



Industrial Hemp is an emerging crop in Montana and is growing in popularity through a pilot program sponsored by the Montana Department of Agriculture. Montana Farmers Union has partnered with the Montana Department of Agriculture and Hemp Genetics International to offer education and training for producers interested in growing the crop. Below is a fact sheet on the growing, processing and licensing of Industrial Hemp. If you are interested in hosting an iHemp workshop in your area contact the MFU state office at 406-452-6406 or contact [mfu@montanafarmersunion.com](mailto:mfu@montanafarmersunion.com).

## **Industrial Hemp Production 101**

General Information: Source: HGI, Hemp Genetics International

### **Description**

Hemp is a valuable oilseed crop grown for its grain. It is historically dioecious (separate male & female plants). Hemp varieties have exhibited considerable differences in height, maturity and seed size. Hemp grain varieties bred specifically for a higher harvest index (more and larger seeds on shorter plants) in Western Canada include Picolo, Katani, Grandi, CFX-2, CFX-1, CRS-1. Maturity ranges from 100 to about 115 days. A hemp bushel weighs 44 lbs, or approximately 260gm / .5L.

### **Field**

Hemp grows best on clean, fertile, medium textured soil, on cereal or pulse crop stubble that is free of herbicide residues. Organic hemp crops are best preceded by perennial alfalfa breaking or a GM plow down (i.e. SSNS-1 fababeans).

### **Seeding**

Seed hemp shallow, but into moisture (0.5 ~ 1.0+ inches), ideally after the soil temperature has reached 8 ~ 10C+. Hemp is quite frost tolerant. Average seeding dates for hemp vary from late May to mid-June. Expect germination in 2 to 4 days and emergence within 4 to 7 days. Reduce airflow on air distribution systems to prevent seed damage.

### **Fertilizer**

Hemp responds very favorably to adequate fertility, but is very sensitive to higher rates of any nutrient placed close to or with the seed. Conventional producers should fertilize with rates similar to canola, but with at least 10 - 20% more N. Organic producers are recommended to precede a hemp crop with a perennial alfalfa breaking or annual legume green manure plow down.

### **Weed, Disease & Pest Management**

Weeds are best controlled through proper field selection, a pre-seeding burn-off, adequate rates of fertility, and selecting the proper hemp variety based on height. Hemp has few disease and pest problems. Hemp has limited susceptibility to sclerotinia / botrytis in wetter years. Note registered herbicides are limited, as only Assure II has been registered for grain production in Western Canada, and other pesticides trials are ongoing through the Minor Use program.

### **Harvest, Drying & Storage**

Most producers prefer to straight combine hemp while it is still “green / immature” to minimize stem fiber wrapping. Depending on variety and combine, thresh from 11% to 17% moisture (dry is 10% - stores best at 8%). Minor fiber wrapping may occur depending on hemp variety and field conditions with 15-20 year old combines i.e. JD 9600’s / CIH 2188’s, and very little or none with the newest, i.e. CIH 8 series / JD S series. Dry or aerate hemp grain immediately off the combine to 8%, heated air works well. “Turn” and or aerate hemp grain at change of seasons (spring / summer) to reduce moisture migration / spoilage. Move and unload hemp at reduced auger speeds using large diameter augers or belt conveyors. Cut or “haybine” remaining stubble within a few days and bale at 12% moisture, or alternately incorporate with heavy duty disc to clean up field for next year’s crop.

## **Industrial Hemp Rules & Regulations**



Source: Montana Department of Agriculture

### **Where can I get an application or license to grow industrial hemp?**

An application to apply for a license to grow industrial hemp will be available on the MDA website in the near future. We hope to make applications available soon for planting in spring 2017.

## **What's the difference between an application and a Montana Hemp License?**

Applying is the first step. You will fill out an application and submit it to the department through email or mail. If your application is approved, you will receive a Montana Hemp License that allows you to participate in the Montana Hemp Pilot Project. If your application is denied, then you will not be allowed to grow industrial hemp.

