

CANNABIS INDUSTRY Craves Employees & Production Support

By David Kuack

GROWERS AND INVESTORS LOOKING TO CASH IN ON COLORADO'S LEGALIZATION OF CANNABIS ARE SEEKING EMPLOYEES WITH HORTICULTURAL BACKGROUNDS AND SOURCES OF CROP-SPECIFIC CULTURAL INFORMATION.

Retail sales of cannabis began in Colorado on Jan. 1, 2014. Prior to the start of marijuana sales, Colorado voters last fall approved an excise tax of 15 percent that gives the first \$40 million to school construction, and also a special sales tax of 10 percent, which is in addition to the 2.9 percent state sales tax. Collections in FY 2014-15 are expected to total \$137 million, which includes sales of both medical and recreational-use marijuana.

With all the money that is expected to be generated from the sale of marijuana, it is not surprising that growers of all sizes along with investors are interested in cashing in on this crop.

John Frey at Taller Horticulture LLC, a horticultural consulting, sales and marketing company in Denver, says the size of the growing facilities producing marijuana runs from small mom-and-pop basement operations to several acres of greenhouses or lighted warehouses.

"It's all over the board," Frey says. "We know of growers who are looking at 60,000- to 80,000-square-foot warehouse facilities to grow in. Those growers have been successful in 20,000- to 25,000-square-foot spaces and they are now scaling up. Everyone is scaling up. At

this point the bubble has not burst. It will burst. It will be interesting to see at what point in time supply and demand are balanced.”

Political, Production Uncertainty

Even though Frey projects that production will eventually exceed demand, he says it is the ambiguity of what could happen politically that could have a bigger impact on

the production of marijuana.

“There could be a political decision, state or federal, most likely federal, that could change the industry either positively or negatively for the people involved,” he says. “We don’t know what that change will be.”

One segment of the horticulture industry in Colorado that Frey said has been impacted by the interest in marijuana is controlled environment food production.

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“There are many food production projects going on in the world,” he says. “These projects are going on everywhere, but not with the frequency expected in a healthy population center like Colorado. We expected more urban agriculture to be going on here. Within the state, it seems like much of the intellectual capital and much of the financial capital have gravitated to cannabis.”

Growers Needed

Steve Newman, greenhouse crops extension specialist and professor of floriculture at Colorado State University in Fort Collins, says he is regularly contacted by first-time growers and by financial investors about production information and potential employees.

“The majority of calls that I am getting are from big money investors looking for support,” Newman says. “A lot are looking for students to hire as employees. They want to come to the school’s career fairs and they want to come to my classes and promote their businesses. They are looking for employees.”

Newman says that because the university is considered a federal contractor, the university has decided not to associate itself with the marijuana industry and to abide by federal regulations at this time.

The U.S. Drug Enforcement Administration has designated marijuana as a Schedule 1 drug along with heroin, LSD and ecstasy. These compounds “are defined as drugs with no



THE NEXT STEP THAT THE INDUSTRY WILL NEED TO ADDRESS IS DEVELOPING THE CULTURAL PRACTICES TO ASSIST THE CANNABIS INDUSTRY, BOTH HEMP AND MARIJUANA.



currently accepted medical use and a high potential for abuse.”

“Colorado State receives hundreds of millions of dollars in federal research funds,” Newman says. “As a federal contractor, the university by law is not permitted to be involved with any activity that is considered to be a federal offense. That is the stance our legal counsel has taken and it’s a policy that has been adopted campus wide. My personal projects alone include over \$200,000 of USDA-APHIS money that I manage in grants and contracts. I can’t risk losing that. It’s because the university is considered a federal contractor and as its employees we have to abide by federal regulations.”

Filling the Knowledge Gap

Frey says he expects the gap of production knowledge will be quickly filled in Colorado.

“There is a generation of advanced students, PhD and Master’s, who are looking to come into this industry,” he states. “They will receive their degrees and they will go into this industry because they believe they can make a decent living. The information won’t necessarily come from land grant universities, but it will come from the students who graduate from these schools, including

Colorado State University. They are going to be looking for a career with a company in the cannabis industry or they are going to look at starting their own company.

“Over the last year a lot of our ornamental plant grower customers have lost some of their key employees to the cannabis industry. Knowledge is also being transferred through acquisition.”

Frey says that warehouse production accounts for the majority of marijuana in production.

“Most of this enclosed production is being done with artificial light, primarily using high pressure sodium and metal halide lamps,” he says. “LEDs are starting to become of interest. There is some other technology like induction lighting that is starting to become more heavily researched and even used. It is all being done in a warehouse set up.”

