



Your Challenges. Our Solutions. Great Chemistry.®



CASE STUDY

Flexibility, Responsiveness, Collaboration, Experience.

4 factors attracting an agricultural startup to the CJB teams

When preparing to bring a new bioinspired product to the agricultural market, small trial volumes are critical to test the product under field conditions and help growers and their advisors see its value. But what happens if you're a company without a manufacturing facility? And if issues are encountered with the formulation, and you lack an in-house formulation team, where do you turn to help redesign the formulation?

One of our clients faced this situation. They are a startup company that didn't have in-house formulation and manufacturing capabilities but had a new and novel bioinspired product they were ready to introduce to the U.S. agricultural market. They were experiencing some concerns with the formulation itself and having difficulty securing a partner that could produce the small volumes required for the initial commercial launch. They reached out to our teams at CJB Applied Technologies and CJB Industries, who were able to address these challenges and more. And not just for their first product launch, but for other products that have followed.

To put our flexibility, experience, responsiveness and collaboration to work for you, contact us today.

Sims Turner
VP Sales & Business Development
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"We were a small company. We didn't have formulation capability. We didn't have any manufacturing capability. CJB had all that in house, so it was really a one-stop shop for us to come to them and rely on them for formulation expertise, pilot plant expertise, and then being able to go from the pilot plant at CJB Applied Technologies over to CJB Industries to scale up for our commercial production. That's proved to be efficient and seamless because those teams communicate well together."

Customer Director of Manufacturing



CHALLENGE

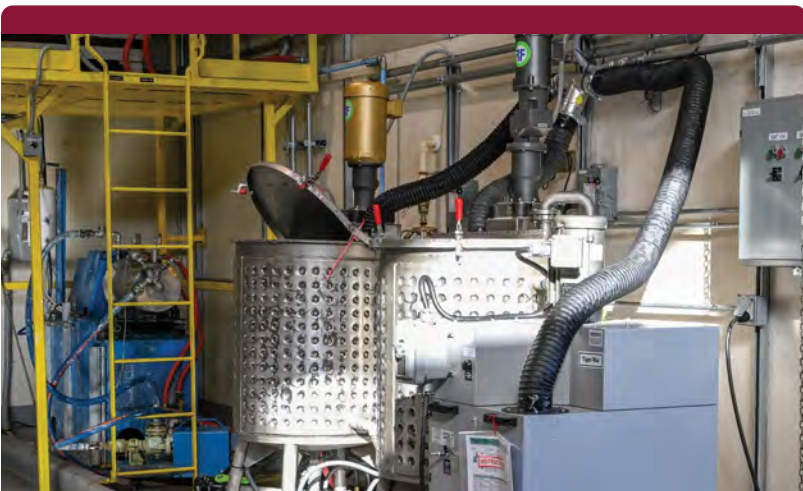
Launching a product without formulation and manufacturing facilities



Our customer was excited about bringing their new bioinspired solution to market and needed a small production batch of around 50 gallons for the launch. It was critical to get the product in their customers' hands to become familiar with the value the product could bring to growers' fields and their crop productivity. They'd been talking to a number of manufacturers but found few capable or willing to produce and package such a small amount.

In addition, they realized the formulation that had been used in field trials had some product stability issues. The product was an oil dispersion formulation, which was highly viscous and prone to settling. Our customer struggled to find a company with the knowledge and expertise needed to address those challenges.

To add another layer of complexity, this was also happening as COVID-19 was causing havoc with the supply chain and making it difficult to access active ingredients.



"In addition to trying to resolve formulation stability, we were rushing to produce the small production volumes required to support this launch. Then COVID hit. This resulted in supply chain issues, which delayed some of the activities, compressing the timeframe allowed to get product out to our customers."

Customer Director of Manufacturing

SOLUTION

CJB delivers pilot plant resources, formulation expertise and manufacturing scale-up flexibility

Our teams at CJB Applied Technologies and CJB Industries understood the challenges our customer was encountering and committed to working together to help our customer commercialize a viable product.

CJB Applied Technologies had the expertise, facilities and resources to support our customer during their pre-commercialization phase. Our facilities included a pilot plant capable of producing smaller volumes. This was ideal for the customer during their product trial and soft launch. Our team was able to provide them with custom filling and packaging services to meet their needs of 1-quart jugs. Each jug was placed within a box, and 12 of those boxes were placed in a larger box for shipping.