Difference between Hemp and Marijuana

## **What is the difference between industrial hemp and marijuana?**

Industrial hemp and marijuana are varieties of the same plant, *Cannabis sativa* L., which developed due to selective breeding. Hemp was bred for its fiber and seed oil. Marijuana was bred for its psychoactive properties. By both federal and state law, industrial hemp must contain less than 0.3 percent THC on a dry weight basis. The plant family *Cannabaceae*, that contains both industrial hemp and marijuana, also includes the hops plant which is used in the brewing process.

Fees

## **How much will it cost to be part of the Montana Hemp Pilot Project?**

Once the program is in place, user fees will support the program. MDA will establish user-fee rates as part of the rule-making process. The fees will need to be set at a level that supports the program, but not so burdensome as to keep people from participating. The fees proposed in rule are currently set at \$50 for the Montana Hemp License and \$400 for participation in the Montana Hemp Pilot Project.

Growing Hemp

## **Is growing industrial hemp legal in the United States?**

Yes, under certain conditions. Unlike marijuana, which is still illegal under federal laws, industrial hemp has been given a narrow legal approval under the 2014 Farm Bill which states:

*"...an institution of higher education...or a state department of agriculture may grow or cultivate industrial hemp if...the industrial hemp is grown or cultivated for purposes of research conducted under an agricultural pilot program or other agricultural or academic research..."*

## **When will I be able to start growing industrial hemp?**

We are working towards spring 2017 planting.

## **Will I be able to grow industrial hemp outdoors?**

Yes. Normally, industrial hemp is grown outdoors—like any other crop. However, there may be some research projects that require studying industrial hemp indoors. Indoor industrial hemp projects will need to meet the research goals and parameters of the pilot project.

### **Will I need security to grow industrial hemp outdoors?**

Crop security will be up to each grower individually, but MDA does not foresee requiring fences or security cameras for industrial hemp cultivation. Industrial hemp is an agricultural product and, due to the minimal THC content, is not a "drug."

### **Will there be minimum or maximum field sizes for industrial hemp?**

No minimum or maximum field sizes are being considered now. However, a field must meet the goals of the pilot project. Before determining the size of your industrial hemp crop, you may want to research state industrial hemp processors and markets so you don't end up with a lot of hemp and no one to sell it to.

### **Is growing industrial hemp to produce CBD (Cannabidiol) allowed?**

Yes. Cannabidiol (CBD) is one of many active cannabinoids identified in cannabis plants. CBD oil is generally extracted from plant parts other than seeds and many preferred CBD varieties exceed the 0.3 percent THC on a dry weight basis tolerance to be defined as industrial hemp. Cannabis varieties that exceed the 0.3 percent THC tolerance will not be approved for the hemp pilot project. On December 14, 2016 the DEA, in the Federal Register Volume 81, Number 240 re-classified all extracts of any member of the cannabis family, including hemp, as Schedule I Controlled Substances, or a substance with no recognized medical use. This scheduling takes effect on January 13, 2017.

### **Is federal funding available for University researchers to study industrial hemp?**

Yes. New guidelines issued from the federal government, through USDA's National Institute of Food and Agriculture (NIFA), has recently released clarification on how universities and colleges may be able to apply for federal funding to study industrial hemp agriculture. More information on this topic can be found by visiting <https://nifa.usda.gov/industrial-hemp>.

### **Organic Certification**

#### **Can my industrial hemp be certified as organic?**

Yes. Under guidelines (link: <https://www.ams.usda.gov/sites/default/files/media/NOP%202040%20Hemp%20Instruction.pdf>) issued by the U.S. Department of Agriculture (USDA) on August 23, 2016, industrial hemp grown under legal state industrial hemp pilot programs may be certified as organic. Industrial hemp must follow the same requirements (link: <http://agr.mt.gov/Topics/Organic-Certification>) as other crops certified in accordance with the USDA National Organic Program (NOP).

