

he market for hemp-derived CBD (cannabidiol) products has exploded. Whether it's edibles or for personal care, you can find a wide range of products infused with CBD. Target, Kroger, Walgreens and CVS are just a few of the major retailers looking to expand their offerings of CBD-infused products. The market for these products is only expected to continue to increase now that the 2018 Farm Bill has legalized the production of hemp by licensed growers.

Market research company Brightfield Group (www. brightfieldgroup.com/post/hemp-cbd-market-to-reach-22-billion-by-2022) expects the CBD market to reach \$22 billion by 2022. With such staggering projected sales numbers, both field and controlled environment growers are looking to get in on the potential profits hemp has to offer.

POTENTIAL OVERPRODUCTION

As of July 2019, North Carolina has over 1,200 licensed industrial hemp growers, representing nearly 15,200 licensed acres and over 5.6 million square feet of licensed greenhouse production. There are currently 731 registered processors in the state.

"It seems like everybody in North Carolina is interested in growing industrial hemp," says Debbie Hamrick, director of specialty crops at the North Carolina Farm Bureau Federation. "There are many people in agriculture concerned about the surge with industrial hemp production. A number of farmers are looking at hemp without fully exploring all of the issues and challenges involved with this crop."

She says the concern with overproduction is definitely something all growers should have in the back of their minds.

"How much industrial hemp for the production of CBD oil is required for the current market that already exists? That is a big question I'd want to know before I even thought about growing hemp."

The Kentucky Department of Agriculture has authorized 57,000 acres for planting hemp this year. In 2018, 6,700 acres were used for hemp production, resulting in more than \$57 million for processors. U.S. Secretary of Agriculture Sonny Perdue (www. wlky.com/article/us-secretary-of-agriculture-sonny-perdue-calls-kentucky-the-birthplace-of-hemp/28267229) in a July 2019 interview with WLKY-TV in Louisville, Kentucky, said because farmers are so productive, he was concerned they might overproduce hemp like they have done with other crops resulting in a drop in price.

PROPER PRODUCTION

Hamrick says growing hemp can be an expensive investment, especially if it is going to be produced in greenhouses.

... continued from page 26

"Growers can pay as much as \$8 per clone, and then there are the costs associated with irrigation, containers and growing media if the crop is grown in a greenhouse," she explains. "A lot of the growers are looking at year-round greenhouse production of higher quality plants on a smaller scale. Researchers at North Carolina State University are looking at different varietals. Initial study results have shown that some varieties have done better than others.

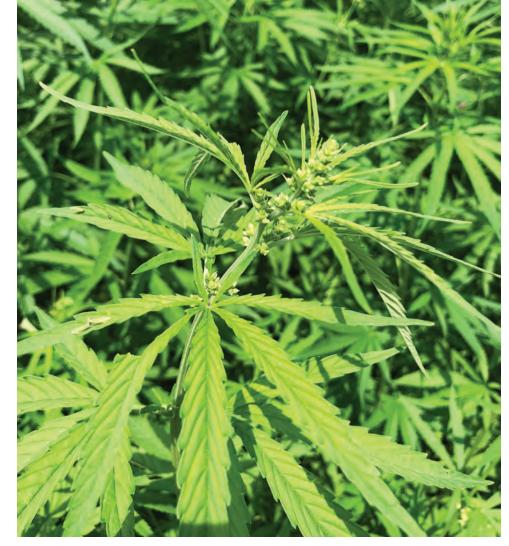
"One of the questions about varieties is what entity or body is certified to say these clones are what they're supposed to be? If a grower who is buying clones doesn't get the right ones the result could be lower than expected CBD levels. Another issue is that the wrong clones could produce a higher level of the psychoactive compound tetrahydrocannabinol (THC)."

In North Carolina, crops have to be tested before harvesting to determine THC levels. According to Hamrick, crops that exceed the federally permitted 0.3% of THC are considered "hot" and have to be destroyed. She says industrial hemp researchers are studying what production practices impact THC levels.

THE POWER OF THE PROCESSORS

Hamrick says that she has heard numerous stories about growers who have produced industrial hemp for CBD and were not paid by processors for their crops.

"We've heard a number of stories," she says. "Some growers have been told they would be paid when the plants were processed



Debbie Hamrick, director of specialty crops at the North Carolina Farm Bureau Federation, said there are farmers looking at producing industrial hemp without fully exploring all of the issues and challenges involved with the crop.

