analysis.

What method do you use to test for THC?

The method used is called high-performance liquid chromatography, or HPLC and we test for delta-nine Total THC using the following formula: $d9\text{-THC} + 0.877 * \text{THCA}$. This method or a similar one that uses decarboxylation is required under the 2018 Farm Bill for state departments of agriculture that want to have their hemp regulatory plans approved by USDA. We will invoice you for the cost of the sampling and testing. Growers may not move their industrial hemp crop to a processor or sell it to a consumer until it has been tested by the department and a fit-for-commerce certificate is issued. All plants must be either harvested or destroyed within 10 days after receiving sample results.

What if my plants test above 0.3% THC?

You may request a retest within 10 days of receiving your sample results. We would collect another sample and send it to the laboratory again for HPLC analysis. You would pay the cost for both the resampling and retest. If you decline resampling and retesting, or if the hemp samples test high again, you are required to destroy your crop within 10 days. Wisconsin state law provides protection from criminal penalties to growers whose plants test no more than 1 percent -- up to 0.7 percentage points above the 0.3 percent THC limit. Growers who plant certified seed are protected from criminal penalties regardless of THC level.

Does the department have a list of approved laboratories that can provide THC and cannabinoid testing?

The department does not currently certify or approve laboratories that can provide cannabis testing.

Can I send my hemp sample to a private laboratory to avoid the cost of the DATCP testing?

Growers must have their hemp crop sampled by Department staff and tested by the department's regulatory lab prior to harvest. Growers and processors can use private laboratories for additional pre- or post-harvest testing needs.

Do you require post-harvest testing?

The department currently does not require post-harvest testing or product testing. Processors and manufacturers may require testing. Regardless of testing, all hemp and hemp products must meet the legal definition of hemp.

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Growing locations

Can I grow industrial hemp in a greenhouse?

Yes, you can grow in a greenhouse as long as you clearly indicate your research goals and production methods on your application.

Can I grow industrial hemp in my residence?

No, you may not grow industrial hemp—except to start seedlings--in your residence, including your basement or any other indoor area within your residence.

Can I grow industrial hemp near a school, a town, or a major road? Are there restrictions on where I can grow it?

Industrial hemp should be grown in traditional agricultural fields or greenhouses. We do not permit growing industrial hemp in residences. If you want to grow industrial hemp in a location that is not an agricultural field or greenhouse, you must seek and receive approval for that location from the department prior to planting. The department will not otherwise restrict industrial hemp production locations, but you may be subject to township or city zoning rules prohibiting industrial hemp in certain locations, including backyards in residential neighborhoods. We do not track these local rules. You are responsible for knowing and complying with them.

Can I change my field locations or add a growing or processing site?

If you want to change field locations, you must amend your license, submit a license modification fee, and provide new GPS coordinates. The department has the discretion to waive the license amendment fees for field location change that are required due to unforeseen or extenuating circumstances, such as flooding.

Is there a minimum acreage requirement?

While the department does not require a minimum acreage, growers must have a minimum of 15 plants available for a pre-harvest regulatory sample at the end of the growing season.

Do I need to build a fence or put up signs around my field?

No. If you are concerned about trespassing or vandalism if your crop is mistaken for marijuana, you may post signs identifying it as industrial hemp, but it is not required.

Also, if your industrial hemp plot is less than 1 acre, you may want to post signage to help local law enforcement identify it as part of the pilot program.

Do I need to notify the sheriff/local police or does DATCP do it?

Many growers do proactively notify their local law enforcement about their hemp fields and processing locations. However, once you register your hemp fields with us, we will share your field location and contact information with local law enforcement upon their request. For this reason, it is essential that you provide accurate field location information and maps and keep the department updated if you need to change growing, storage or processing locations. This saves the grower and processor from unwanted attention, and saves law enforcement time and money on unnecessary investigations. Make sure all locations where hemp will be grown, stored or processed are registered with DATCP prior to planting, storing or processing the hemp.

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How to grow industrial hemp

Please note that we do not have agronomic expertise. Our role is to set up the pilot research program and regulate it. Learning how to grow hemp in Wisconsin is part of the research. However, some information is available from other states that have already started their pilot programs, from Canada where industrial hemp is grown as a commodity crop, and from organizations advocating industrial hemp as a crop. We have used that information to answer these basic common questions, but encourage you to go directly to the sources for details.

