



HEMP TAKES HOLD

Farmers and industry hustle to ramp up production to keep up with demand.

By Des Keller

Broad-shouldered and barefoot, Brian Lyda trots into a rain-softened 6-acre hemp field near Hendersonville, in mountainous western North Carolina. Mud is splattered up his calves as he turns back a fourth of the way into the rows.

"This plant loves attention but not too much attention, if that makes sense," says Lyda, gesturing to the 2-foot-high hemp plants growing under plastic in rows 6 feet apart. After all, hemp — and its cousin, marijuana — can grow and thrive on their own in road ditches.

"Growing hemp is like raising kids," says Lyda, chuckling. "You don't want to be in their business too much, but you do step in at key moments when you sense they may be struggling."

This isn't wild hemp, whose health and oil content are determined by the randomness of nature. The varieties Lyda nurtures for the cannabidiol, or CBD, company he helped found, Healthy Harvesting LLC and its CBD product line, HempOfye, have been carefully bred and cloned to maximize the amount of oil produced in the plant's flowers and leaves.

In case you've been avoiding the headlines the past few years, CBD use as a supplement on its own as oil and in food, beverage, and skincare products, has exploded. One in seven Americans uses it as an over-the-counter treatment for pain, anxiety, or sleep problems,

according to a recent Gallup poll. While the positive anecdotes about CBD keep rolling in by the thousands, they aren't yet backed up by scientific studies.

Numerous food and drink companies are reportedly awaiting an assumed Food and Drug Administration approval of CBD in products for human consumption. As it is, CBD product makers can't technically make any health or wellness claims.

Market research firm Brightfield Group estimates CBD sales in the U.S. were \$600 million in 2018 and will increase by more than 700%, to \$5 billion this year. The market could grow to more than \$23 billion within four years, according to Brightfield.

The demand growth has jolted prices. Lyda, considered one of the best growers in North Carolina, can coax up to 25 liters of CBD oil from 1 acre of hemp. Each liter of CBD oil is worth \$7,000 or more. That's a gross per acre of \$175,000 and over \$1 million for the 6 acres in which he's standing.

Real Work

That kind of value demands management. A half dozen workers are making their way through the field, weeding by hand in between rows. A drip irrigation system delivers water and fertilizer, as necessary. Branches are selectively trimmed to maximize airflow to reduce the chance of mold and fungi. Harvest is done by hand; workers chop

Part of the burgeoning CBD industry, hemp growers (from left) William 'Ick' McCraw, Kelton 'Pepper' McCraw, and Brian Lyda are the force behind Hendersonville, North Carolina's HempOfye. The McCraws are co-owners and Lyda is the master grower for their 25 acres of hemp in 2019.

off the entire 4- to 5-foot plant at the stalk near the ground.

The boom in the hemp-CBD business is national. There were an estimated 80,000 acres of hemp grown in 2018 in the U.S., and that number has at least quadrupled this year to 320,000 acres, according to the National Hemp Association. Growers, processors, and retailers — experienced or otherwise — are joining the rush.

The North Carolina Industrial Hemp Association has about 400 members made up of processors, extractors, and retailers, along with 250 of the state's 1,100 approved hemp growers.

A Fun Business

This business has exploded in one year with the passage of the new farm bill," says Jeanine Davis, Extension specialist for herbs, organics, and specialty crops with North Carolina State University (see related story, "The Road to Legal Hemp"). "After 31 years in the business, this is fun to see this kind of growth. I thought the hops market was going to be big, but this is much greater."

Despite demand, not everyone will be successful growing and marketing hemp.

"There is a lot of excitement early on," says Davis, "but at some point, we are going to see people filter out who are not a good fit. The growers ▶



who are serious will make investments where they need to.”

That’s the case with Lyda and his business partners at HempOfye. After two years growing hemp and shipping it elsewhere for extraction and processing, they decided they were losing too much of the crop’s value. They expect to spend from \$500,000 to \$2 million to purchase new or used processing equipment to extract the oil. They already operate a retail outlet for hemp products in nearby Hendersonville.

More than Just CBD

While the excitement and attention are focused now on CBD oil, hemp is not a one-trick pony. The plant’s fibrous stems and limbs are used for textiles, building materials, car-seat cushions, and bioplastics. There is also a market for the hemp seeds, the grain itself.


“The demand in the CBD market has grown so quickly that we aren’t really looking right now at the long game for hemp fiber and grain,” says Blake Butler, executive director of the North Carolina Hemp Association. “There are huge opportunities on the horizon, particularly for fiber.”

At this time, growing for one of the three end uses – CBD oil, fiber, or grain – requires different varieties

bred for those traits. Hemp plants grown for CBD oil are all female. Female plants continue to produce oil through maturity to harvest. Male plants die off shortly after completing pollination.

At the retail outlet WNC Hemp, which HempOfye works with in Hendersonville, Lyda plucks a couple of flowers from a plant under grow lights. Just by touching the flowers you can feel and see an oily sheen left on your finger and smell an earthy, grassy scent.

“I’m trying to set a precedent for this plant in terms of quality,” says Lyda, who is aware there are many people selling CBD products whose standards and concentration of CBD may be uncertain. “Whatever they get from us is going to be a good product.” Lyda is the eighth generation to farm in these hills; Jacob Lyda and family came to the area in the 1720s after emigrating from Germany. For 300 years at various times, Lydas have farmed grain, livestock, apples, and produce here and still do. Lyda, who for years has grown medical marijuana in Oregon and Michigan, saw newly legal hemp as a way to return home.

“Hemp is a phenomenal plant with the potential to help so many more people than medical marijuana,” says Lyda. “I’ve encountered those whose lives it has helped, and that’s why I’m doing this.” 



More on Hemp

Hover your compatible phone’s camera over the smart code above.

The Road to Legal Hemp

Tough and fibrous, hemp is believed to have been one of the first cultivated crops in the world and was one of the first plants to be spun into textiles 10,000 years ago. It has been used to make sail canvas and rope as well as clothing, building materials, and plastics.

The 1937 Marijuana Tax Act and the 1970 Controlled Substances Act didn’t make any distinction between the cannabis (marijuana) and hemp plants. As a result, hemp was banned and classified as a Schedule 1 drug under federal law until recently.

The 2018 Farm Bill changed everything, allowing growers the ability to cultivate hemp and allow the movement of hemp and hemp products across state borders. Pilot projects in numerous states existed under the 2014 Farm Bill.

The new farm bill places industrial hemp under the supervision of the USDA. Technically, the legislation defines industrial hemp as a cannabis plant with less than 0.3% of tetrahydrocannabinol, or THC (the psychoactive compound that creates a high from marijuana). Hemp harvests are tested to make sure THC levels remain below that level.

The farm bill also preserved the Food and Drug Administration’s authority to regulate products containing cannabis or cannabis-derived compounds. As of now, the FDA hasn’t yet approved a single product containing CBD other than one prescription drug for epilepsy. 