GROWERTALKS

Cover Story

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"I cultivate cannabis. There's nothing wrong with that."

Chris Beytes

Five years ago, *GrowerTalks* did its first-ever story on cannabis. Titled "Is This Your Next Cash Crop?", the piece was written to make the industry aware of the details of this emerging agricultural product. At the time, medical cannabis was legal in 16 states and the District of Columbia. No state had yet legalized recreational cannabis, although 13 states had "decriminalized" first-time possession for personal use.

Finding an actual cannabis growing operation to write about took a bit of digging. And getting the grower to talk on the record took some convincing. Then, when Managing Editor Jennifer Zurko showed up at his northern California greenhouse, she found that it had been raided the week prior by the local sheriff, and all the plants and equipment confiscated.

It made for a colorful story—and a cautionary tale.

Fast forward to today. Recreational cannabis is legal in four states and the District of Columbia, and as many as nine more states could legalize recreational use of the drug in 2016. Medical cannabis is legal in 23 states and D.C. Fifty-eight percent of adults favor legalization. Vermont Senator Bernie Sanders has proposed a bill that ends federal prohibition. And GrowerTalks got invited to pay an all-access visit to Colorado's newest and largest recreational cannabis greenhouse, named SunCanna—built by a new company called GrowCo, which plans to build similar operations across the country, and specifically targeting bedding plant growers as potential

customers.

A lot has changed in five years!

All access meant just that—we could ask questions and take pictures to our heart's content and write about any aspect of the business. With one exception, that is: We can't reveal the name of the person or persons who have leased SunCanna from GrowCo. Not because they're bashful, or worried about law enforcement. It's got to do with banking and the other businesses they are involved in.

The birth of GrowCo and SunCanna

You'll find SunCanna two hours south and a bit east of Denver. It's off a dirt road, out in the cornfields and cow pastures of Pueblo County. To the west are the Rockies, to the east nothing but flatland all the way to Kansas.

As you approach, the gutter-connected range looks like any other bedding plant greenhouse ... and then you notice the razor wire twined around the barbed wire



atop the 6-ft. chain link fence. The only gate is locked; an unmanned guardhouse is to the right. I phone my source and he dispatches Tyler Smith, one of his grower/managers, to let me in. Tyler, who spends most of his time with compliance issues such as paperwork, has me fill out a visitor's log, hands me a visitor's badge and directs me to the temporary office, where I get the story of this new venture from the grower who has leased it.

Pictured: **Training staff in high-volume production.** Kyle Henderson (left) and Tyler Smith are college graduates and have experienced growing cannabis indoors. Both have also done a stint at a bedding plant operation to get used to high-volume greenhouse production. The lesson? "Get the mindset out of your head that cannabis plants are special. This is a production-driven model. That square footage is there to make money. How do we make money? By turning it as fast as possible and by growing as quick and as good as you can to create a beautiful plant in as short a time as possible." All employees have to be "badged," meaning they've passed a state background check.

Our cannabis journey began with another sideline business: potting soil. Our grower began selling organic potting soil, along with other growing supplies, to some of Colorado's indoor medical cannabis businesses, and consulting with them on how to grow in the mix (most were growing hydroponically). Eventually, he had 19 indoor growers as customers, producing anywhere from 500 to 1,500 medical cannabis plants at a time.

In 2012, Colorado legalized recreational cannabis, and our grower approached one of his customers, two brothers, about a greenhouse cannabis partnership. He would build and run the greenhouse, while the brothers would grow, cure and market the crop.

"We know how to build and run a greenhouse," our source explained. "We know nothing about the actual cannabis plants. We know how to grow plants, but there is a specific art form that comes with cannabis, just like making wine."

The brothers agreed, and in September 2014 the new partnership broke ground on a greenhouse in Pueblo County, due south of Denver. Pueblo is one of just a handful of counties in Colorado that allows cannabis growing in a greenhouse rather than only indoors (as in Denver), which has led to a "green rush" into the area.

Just a few months later, the partners were approached by a firm called Two Rivers Water & Farming, a publicly traded company that owns land and water rights in Pueblo County and across the Southwest. They wanted to know if the team would build cannabis greenhouses for them. The brothers weren't interested, but our grower was, and so he and Two Rivers formed GrowCo.

GrowCo's business model is to build and lease cannabis-growing greenhouses. They provide the facility and expertise, and a grower/leasee gets the actual cannabis license and produces the crop. Along with rent, the grower also pays GrowCo an administration fee that covers a range of services, from HR to consulting. This arrangement allows GrowCo to work in any state that has legalized cannabis. Because GrowCo doesn't actually touch the cannabis plants, they are free from any legal or financial constraints—which includes divulging the identities of their investors, a requirement of any business attached to a cannabis license, which would obviously have a chilling effect on likely investors.

GrowCo quickly signed its first deal for a two-acre range in Pueblo County. Only, halfway through construction, the tenant got cold feet and backed out, so one of the GrowCo partners agreed to lease it, and SunCanna was born. He would gain practical cannabis growing experience, and it could prove to be a very lucrative investment. He began production last September and is probably harvesting his first crop as you read this.



Inside a cannabis greenhouse

"A bedding plant greenhouse is all about flow," our grower said when asked to compare a bedding plant greenhouse to a cannabis greenhouse. "How do you get product in and out during the busy time of the year. How do you create turns?"