What are the best hemp varieties?

Different varieties are better for different purposes. Whether you grow hemp for fiber, grain production, or CBD will determine which varieties you will want to grow. Please refer to this fact sheet for some growing and harvesting information about the three most [common types of hemp](#).

You may refer to [DATCP's hemp seed webpage](#) for lists of certified grain and fiber varieties and approved CBD varieties. Regardless of variety planted, all industrial hemp fields or varieties testing above 0.3% THC in the department's pre-harvest test must be destroyed.

When do you plant hemp?

The ideal seeding time for outdoor industrial hemp production in Wisconsin is from mid-May to mid-June. Soil temperatures should be at least 45-50 degrees Fahrenheit. Industrial hemp likes warm soil. Cold soils and pathogens may kill seedlings if you plant too early.

What type of soil does hemp like?

Hemp can grow in many types of soil, but it particularly does well in well-drained soils.

How many pounds of seed per acre do you plant?

The general recommendation is 20-40 pounds per acre for grain production, and 40-60 pounds per acre for fiber production, but the optimal seeding rate for your field will depend on the seed variety, seed purity and germ, local conditions and other factors. The [Canadian Hemp Trade Alliance's \(CHTA\) Hemp Production eGuide](#) has excellent seeding information. Hemp grown for CBD usually requires at least 6 ft per plant with 1000-2000 plants per acre.

Can you plant hemp on hemp? How does it fit into a crop rotation?

According to the CHTA, "Hemp fits in with typical crop rotation systems and with typical equipment that would already be found in a grain production system." Please visit the [CHTA's Hemp Production eGuide](#) for much more information on hemp agronomy.

How do you sow hemp seed? What equipment and at what depth? Can you broadcast or do you have to drill?

Most conventional drills and seeders will work for hemp. Use lower air volumes to avoid seed cracking, and plant ½-1 inch maximum into a firm seedbed. Avoid soil compaction and do not seed when heavy rain is in the forecast. Please visit the [CHTA's Hemp Production eGuide](#) for much more information on hemp planting.

Can I grow hemp organically?

The National Organic Program (NOP) allows organic certification of hemp grain and fiber. The national organization has indicated it may not certify cannabinoid extracts produced from hemp, but each local certifier may handle this matter differently. Please visit [NOP's website](#) or speak with your local organic certifier for more information.

There are no pesticides registered for use on industrial hemp. You may use only 25(b) minimum risk pesticides, which are exempt from federal EPA registration. However, those products must be registered in Wisconsin. A list of pesticide products registered in Wisconsin can be found [here](#). Check with your local certifier to see which of these may be used on organic-certified industrial hemp.

Do you need to fertilize industrial hemp?

Yes, hemp has similar nutrient needs to corn, and especially requires added nitrogen. General guidelines for fertilizer rates can be found on the [CHTA's Hemp Production eGuide](#).

How do you harvest it?

Hemp varieties grown for grain and fiber are generally harvested by straight combining; however, swathing is also used. Hemp has long fibers and can get entangled in harvesting equipment. Other hemp varieties, such as those grown for CBD, may require different harvesting techniques, including hand harvesting. Do your research and be patient while harvesting industrial hemp. Please visit the [CHTA's Hemp Production eGuide](#) for much more information on hemp harvesting.

When do you harvest it?

Generally, crop maturity is 90-120 days after planting, depending on the variety and local climatic conditions. Industrial hemp seed is harvested when about 75 percent of the seeds are ripe and starting to shatter. High winds can accelerate shattering. Bird predation can also be a major problem. The CHTA recommends harvesting at 18-20 percent moisture, and immediately starting the drying process. Dry grain to 8-10 percent moisture for storage.

What kind of yield can I expect?

Yields vary widely depending on variety, local climatic conditions, cultivation method, and grower experience.

For grain, new growers have reported yields of 250-700 pounds/acre. More experienced growers report 800-1,800+ pounds/acre.

The average yield for dual purpose crops, harvested for both grain and fiber, is ¾-2 tons/acre. For hemp produced solely for fiber, the average yield is 3-5 tons per acre.

How deep are the roots?

