



2021 / CASE STUDY

How A Hemp Processing Pioneer Automated Their Business For Compliance and Growth



There are two unalienable truths about the hemp and cannabis business:

- 1) It is one of the very fastest-growing segments in all of agriculture;
- 2) It's in not just its infancy but its super-infancy.

At that stage of the game there's limitless potential in every child-to-be, and there's limitless potential in hemp and cannabis. Listen to what Nick Strawn, Chief Operating Officer (COO) of Delta Ag Partners, has to say about the commodity:

"It's a crop that sequesters approximately six tons to the acre of carbon. Hemp is a carbon-negative crop – and the downstream possibilities are endless with flower. You could do anything on the cannabinoid side, but there is also feed value to crop – cattle feed and animal feed are just a couple uses for the flower on the industrial side.

"When it comes to hemp grain, the raw good contains a 30% protein content, 30% fat content, meaning there's numerous benefits for both animal and human consumption. Then hemp fiber is all about the cellulose characteristics – bioplastics, absorbents, building materials, and textiles are just a few of the downstream applications of the raw good. Hemp fiber produces three times as much cellulose as an acre of cotton, so it's a plant that can be commoditized, and that you can use every part of for industrial purposes."

That's a lot. That's every part of the pig but the squeal. If you said hemp could ride a bicycle on a tightrope while juggling flaming chainsaws it would seem totally reasonable.

The problem is that while you *can* and *could* do all these things with hemp (just the other day a Facebook ad was advocating hemp-based toilet paper to replace the old-fashioned made-from-trees variety), most markets for the product are in that pre-gestational state as well.

So while Delta Ag Partners knows what it can do with the stuff, it has to be somewhat patient while the rest of the industry evolves itself and crawls out of the alluvial sump.

COMPANY OVERVIEW

LOCATION	Colorado, Texas, Kentucky
FOUNDED	2020
TYPE	Hemp Raw Goods Producer
WEBSITE	deltaagpartners.com



Regulatory Hurdles

Unfortunately, that also includes a lot of the regulatory infrastructure. Because so many people outside the industry conflate “hemp” with “marijuana,” and because many of those people have to vote on laws regulating the plant, the result is a regulatory morass. It’s like that ice cream dessert with the crunchy shell and the creamy underlayer, only the crunchy part is rusty bedsprings and the creamy part is swamp water.

There’s a lot of work to be done, in other words.

“It’s tough because there’s USDA [U.S. Department of Agriculture] guidance that’s issued, but then states have to certify that USDA guidance,” Strawn says. “Separate states have different regulatory frameworks than the National. There’s not an open regulatory channel.”

You would expect Texas to be one of those states that wants to regulate hemp in its own totally Texan way. And you would be right.

According to Strawn, the USDA “has issued their final version of the farm bill and their hemp ruling, and the State of Texas right now is still in session trying to figure out what their hemp bill is going to look like – and it’s not going to be identical to the USDA.”

Never-ending fun for sure, but considering Strawn’s previous job was as an oil-and-gas attorney, state-federal regulatory misalignment is just table stakes. The only way it gets weird is: imagine if the key ingredient in oil was a controlled intoxicant. That’s hemp.

“It’s a tough regulatory framework, and with it comes a lot of compliance,” Strawn says. “If [hemp] is over .3% THC, it’s technically classified as marijuana, which is a schedule-one narcotic, and with sales of a schedule-one narcotic you [can’t] deduct anything but cost of goods sold. It requires a lot of compliance and diligence to be able to demonstrate that we aren’t something that’s illegal.”

Because the regulation isn’t in place, the markets aren’t coming around either.

In Strawn’s words, “We do not have a framework that allows us to readily sell parts of the plant. Right now, the FDA [U.S. Food and Drug Administration] and USDA have not legalized the use of hemp grain for human or animal consumption. They’re still looking at it and testing it. We can’t sell to feedlots because they can’t put USDA stamps on the beef they sell from there.