Even with the predominance of warehouse production going on, Frey said there is increasing movement towards greenhouse production.

“People are starting to get some of these greenhouse projects off the ground and there are some that have already been built,” he says. “There are also some existing structures that have been taken over. Some of these projects will not use any supplemental light, others will. Colorado is going to

Growing facilities producing marijuana in Colorado run the gamut from mom-and-pop basement operations to several acres of greenhouses or lighted warehouses. (Photos: Horticultural Solutions Ltd., Georgetown, Colorado)

be a good place to get to know how to produce this crop. There likely are going to be several methods to perfect the production of this crop. We are all going to learn a lot.”

Both Frey and Newman say they are unaware of any ornamental plant greenhouse growers who have added marijuana to their production.

Newman says he hasn’t received any inquiries from anyone on the ornamental side asking about growing marijuana.

“I don’t see traditional industry people doing this,” Newman says. “And if they are doing it, I would expect that they would be doing it under a completely different name.”

Frey says he doesn’t know of any active ornamental growers in Colorado who are participating in the production of cannabis.

“That surprises me, but if you ask me that question in a year, I bet I’ll have a different answer,” Frey adds. “It would be shocking if they weren’t looking at it.”



Since cannabis grown for hemp is not nearly as profitable as marijuana, it is more economical to grow it as an outdoor field crop. (Photo: Colorado Hemp Project)

High on Hemp

While marijuana has garnered most of the attention of growers, investors and the media, there is another use for cannabis that has also become legal in Colorado. That is the production of cannabis as hemp.

Duane Sinning, assistant director of Plant Industry Division at Colorado Department of Agriculture, says there is a lot of misinformation circulating about the difference between marijuana and hemp and the regulations related to each crop.

“Currently Colorado divides cannabis into marijuana and hemp based on the level of psychoactive THC (tetrahydrocannabinol),” Sinning says. “The Department of Ag regulates hemp, the cannabis cousin with a THC level below 0.3 percent. There are two affordable registrations available for hemp. One is for commercial and one is for research and development. If a grower is going to produce cannabis with a higher THC level for marijuana, the registration process is completely different and the grower would work with the Colorado Department of Revenue.

“For the hemp grower who is producing the plant for ‘rope and soap’, it is not nearly as profitable as marijuana. So from purely an economics standpoint, for a cannabis crop to take up greenhouse space it wouldn’t be practical to grow hemp for that purpose.”

Expanding the Use of Hemp

Sinning says there is an interest in research and development for cannabis

breeding programs, similar to what is done for ornamental crops like impatiens, and for some of the other cannabinoids used for medical purposes.

“Someone might be interested in breeding cannabis for hemp because there are no certified varieties available commercially,” Sinning says. “From the standpoint of the early stages of industry development as well as product development, there is an opportunity to breed new varieties for

the hemp industry. To ensure the products registered as industrial hemp contain THC levels below 0.3 percent, the Department of Ag has developed sampling and testing protocols and set up a lab to handle those procedures.”

Sinning says that hemp in an unprocessed fashion cannot leave Colorado because it is considered a DEA Schedule 1 drug regardless of whether it is cannabis grown for hemp or for marijuana. “DEA doesn’t differentiate



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between the two,” he states. “Colorado Department of Ag doesn’t regulate the processors, but we acknowledge the fact that the cannabis cannot be shipped outside the state unless it is processed. To process seed into salable grain it is sterilized and killed. Hemp can be exported if it is in a processed form by turning the stems and leaves into fiber, biodiesel or biofuel. Part of the compliance is

that growers have to let the Department of Ag know what they are doing with the crop.”

Sinning says currently there are a limited number of processors. Because the seed is so scarce, a lot of growers are planning to harvest the seed themselves and replant it next year. If growers are going to sell some of the seed, they have to register with the state to be a registered seed

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Since the hemp industry in Colorado is in its infancy, there are opportunities in the areas of breeding new varieties and product development. (Photo: Colorado Hemp Project)

dealer or labeler.

“The next step that the industry will need to address is developing the cultural practices to assist the cannabis industry, both hemp and marijuana,” Sinning adds. “I don’t expect the cultural practices will be much different for either crop. Bigger differences may develop because of the human consumption factor with marijuana vs. something that is going to be turned into a nonedible product with hemp. Pesticide labeling and use will continue to be an issue growers face as the industry evolves.”

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