The CHTA says that hemp roots are capable of penetrating up to 24 inches into the soil to recover nutrients that may be lost to many other crops. [CHTA Hemp Production eGuide](#)

Do deer eat hemp?

Yes, deer browse damage was observed in Wisconsin fields by DATCP hemp inspectors in 2018, but it was not substantial.

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Seed and Clones

Where can I buy hemp seed or clones?

Seeds and clones are available from multiple domestic or international sources. You can order seed or clones after you receive your license and submit your annual registration form and fee. You must transport and store seeds or clones in a secure manner. We recommend purchasing certified seed for grain and fiber varieties as the best option for quality germination rates and best protection against high THC levels.

Does DATCP have a DEA registration to help growers import seed internationally?

DATCP does have a DEA seed importer registration and can help facilitate seed imports in 2019.

Can I sell seed or clones to growers in other states?

Federal law fully permits interstate commerce of hemp seed, grain, plant material, and hemp products.

However, you cannot sell or transport hemp seed that was imported from outside the country via Wisconsin's DEA importer registration permits. That imported seed must be planted or processed within the state.

Can I save seed to plant the following year?

A grower may save seed harvested from a pilot project and plant the seed unless it is prohibited by the variety owner. Please see more information in the [seed section of DATCP's industrial hemp web site](#). Usually, seed cannot be saved and sold for propagation, except under the Wisconsin Crop Improvement Association's seed certification program. Most seed distributors will not allow purchasers to save seed and sell it to other users.

Do I need a seed license to sell hemp seed or clones in Wisconsin?

The Department of Agriculture, Trade and Consumer Protection licenses seed labelers. The labeling requirement helps assure that consumers receive good quality seed that germinates and does not contain weed seeds.

A seed labeler is any business or person whose name appears on a seed label, or who opens containers of agricultural, lawn or vegetable seed to sell all or part of it. Labels must include information about the percentages of different kinds of seeds in the package, germination, and treatment, inoculation or coating. Complete labeling requirements are listed in [Wisconsin Administrative Code ATCP 20](#).

You do not need a seed label license if you sell:

- Seed grown and sold on your own farm
- Seed in unopened bags or containers labeled by a licensed seed labeler
- Clones

Please visit the [Wisconsin Seed Program](#) for more information.

Can I breed a new variety of hemp for Wisconsin?

Pilot program participants wishing to breed a new hemp variety must apply for a research authorization from the department. Breeding is typically done by breeders or plant geneticists in an academic setting, and may have additional legal requirements.

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Marketing

Can I sell my unprocessed hemp in other states?

Wisconsin does not prohibit licensed growers from selling their unprocessed hemp interstate, but other states may or may not allow their processors to import unprocessed hemp from Wisconsin. You are responsible for understanding federal law and other states' laws, or for consulting an attorney on these matters.

Can I process hemp imported from growers in other states?

Licensed processors in Wisconsin may accept unprocessed industrial hemp from licensed growers who are part of any state's industrial hemp pilot program. Unprocessed hemp must be accompanied by documentation provided by an industrial hemp pilot program that demonstrates that the hemp has tested at or below 0.3 percent THC.

Does DATCP have any grants for growing hemp?

No, but our Division of Agricultural Development may provide some business development assistance. Other agencies or organizations may offer grants or other financial assistance. If you accept grants, there may be additional reporting and other requirements beyond those you must meet to participate in the pilot research program. This does not relieve you of any of your responsibilities within the pilot program.

Do I have to be a Wisconsin resident to get a DATCP industrial hemp license?

No, but the land where you grow industrial hemp or the location where you process it must be in Wisconsin.

Can I grow hemp under contract with someone else?

Yes, but each individual grower must still be licensed, register and sign a research agreement, and meet the research plan and reporting requirements. The person you are growing for must be a licensed processor.

Do I have to own the land I want to grow hemp on?

No. You can grow hemp on rented land as long as the landowner consents, and understands that we will perform routine inspections and plant sampling in the fields. If you plant hemp on rented land, you must provide us with the landowner's name and contact information.

What price can I expect to receive when I sell my hemp?

Prices for hemp grain, fiber and oils are fluctuating widely in the U.S. because the industry is in a very early stage and constantly developing. You should research available markets before you plant.

What is the cost per acre of growing hemp?

