The Opportunities and Challenges with Hemp

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The Opportunities and Challenges with Hemp

Abstract
Over the past several years as row crop prices declined, farmers and landowners across the nation have searched for alternative crops that might improve the financial bottom line. With the passage of the 2014 and 2018 farm bills, industrial hemp became one of those possible alternative crops. The 2014 farm bill established industrial hemp (hemp with a tetrahydrocannabinol [THC] concentration of 0.3% or less) as a potential crop, separating it from its illegal relative, marijuana. The 2018 farm bill removed hemp from the list of controlled substances and established hemp as an agricultural commodity, including the provision of crop insurance for hemp. While the farm bills cleared federal hurdles for hemp, it is still up to each state to pass laws legalizing the crop and to submit a plan to the USDA outlining the state regulations and laws guiding hemp production, testing, licensing, and transport. Iowa has passed a law to legalize hemp and our state plan was accepted by the USDA on March 20, 2020.

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Agricultural Science | Agriculture

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Hemp is a versatile crop that can be grown for seed, fiber, or oil. Hemp seed has potential as a food or feed product, but the food or feed products must be approved by the Food and Drug Administration (FDA) for food products and the Association of American Feed Control Officials (AAFCO) for feed products. Currently, hemp seed and hemp seed oil can be utilized in food products. There are currently no approved uses for any form of hemp as a feed ingredient. Hemp seeds can be crushed, like soybeans, to produce oil. Hemp seed oil has industrial and cosmetic applications, such as soaps and shampoos. Hemp fiber can be used in paper, textiles, fabrics, and various construction materials. As the fiber is flexible, yet durable, it has potential as a substitute for fiberglass. While the seed and fiber have several potential markets, another aspect of hemp that has attracted a lot of interest is hemp for Cannabidiol (CBD) oil. CBD is a non-psychoactive compound that can be extracted from hemp in oil form. It should be noted that CBD oil is different than hemp
seed oil. CBD oil can be extracted from various parts of the hemp plant, but the most concentrated form is captured from unpollinated hemp flowers. Rough estimates suggest it takes 20 pounds of hemp flower to produce a pound of CBD oil. CBD oil is reported to have medical applications like relieving pain and reducing symptoms for a variety of ailments. However, there is scant research to back up those claims and any medical applications (beyond use in topical or cosmetic applications, such as lotions or skin creams) require FDA approval.

The production process for hemp depends on the targeted market for the hemp. For the fiber market, producers would choose hemp varieties that can be planted densely, forcing the plants to maximize resource allocation to the stem. For the seed market, planting density would be reduced to maximize seed growth. For CBD production, plant density is reduced even further, to allow the hemp plants to bush out and maximize flower production. Given the desire for hemp flowers for CBD extraction, the male plants are removed to avoid pollination. CBD production in outdoor facilities can be challenging due to the potential for cross-pollination from wild hemp that grows in ditches and other disturbed habitats in the state.

The marketing opportunities for hemp have revealed themselves in a variety of ways. A few clothing lines, such as Patagonia, have introduced hemp clothing items. Several companies have explored using hemp fiber as insulation or as a natural strengthening agent in construction and building materials (example: hemp-crete, concrete with hemp fibers mixed in). But many folks have concentrated on the potential for food, feed, and health products, especially from CBD and other chemical compounds. You’ve likely seen hemp products in grocery stores, convenience stores and assorted other shops over the past couple of years, targeting the food and health markets. The problems are that many of the applications were just test runs or, in some cases such as with CBD products, illegal markets. As was mentioned earlier, while hemp seed oil is legal for food products, CBD oil is not. The availability of CBD products on store shelves has definitely led to confusion in the marketplace and created the illusion that all potential products that can be created from hemp are legal.

To me, the biggest challenge for anyone exploring hemp, either as a producer or as a landowner with a tenant possibly producing hemp, will be to secure a marketing channel. For the majority of Iowa’s agricultural production there are numerous markets where producers can sell their crops, animals, and associated products. For hemp, that is not the case. Currently, there are no organized hemp markets, nor hemp processors, in Iowa. This is not the type of market where you should take a Field of Dreams approach (“If you grow it, processors will come”) as production costs can be extremely high and the approval process for hemp, and especially CBD, products could take considerable time. The market
conditions for hemp in many of the states that moved before Iowa show that the development of hemp markets takes time. See, for example, these stories in Forbes, Harvest Public Media, and the Hemp Industry Daily. Before you or your tenant put a hemp seed or clone in the ground, you better know where your markets are, or better yet, have a contract with a processor already in place. You (and your tenant, in the case of a landowner) also need to understand the potential legal and marketing challenges if your hemp crop is tested and found to exceed the 0.3% level for THC. Who pays for the destruction of the crop? (Answer – you do. If the tenant does not pay for destruction, then the landowner would have to pay.) What are the legal ramifications if your crop exceeds the THC limit? (Answer – if you exceed the allowable ‘negligent violation’ level, criminal charges could be filed.) Given the ever-changing legal and regulatory scene for hemp, it would make a great deal of sense to review any hemp business prospects with an attorney.

At the publication of this article, neither CBD extraction nor processing is legal in Iowa. There is a bill in the legislature that would make it legal, but with the legislative shutdown due to COVID-19, we do not know when the legislature will reconvene again. And, if the bill does pass and is signed into law, regulatory requirements will be put in place, making the processing site equivalent to a licensed food processing facility. If you grow hemp for CBD it is likely that the 2020 crop will need to be transported out of Iowa for extraction. Hemp prices are like hemp processors, hard to find currently. But the general trend reported in the hemp industry is for lower prices. Hemp Benchmarks has created a hemp price index, based on prices they have found in three of the largest hemp producing states (Colorado, Kentucky, and Oregon). That index has fallen by 84% from July 2019 to January 2020. At least three Kentucky processors (Atalo, GenCanna, and Sunstrand) filed for bankruptcy in 2020. It is difficult to create new markets, especially when the product faces significant legal and logistical challenges. While in the long run I believe that hemp will develop as a fruitful crop for some producers in Iowa, the short-term prospects are dim for most who will pursue hemp this year. The few who will be successful will need to do a lot of homework and preparation to produce and market their crop. That homework includes knowing who you will sell to and how well they are set up financially. As the bankruptcies in Kentucky highlight, just because they’re processing today, it doesn’t mean they’ll be processing tomorrow.

The agricultural economy has been rough the past few years. Traditional crop returns have not been strong and farm incomes/balance sheets have been in decline. Producers and landowners are searching for alternative crops that offer any prospects for profitability. We’ve seen these types of agricultural “rushes” before: emus, ostriches, Jerusalem artichokes, Aronia berries, etc. It’s not that these products did not have a market. It’s that these markets were overhyped and initial production over-exceeded (in some cases, greatly) what the market could bare. Hemp is setting up to have a similar path. A few folks
will be successful with the crop, but many will likely see hemp as a flame-out, a lot of cost sunk into a crop with no real opportunity for returns.

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Category: Crop Production

Tags: hemp economics growing hemp hemp industry hemp seed alternative crop

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