“All of this stuff is possible, but it requires someone to build out the regulatory framework on all of it. You’ve got regulators who don’t understand the crop, who don’t understand the supply chain, and the only people who can really build it are the industry participants, and that just takes time and resources and capital. It’s the chicken or the egg.”

So Delta Ag Partners has a super-efficient business model but is waiting on markets and regulators to catch up. It has every confidence they will, but in the meantime they need to get their own processes in order to try to match what’s going on around them, which is chaos.



If [hemp] is over .3% THC, it’s technically classified as marijuana, which is a schedule-one narcotic...It requires a lot of compliance and diligence to be able to demonstrate that we aren’t something that’s illegal.



Nick Strawn
Delta Ag COO

The Business Challenges

Weren't those enough?

Actually, a huge challenge is having the right data on hand. The data that shows the hemp in question is less than .3% THC is a good start.

However, because this is a product that is being grown in a fast-changing business environment that looks like the crowd scene from every Godzilla movie, and a regulatory environment that looks the same but with more semicolons, Delta Ag Partners can't always be sure what data will be deemed important by outside entities. So the challenge has been to capture as much data as possible.

"There's two sides of that coin," Strawn says. "There's the economic data that we need – the production data, the agronomic data to demonstrate, hey, this is how much we're growing per acre, this is what we're yielding, this is

what we can process it in, this is what the loss is when we process it, this is how that affects the bottom line, and this is what we're selling it for. Those are just the large economic considerations.

"The other side of the coin is tracking data for compliance, to demonstrate that we've got a clear line of sight to all of these things that allow us to be able to show that we're legally compliant, [so if] one of our crops does have pesticides in it we can track and trace and show where it is in the field.

"Consumer transparency, right? People want to know exactly where this stuff was grown, who grew it, all those things. That's the other side of it, the data that we're collecting on that."

Where Arbré Technologies Comes In



Perhaps a better statement would be, "*when* Arbré Technologies comes in," because the company came in early. Make that super-early – though with the general infancy of everything associated with this business, maybe it was actually the mature phase of the pre-conception lifecycle.

"We're only in our 16th month of operation, and we brought them on in month one," Strawn says. "We were pulling a lot of ropes at once, so bringing them on, it was like, 'Hey, guys, this is what we've got. Help us design a program to make this work, and here's how much time we have a week for you.'

"It was a whirlwind. In hindsight, it was a project that we both had to take on with some understanding that we were going to kind of learn as we go. Nobody's ever done a track-and-trace program on hemp, and we had to do it while thinking about our processing flows on facilities that we were building at that same time."

“Technology goes hand-in-hand with processes and procedures,” says Arbré Technologies’ CEO Matt Vollmer. “Which comes first? That’s a big challenge. We’ve had to develop and implement tech with a lockstep approach and continuously improve the tech, processes and procedures in tandem.

“Delta Ag has been a real pioneer in industrializing hemp processing, and it’s been a real honor to play a small role in their successes.”

Industrializing requires automation, and Arbré has been instrumental in taking Delta Ag Partners’ processes from concept to implementation.

As Strawn says, “In theory, it sounds great to be able to scan something in as it comes through the door, weigh it, have the scale automatically upload to a website, but when you’re trying to bring in 60 bales a minute, do you have time to be able to weigh that end, do you have time to scan that, can you staff someone independently who can just scan it on their own?”

“There were all these kinds of considerations that we had to learn together, being that we were building the facility in line. In Texas, we were the first group to grow [hemp there] and scale it. Nobody had ever processed it there; we didn’t know what it was going to look like.”

Specifically, what Arbré did for Delta Ag was come up with a process where bales of hemp are tagged with Arbré RFID tags when they enter the processing facility. Tags stay with bales as they’re weighed and dried (where they can lose up to 50% of their moisture weight) and weighed again.