The Alberta Agriculture and Forestry Department reported an average total production cost at \$409 (Canadian dollars) per acre, with an average grain yield of 1,074 pounds per acre – or 38 cents per pound of hemp seed produced.

In Minnesota, hemp seed prices have varied widely, depending on variety and source. Imported seed costs more than domestic seed because of additional shipping and customs fees. You may also need to buy or rent harvesting equipment. In 2016, hemp producers in Minnesota reported costs per acre of \$970-\$2,500. In 2017, initial reports indicate production costs of \$300-\$600 per acre. This does not include costs of land.

In Wisconsin, we just don't know. That's part of what we are trying to learn.

Who will buy my hemp if I grow it?

The U.S. hemp market is limited and constantly in flux for many reasons. As in other states, Wisconsin will have to develop processing facilities. Growers are responsible for finding markets. To learn more about marketing opportunities, we encourage you to contact a hemp trade group such as the Hemp Industries Association or the National Hemp Association.

What if I can't or don't want to sell my hemp at the end of the growing season?

If you are unwilling or unable to sell your industrial hemp at the end of the growing season, you have several options. You can request permission from DATCP to destroy your crop and burn it, plow it under, or compost it. If it has tested at 0.3% THC or lower, you may bale it and store it on your farm. Your year-end report to DATCP must include the final disposition of your industrial hemp crop.

Can I export hemp products to other countries?

Yes, certain hemp products may be exported to other countries, including processed hemp, grain, seed, and fiber. Export requirements vary by product and destination. Please contact our [phytosanitary certificate program](#) for more info.

What about cannabinoids, like CBD?

Cannabinoids, such as cannabidiol (CBD), are a group of chemicals concentrated in the female flower of the cannabis plant. While they are chemically similar to THC, they do not have the psychoactive effects of THC. It is the licensed processor's responsibility to ensure that any CBD extraction or the production of CBD-containing substances complies with all laws and regulations, including any distribution to be conducted as part of marketing research.

Do I need a license to sell products made from industrial hemp, including CBD oil?

You don't need a license from the industrial hemp program to sell products made from industrial hemp. However, other programs or departments may have requirements. For example, retailers need a permit from the WI Dept. of Revenue.

Can I purchase CBD from a wholesaler who is not in Wisconsin and then re-brand the CBD and sell it with my company's logo in Wisconsin?

If you are repackaging or relabeling hemp for sale, you must have a hemp processor's license. However, the rebranded product cannot include any Wisconsin Industrial Hemp Pilot Program license number or reference unless the hemp was actually grown or processed in the state.

Can I sell food products infused with CBD oil?

The U.S. Food and Drug Administration (FDA) has stated that it is not legal to sell food products containing CBD oil interstate. DATCP's Division of Food and Recreational Safety generally follows FDA's guidelines related to safe food ingredients or additives.

Can I bottle water that contains CBD?

There are numerous regulations that relate to bottling water. Please contact our Division of Food Safety for more information at 608-224-4923 or datcpdfslicensing@wisconsin.gov.

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Animal feed and pet treats

Can I feed hemp to my livestock?

Animal feed (animal food) and animal feed ingredients, including pet food and pet treats, are regulated by the FDA and each individual state. At this time, industrial hemp, its byproducts and extracts (e.g. CBD concentrates, isolates, or synthetics) cannot be used in or on any animal feed product or animal feed ingredient.

Can I make pet food with hemp?

Animal feed (animal food) and animal feed ingredients, including pet food and pet treats, are regulated by the FDA and each individual state. At this time, industrial hemp, its byproducts and extracts (e.g. CBD concentrates, isolates, or synthetics) cannot be used in or on any animal feed product or animal feed ingredient.

Can I sell pet treats that contain CBD?

No. Industrial hemp, its byproducts and extracts (e.g. CBD concentrates, isolates, or synthetics) are not approved for use in animal feed as there is inadequate data surrounding the safety and utility of any hemp or hemp byproducts for use in animal feed.

At this time, CBD oil is regulated as a drug by the FDA. CBD oil must undergo the drug approval process through the FDA prior to distribution. For more information on pursuit of a new animal drug application, please visit:

<https://www.fda.gov/AnimalVeterinary/DevelopmentApprovalProcess/NewAnimalDrugApplications/default.htm>.

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