Conversely, a cannabis facility is all about environment, with an emphasis on humidity control and high light. "It's all about creating the most optimum environment for this plant to create

the most yield and the highest concentration of THC or CBG," the two main cannabinoids (chemical compounds) that, as he says, "either get you high or make you better."

Pictured: **Security is Fort Knox tight.** Forty eight high-definition video cameras keep an eye on every entrance and exit, and every bay of the greenhouse. Not only are their images recorded and stored for 40 days, both onsite and in the Cloud, they're also fed live to Colorado's Marijuana Enforcement Division (MED). "We've had the Marijuana Enforcement Division visit us three times already. We are on the radar. We are the biggest cultivation facility in Colorado. We don't have the most plants growing, but we're the biggest square footage, with our two acres here."

The biggest challenge facing indoor growers is excess humidity. Cannabis likes to grow at 70F, with humidity below 30%. Growing indoors requires lights, and lights create heat, so growers have to air-condition the space. This clashing of cold and hot air creates humidity, which leads to powdery mildew.

To avoid that problem, GrowCo designed a greenhouse that would let the grower control the humidity as precisely as possible. The structure, an open-roof design, measures 640 ft. by 160 ft., with 14-ft. high gutters. Glazing is double poly, and every other roof opens for ventilation. Heat is in-floor hot water supplemented by unit heaters hanging in the bays. The combination of floor heat and roof venting allows for fast, precise humidity control.

Cannabis is a short-day plant, like a mum. To harvest 52 weeks a year requires a vegetative zone with lights and a flowering zone with blackout curtains. The high pressure sodium lights also provide supplemental lighting year-round. More light means higher yield, and as our grower says, "Cannabis is all about the yield—the number of pounds you want to get out of those plants."

So why not glass glazing? He says the plants grow better under the diffuse light of the poly than they would under standard glass. However, ultimately, he'd like diffused glass, which would be the best of both worlds.

There are three separate zones in the greenhouse: propagation, vegetative growth and flowering. They use standard shipping racks to move the plants from zone to zone—three weeks in propagation, five weeks in vegetative and then seven to eight weeks in flowering. Plant are irrigated by booms during propagation and vegetative growth, then via drip once they're in the flowering zone, to keep the plants and buds dry and reduce the risk of disease.

Plants are grown "as organically as possible," using Mojo brand organic potting soil and Mojo liquid fertilizer. Insect management is all via biological controls.

Once mature, the plants are carted to a production barn for processing: harvesting the buds, drying them, then packing and climate-controlled storage.

Cannabis economics

GrowCo's total investment in SunCanna is about \$5.2 million—a lot of money when growing annuals, but not necessarily a lot for this crop.

Our grower's first location, in partnership with the brothers, has thus far produced about 700 pounds of recreational cannabis. Cost of production, from start to finish, has averaged \$400 to \$500 per pound, they calculate. "And that's our first crack at it," our grower adds, implying it will come down. The best indoor growers spend nearly double that—\$700 to \$800.

Wholesale, cannabis commands \$1,800 to \$2,000 per pound. By the time a consumer buys it, the cost goes to about \$250 per ounce (equivalent to \$4,000 per pound)—"Astronomical margins," he says. However, he thinks prices will come down as more greenhouse growers get into the crop. "Even if they don't know what they're doing, they can make money." They anticipate a price drop as competitors battle for business, before leveling off at an acceptable figure of about \$100/ounce retail.

Having heard that banks won't touch cannabis money, we asked how a cannabis grower collects that \$1,800 per pound.

"That's definitely a challenge," he admits. He solves it two ways. First, he never deals in cash. Customers have to pay with a certified or cashiers check. Dealing with a few large wholesale buyers rather than numerous mom-and-pop retail outlets makes that easier. Second, there are a few local banks in Colorado that are not federally insured, so they're not subject to the same federal rules that prevent them from dealing with cannabis businesses. These "cannabis-friendly" banks, while expensive, are willing to handle cannabis money.

First nationwide, then public

The GrowCo partners have big plans for their fledgling businesses. First, our grower can expand SunCanna to four times its current size. State law allows just one license per address, but thanks to a smart land purchase, he can have four greenhouse businesses, each with its own address, but able to share one physical plant (heating and irrigation). Crops, processing and storage have to remain separate. Eventually, that could mean 43,200 cannabis plants. At a conservative 1/2 lb. each and \$1,000 per lb., that's \$21.6 million from 8 acres.

GrowCo, meanwhile, is already negotiating with other growers to build cannabis ranges, both medical and recreational. One project is on the drawing board in Maryland, where medical cannabis was legalized in 2013. And as mentioned earlier, GrowCo is primarily interesting in partnering with experienced greenhouse growers.

"There's only a certain skillset of people out there who can run greenhouses profitably," our grower says. "We're trying to attract those people." Warehouse cannabis growers will have a very hard time transitioning from growing in their world to ours, he says.

The end goal? Take GrowCo public.

During our afternoon at SunCanna, we talked about many other topics, including breeding, marketing and even the morals of cannabis, but those could fill three more articles. To sum up, we asked why GrowCo was willing to go on the record about cannabis, albeit anonymously. We assumed they wanted to promote their business, but is there more to the story?

"I think it's good for people to know that this isn't scary," our grower said of the cannabis business. "I'm not a drug kingpin. I hope that the banks get past their mindset about it being federally illegal. My dream for the next five years is that anyone can openly, freely, say, 'Yeah, I cultivate cannabis. There's nothing wrong with that—it is, after all, just another plant." **GT**