As the product is separated into constituent elements like seed, stock and flower, those packages are tagged and classified, so that each bag of seed or flower can be traced back to the bale, which can be traced back not only to the field where it was grown but a location in the field.

“At an industrial scale, maintaining the linkage between the farm field and finished byproduct, such as flower, is a difficult challenge,” Vollmer adds. “However, our team came up with some creative solutions to meet the challenge.



“For instance, several bales get processed as a batch, but one bale doesn’t always equal one bag of flower as the output. Those many-to-many relationships pose unique problems for traceability – but we’ve been able to overcome that. There are a lot of scenarios like that that have to be addressed in a detailed yet efficient manner. Those are the challenges we live for – and that’s a big reason why we’ve really enjoyed working with the Delta Ag team.”

The granularity of this data is vital to Delta Ag’s current business operations, which require data to verify everything from THC content to possible pesticide contamination, but without an industry-standard required dataset that could streamline data collection and aggregation.

In other words, Delta Ag Partners needs to measure everything it can and have that information accessible just in case. Only a system with the capability and flexibility of Arbré Technologies’ RFID-based system could provide that level of information.

Lessons Learned

There have been bumps in the road all right, but nothing that you wouldn't expect from a startup that hired a company not too much older than themselves to capture an ever-changing assortment of data from several ever-expanding facilities scattered across the West and Southwest.

"The biggest issue has not been their competence or our competence," Strawn says. "It's simply just a lack of time and resources on our side, to be able to sit down and dedicate 30 hours a week to operate tech. We need a full-time person managing that."

"For us right now we haven't gotten there yet, but [Arbré has] been great," he adds. "They allow us to integrate as needed. They're very attentive. They see where some of our pressure points are and they understand that we don't have a resource person dealing with our tech right now, so they pick up the ball themselves. They've been great to work with."

Delta Ag took the unusual step of bringing on Arbré Technologies when the business was still in its infancy because it expects to scale significantly and rapidly, and didn't want to bring on an inventory-management solution in the midst of that chaos.

Instead, it chose to bring on Arbré in the midst of initial chaos, trading some front-end insanity for the security and knowledge that when scaling comes, there's a partner in place to scale with them.

As Strawn says, "I don't necessarily know that we need Arbré Technologies today to be able to execute on our business model, but if we want to grow into the business that we are trying to become, we need it in place and we needed it to grow with us. That's the whole reason we've got it."



Bottom Line

The bottom line for Delta Ag Partners is not something that be measured in with a pat ROI percentage or efficiency improvement, because prior to Arbré Technologies ... well, there really wasn't a "prior to Arbré Technologies." You can't compare something to nothing.

Instead, the bottom line has to do with setting up a business that can grow rapidly yet efficiently, that can generate business-critical data in an environment that generously can be characterized as fluid, and that can serve as a model for how hemp can be grown successfully, commercially, and at scale.

"I believe the services they provide are necessary for the future of this crop, to provide it [with] the transparency and traceability that is expected with large-scale agriculture," Strawn concludes. "But I would also say that Arbré is for large-scale production – and if you aren't thinking in those terms, and if you don't think Arbré Technologies is a necessity for you, you're probably not going to be in the industry very long, or you're going to be focusing on a very specific niche."

To sum it up, Strawn says, "If someone's considering Arbré Technologies, they need to really consider their businesses, and whether they're ready for what that kind of necessitates and connotes."

On Hiring Arbré Tech



I believe the services they provide are necessary for the future of this crop, to provide it [with] the transparency and traceability that is expected with large-scale agriculture.




Nick Strawn
Delta Ag COO

Delta Ag Partners knew it was ready for Arbré Technologies after only one month of operation. Given that, the message to other hemp and cannabis growers is clear: What are you waiting for?



Contact us today to see how Arbré Tech can add value to your business.

 (414) 502-7359

 info@arbrectech.com

 www.arbrectech.com