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Industrial Hemp Production: A Risk Assessment

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Farming and ranching is a very risky business. Many times the success or failure of an agricultural business is determined by the ability of the operator to manage risk. One of the most risky decisions that farmers and ranchers make regularly is considering producing a new crop.

The last several years have been very challenging for Colorado farmers and ranchers as commodity prices continue to be weak. Cash market prices that just a few years ago might have offered a small profit will not cover the cost of production today. Many agricultural producers are looking for more profitable alternatives to traditional crop and livestock enterprises.

One such alternative that many farmers are considering is industrial hemp. Industrial hemp shares the same botanical name as marijuana (*Cannabis sativa)*. The major difference between industrial hemp and marijuana is the Tetrahydrocannabinol (THC) content. THC is the psychoactive ingredient in marijuana that produces the "high." According to 2018 Farm Bill, industrial hemp must contain less than 0.3% THC on a dry weight basis.

In order to make a sound decision regarding the production of hemp, growers must evaluate the risks associated with the crop. That risk assessment should include a thorough review of the five areas of risk in agriculture. Those five areas include price, production, legal, financial, and human risk.

Price risk is defined as the fluctuations in prices paid for inputs or received for outputs (commodities sold). The major issue for industrial hemp in this risk category is the lack of a price discovery function. It is very difficult to determine the price of hemp fiber, seed, or flower (used in cannabinol/CBD production) at any given time. Unlike corn, wheat, cattle, and other traditional agricultural commodities, hemp is not currently traded in any public markets, so information on prices paid for hemp products is scarce.

It is difficult for producers to determine if a price offered for a hemp product is a fair price. Is the offered price sufficient to lock in a profit? Are prices likely to go up or down in the future? Should I lock in a price now or wait a few months? These are just a few questions that a producer contemplating producing hemp will need to answer. In addition, the lack of price discovery can lead to an unfair advantage when buyers and sellers negotiate prices.

Fluctuations in yields (quality & quantity) are the concerns addressed in the area of production risk. One method farmers use to mitigate production risk is by purchasing Federal Crop Insurance. Federal Crop Insurance is provided through Title 11 of the Farm Bill, and a portion of the premium is subsidized by the USDA. Although industrial hemp was approved for inclusion in the Federal Crop Insurance program in the 2018 Farm Bill, it may take several years of data collection to develop actuary tables to determine premium rates for yield or revenue policies. Whole Farm Revenue Protection (WFRP) policies may be available in the short term. However, the hemp crop must be produced under contract to qualify. There are additional concerns about the ability of underwriters to offer insurance for hemp being grown for CBD's due to the high value of the crop and potentially large losses. Finally, WFRP will not cover losses due to the crop testing over the 0.3% THC limit.

Controlling pests is another production risk concern. To date, few pesticides are registered for use on industrial hemp.

Legal risks, defined as "anything that changes the rules of the game, or causes outside influences on the business," must also be evaluated. At the present time, there are no quality standards for hemp, unlike most traditional crops such as corn. Most corn that's sold worldwide is marketed as U.S. #2 yellow corn. The USDA has developed specifications for corn as well as the methods used to determine those specifications. These quality standard or grades allow buyers and sellers from across the globe to trade corn contracts effectively.

The lack of quality standards for hemp makes it difficult to develop production contracts as the buyers and sellers could have vastly different views on what criteria to use to determine a good product from a poor product. Grading standards could be especially important if there is a dispute regarding the quality of the hemp product at delivery that would impact the final price.

Another concern in the area of legal risk would be the current status of CBD's with the Food and Drug Administration (FDA). To date, only one CBD has been approved by the FDA to treat a medical condition. On June 25, 2018, the FDA approved the use of Epidiolex for the treatment of two severe pediatric seizure disorders, Lennox-Gastaut and Dravet syndrome.

Currently, CBD's are being promoted as a potential treatment for a wide range of medical conditions, and although future research may show that CBD's are effective in treating many maladies, that research must prove that CBD's are effective and safe. The type of research required by the FDA is very costly and time-consuming, and the future growth of the CBD market may be dependent on the approval of additional medical and nutritional uses.

Much of the stress farmers and ranchers are experiencing today can be attributed to financial risk. This fourth category of risk is defined as a condition of not having sufficient cash to meet expected obligations, generating lower than expected profits, and losing equity. One way to combat this type of risk is to produce hemp under a contract. Without a contract, hemp is considered a speculative crop, and producers should not invest more than they can afford to lose.

If you are approached by someone offering you a contract to grow industrial hemp or buy your hemp related raw products, the prospective buyer must hold a Farm Products and Commodity Handlers license issued by the Colorado Department of Agriculture (CDA). A full list of licensed buyers can be found on the CDA website:
https://www.colorado.gov/pacific/sites/default/files/June%201st%20Hemp%20FP%20list.pdf.

The final area of risk management is human risk, defined as the uncertainty attributed to the character, health, or behavior of the people involved in the business. The U.S. Hemp Industry has been referred to as the "Wild West" or a modern day "Gold Rush" with many people jumping on the bandwagon. With so many "players" involved, it's difficult to tell the "Good Guys" from the "Bad Guys." It is very important to carefully vet all potential business relationships before making a deal and to be cautious of those opportunities that seem too good to be true. In the words of Kansas State University Professor Jason Griffin, "… if anyone is promising that you're going to get rich (with industrial hemp)… walk away!"

Low commodity prices have forced many producers to search for alternatives to traditional crop and livestock enterprises. Many of these alternatives provide their own set of challenges, and farmers and ranchers must do a thorough risk assessment as they consider producing industrial hemp.

If you have questions about this topic or any other agricultural business management issue, please feel free to contact me at 970-522-7207 or by email at brent.young@colostate.edu.