



Industrial Hemp Planting Best Practices for Grain Production

.....

Planting Industrial Hemp in Kansas

2022 Guidelines, Recommendations & Best Practices for Growing Industrial Hemp



2022 Industrial Hemp Season in Kansas

Thank you for your interest in planting and growing industrial hemp in Kansas. The Kansas Hemp Consortium (KHC) has been researching and working with hemp producers since the industrial hemp program officially launched in the state during 2018. With the reintroduction of this crop on farms throughout the midwest, there is much to learn and important information to share that increases the odds of success for the crop and resulting industry.

Research, collaboration and the support of public institutions are all essential to hemp as the crop grows to reach its full potential. The recommendations contained here, in *Industrial Hemp Planting Best Practices for Grain Production* guide, reflect the experience of those involved to date and are subject to change as more is learned about industrial hemp. Thank you for making positive contributions to the industrial hemp community in Kansas and the midwest.

Industrial Hemp Season 2022 Timeline

- 3/15 Deadline to apply for [hemp producers license](#) through the Kansas Department of Agriculture
- April Recommended **final** planting date (April 1) in Kansas and similar latitudes
- May Weed control focus and cultivation if possible
Fertilization recommended
- June Reevaluate weed control needs
- Sept. Harvest and grain drying
- Oct. Ret stalks in the field
- Nov. Sell industrial hemp baled stalks and dried grain

This general timeline is fleshed out in the information that follows with recommendations and resources that may be helpful along the way. Industrial hemp is new to U.S. farmers and while there is a lot of potential, there are also a lot of potential pitfalls along the way.

KDA's Hemp Producer Licensing Costs

- **\$25** Fingerprinting at local law enforcement (\$25 is the rate charged at the Sedgwick County Law Enforcement Training Center, fees in most areas of the state are likely similar)
- **\$100** KDA Application fee
- **\$47** KBI Background check fee (both this and the application fee must be remitted with application)
- **\$1200** Assuming all the licensing requirements are met, you'll hear from KDA with a 'conditional approval' notice in a week or two after submitting the application. At this time, you'll be required to remit the full license fee for final licensing

Industrial Hemp Genetics

Kansas Hemp Consortium tested six different industrial hemp genetics in the 2021 season. Because planting conditions and techniques were the primary contributors to the success and failure of those fields, it is impossible to fully evaluate the potential for each genetic variety in the Kansas climate with just one season of data and spotty results. Research continues and, in 2022, KHC plans to source only two genetic varieties for comparison. Both are focused on grain production as their primary commodity but also produce fair amounts of fiber, flower and environmental benefits.

Depending on desired outcomes and growing conditions, there are other good options available. Research, recommendations and sources for varieties bred more specifically for fiber and hurd production are available through the multi-state hemp variety trials. Ask KHC for more detailed information on alternative genetics.

Industrial Hemp Planting Recommendations

Success on dryland is critical to the embrace of industrial hemp across the country. KHC test fields in 2021 were all on dryland. Planting specifics detailed below assume dryland planting.

Hemp seeds require moisture to germinate. Recommended planting date is before the last frost in March. This and all other recommendations made here are what's suggested by current research for weed pressure mitigation and a successful stand.

Planting recommendations specific to 2021 planting season for New West Genetics 2730:

- Planting depth: No more than ½ inch deep
- Soil Temperature - 45 to 55 degrees Fahrenheit
- Vegetation Period - 100 to 110 days depending on a number of factors such as seeding date and temperatures
- Hemp seed average is around 20,000 seeds per pound
- Typical test weight is 40 pounds per bushel

Planting & Cultivation Equipment

KHC's goal is to identify existing on-farm equipment that can function successfully for planting and harvesting industrial hemp. There are varied planting recommendations depending on the type of equipment available. For questions regarding the implementation of equipment on your farm, please connect with KHC for recommendations.

Seeding equipment options:

- 30 inch planter
 - Plates
 - High Rate Sorghum plates
 - 90-cells targeting 180,000-200,000 plants per acre
 - Translates to about 10 pounds per acre with the seeds about an inch apart
 - Row spacing similar to soy beans
 - Small Milo Plates
- 7.5 inch drill
- Broadcast planter with agitator on top inch of soil

Planting density:

30' Rows - 12 lbs/acre (planter)

7' Rows - 16 lbs/acre (drill)

Seed Cost: \$115/acre average

Cultivation is critical for weed control. Today, there are no approved pesticides or herbicides labeled for industrial hemp in Kansas. Treating your field with a preemergent may be helpful but can hopefully be avoided by planting before the last frost.

Harvest & Beyond

Yield Goals Per Acre:

- 1400+ Pounds Grain
- 2.5 - 3.5 Tons Baled Stalks

See the [Harvest Guide](#) from Midwest Hemp Technology for detailed instructions on harvesting hemp grain and fiber for purchase. Meeting specific requirements for drying, retting, baling and delivering properly to a processing facility increases the value of the crop.

Insurance - Recommendations available but not viable for small acreage test plots. Restrictions apply but coverage for hemp producers is available outside of the Federal Crop Insurance Program. Contact Assure Group or your local agent for more information.

What's Next?

Kansas Hemp Consortium is committed to the growth of hemp in Kansas and the midwest. It is our sincere hope that everyone who plants industrial hemp in the 2022 season sees success. The hemp industry still has a great deal of growing to do. Regulations are still being settled. Infrastructure is starting to come together.

Please be encouraged to stay involved and grow the Kansas industrial hemp industry. From bioplastics to livestock rations, there is room for many sub-specialty markets to develop and mass market appeal is growing. Over the next few years, supply and demand will both increase. The environmental benefits of industrial hemp are unsurpassed and will play a critical role in carbon reduction policies of the future.

Industrial hemp production research conducted in 2021 was funded by the Sustainable Agriculture Resources and Education Fund. Special thanks to dedicated collaborators at the Kansas Small Business Development Center at Wichita State University, Kansas State University, the Kansas Department of Agriculture, Kansans for Hemp, Planted Association of Kansas, Kannaco Inc., Fleming Feed & Grain, Firefly Farm Wichita and Midwest Hemp Technology.

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under agreement number 2020-38640-31522 through the North Central Region SARE program under project number FNC21-1307. USDA is an equal opportunity employer and service provider. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.



www.kshempconsortium.com