Photos by Debbie Hamrick, N.C. Farm Bureau Federation

THE STRENGTH BEHIND YOUR IPM PROGRAM





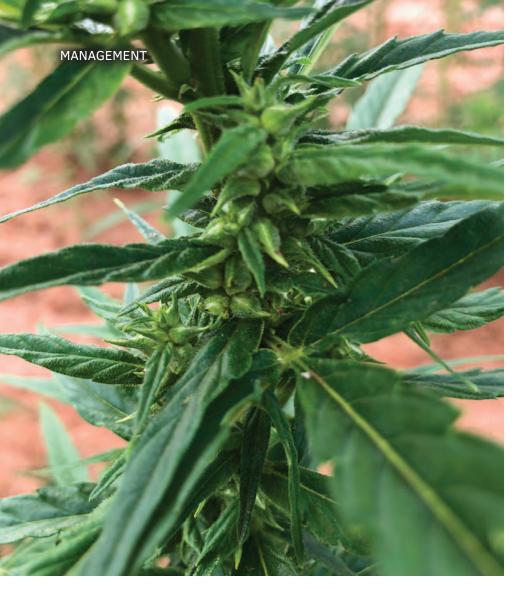












In North Carolina, crops have to be tested before harvesting to determine tetrahydrocannabinol (THC) levels. Plants that exceed the federally permitted 0.3% THC have to be destroyed.

or when the CBD oil was produced. Others have been told they'd be paid in CBD oil or a percentage of the oil sold by the processor. There are processors that are writing contracts and have standing orders with farmers to produce hemp crops. Growers want to have more than handshake deals. Growers want to have something in writing when dealing with processors.

"This used to occur in the floriculture industry all the time where growers would make an arrangement with a buyer and they had nothing in writing. There was no documentation so they really didn't have a contract and they had nothing to back them up later in court when a customer reneged on an order."

Hamrick says growers need to know what their responsibilities are, including how the hemp is going to be delivered to the processor, in what form and in what timeframe.

"Growers want to have the basics in writing," she adds. "What is expected of the grower? What is expected of the processor?"

KNOW THE RISKS

One advantage that greenhouse ornamental and vegetable growers have over field growers is they have learned how to manipulate the factors that influence how plants grow.

"These growers can produce the plants whether they are ornamentals or vegetables, but where are they going to market them?" Hamrick says. "The same is true for hemp.

"There are many other questions that need to be answered. What is the legal framework for the market? How does it function and what are the rules? The production piece is part of it. But the framework and the infrastructure that surrounds that framework is also a big part of it."

When talking to growers about producing hemp, Hamrick asks them how much money they need to make from the crop.



Researchers at North Carolina State University are trialing different varieties of industrial hemp for cannabidiol (CBD) oil production.

"I ask growers of any new crop whether they can take the risk of growing the crop," she says. "Or are they growing the crop just to gamble. If growers are relying on hemp to save their farms, it may not be their best choice."

Another concern of Hamrick's is the potential effects of CBD oil and the limited amount of information that is available.

On July 23, 2019, U.S. Food and Drug Administration (www.fda. gov/news-events/press-announcements/fda-warns-company-marketing-unapproved-cannabidiol-products-unsubstantiated-claims-treat-cancer) issued a warning letter to Curaleaf Inc. in Wakefield, Massachusetts, for illegally selling unapproved CBD products online with unsubstantiated claims. The company advertised its products could be used to treat a variety of diseases and conditions including cancer, Alzheimer's, opioid withdrawal, pain and pet anxiety.

"We don't yet have a clear picture of how CBD oil really impacts human health," Hamrick explains. "We don't know dose rates for different individuals. We don't understand drug interactions. We don't understand long term use.

"Many of the effects of CBD oil are only anecdotal. Someone said they tried it and they got relief or they're sleeping better. This is not how our country operates when it comes to drugs and human health. A drug manufacturer can't say something works if it hasn't been proven. That's false advertising."

For more information: Contact Debbie Hamrick, North Carolina Farm Bureau Federation, Raleigh, North Carolina; 919.782.1705; debbie. hamrick@ncfb.org; www.ncfb.org. SPN

David Kuack is a freelance technical writer in Fort Worth, Texas and can be reached at dkuack@gmail.com.