### **Pesticides**

#### **Which pesticides can I use on my industrial hemp crop?**

**25b products and pre-emergence herbicides.**

## Processing/Manufacturing

### **Can I process or manufacture industrial hemp into products under the Montana Hemp Pilot Project?**

Yes. Processing, or making agricultural hemp into a product, is permitted under the research goals. Examples of what industrial hemp can be made into include oils, shampoos, rope, beer, clothing, paper, and building materials.

### **Can I process or manufacture industrial hemp into pet food or animal feed?**

No, hemp is not an approved commercial feed ingredient under Association of American Feed Control Officials (AAFCO) regulations. Hemp cannot be manufactured into any commercial animal feed including pet foods and specialty pet foods, including complete feed, treats and snacks. Unprocessed hemp seed and other plant parts may be fed to animals as forage. Contact the Montana Department of Agriculture Feed Program for questions about feeding hemp products to animals: <https://agr.mt.gov/Topics/Feed>

## Sale/Movement of Hemp

### **Where can I sell the industrial hemp I grow?**

Since this program is so new, Montana has very few in-state processors. Before growers apply to the program, they may benefit from researching where they will sell their hemp plants and parts.

### **Can I sell the seeds from my industrial hemp crop to begin other industrial hemp programs in other states?**

Viable industrial hemp seeds cannot be resold at this time. Industrial hemp seeds that are capable of growing into new plants cannot be sold or moved across state lines due to DEA restrictions. They also cannot be sold or moved to Canada or abroad without DEA export permits. DEA export permits for industrial hemp are extremely difficult to obtain at this time. Currently, industrial hemp seed may be sold *only* as devitalized grain.

Devitalized grain are seeds that have been sterilized to make them unable to grown into new plants. Industrial hemp seeds/grain imported to the United States must be steam-sterilized at 180 degrees Fahrenheit for 15 minutes.

## Seed/Certified Seed

### **How will I get industrial hemp seeds to plant?**

Industrial hemp belongs to the plant genus *Cannabis*, which is still federally illegal, so no part of the plant, including seeds, can cross state borders. Once seeds cross state lines, they fall under the jurisdiction of the federal government. So getting seeds from Oregon, Washington, Kentucky, or Colorado would be illegal, for example. Even though the federal government allowed legal pilot hemp programs, no language was included for movement of seeds. Currently, the only way to get seeds legally is for a state department of agriculture, like MDA, or a university with an approved pilot program to get

a permit from the U.S. Drug Enforcement Administration (DEA) to import seeds from abroad and, in turn, provide those seeds for use in research. Most states get imported industrial hemp seeds from Canada and Europe. We are currently working with the DEA to complete our permit and import seeds legally.

Industrial hemp seeds will be available from a Montana approved seed variety list. This list will include varieties of certified industrial hemp seeds. This list has not yet been created. We will be looking closely at the type of certified seed that growers would be interested in for their research projects.

### **Can I get hemp seeds on my own for planting?**

No. All viable hemp seeds, plants, and parts must be grown and/or processed under the authority of the pilot project. Obtaining your own seeds, gathering growing hemp plants from the wild or obtaining hemp any other way would be illegal under the law. Input through the public comments process will help us determine how best to acquire industrial hemp seed. The main goal of the program is to create a solid, lasting program that will serve the needs of all Montana hemp growers into the future. Industrial hemp seeds will be available from a Montana approved seed variety list. This list will include varieties of certified industrial hemp seeds. This list has not yet been created. We will be looking closely at the type of certified seed that growers would be interested in for their research projects.

THC

### **What is THC?**

THC is short for tetrahydrocannabinol and is the component of marijuana that has psychoactive properties.

### **How much THC is allowed in industrial hemp?**

By law all industrial hemp must contain a THC concentration of 0.3% or less by dry weight.

### **What happens if my field of industrial hemp tests over 0.3% THC?**

If your field, greenhouse, harvest, or any other aspect of your industrial hemp project tests over 0.3% it no longer meets the definition of industrial hemp. MDA is considering what enforcement actions are most appropriate. Non-compliance would likely be referred to local and federal law enforcement officials.

**For more on the Industrial Hemp Pilot Program and application details visit their website at <http://agr.mt.gov/Industrial-Hemp>**