"All of that had to be done by hand. You don't find a lot of companies that are that flexible and willing to take on a project like that with short notice. Most of them just want something to drop into an automated line and say, okay, let's go."

Customer Director of Manufacturing

To address concerns with product stability, our CJB Applied Technologies team used their formulation expertise with oil dispersions to design a better formulation. The resulting formulation delivered improved stability, lower viscosity and better dispersion properties, providing consistent efficacy while giving growers a better experience handling the product.

Once the formulation was right and our customer was ready for commercial production, the team at CJB Applied Technologies efficiently collaborated with the team at CJB Industries to ensure the product was manufactured according to specifications.

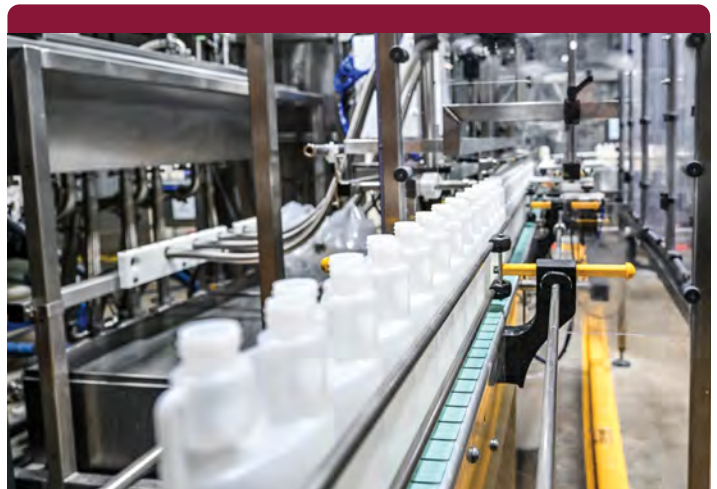
"The response that we got from CJB Applied Technologies and CJB Industries when we wanted to scale up was excellent. They were very flexible and easy for us to work with."

Customer Director of Manufacturing

The team at CJB Industries also provided packaging expertise. They provided recommendations for torquing the caps on the jugs and the type of liner to use in the caps. At one point, the customer shared that growers had reported the jugs leaking. Our team recommended switching from the foam-seal liner to a heat-seal. The complaints about leaking were reduced significantly.

"We were able to bring our customers improved formulations that enhanced their experience using our product. Efficacy has been consistent from one product or formulation to another. We were able to get line time at CJB Industries on relatively short notice so we could have product to take to the field. Having the right amount of available product to support sales is critical."

Customer Director of Manufacturing



RESULTS

Delivering effective product performance opened the door to additional product successes

By demonstrating flexibility and a collaborative approach, our teams helped our customer meet their needs for trial volumes, improved formulation and commercial scale up for a successful product launch. Since then, our teams have continued to support our customer with additional formulations and product introductions.

They collaborated with CJB Applied Technologies to create a dispersion concentrate formulation. Another product was a two-component product packaged as a co-pack. Our CJB Industries team put our process, packaging and logistical expertise to work and created an efficient workflow that delivered for our customer. "It was a labor-intensive filling and packaging situation, kind of a logistical nightmare, that CJB Industries made go a lot smoother than I ever thought it would go," said our customer's Director of Manufacturing.

*"The flexibility of the CJB teams has really been **critical to our development** because without that, it would have been difficult for us to get products out into the field in the timeframe we desired. Being a startup, there's not as much structure as you get in a bigger company. You don't have the processes, procedures that keep things on a tight or consistent timeline. Our team makes decisions, and then asks me, 'Can you do this for this next season?' And I'm like, 'Well, we can, but that's not going to be easy.' And then we call up CJB, and they say, 'Yeah, we can do that.' **CJB has been very flexible.** It's not easy to get that relationship with a supplier a lot of times. We're helping our customers have a better experience, we're improving our quality, we're getting product out to the field, and **all of this really comes out of our relationship with CJB.**"*

Customer Director of Manufacturing



Adaptable Expertise, Technology and Facilities to Meet Emerging Contract Manufacturing Demands

At CJB Industries, we feature highly efficient equipment, state-of-the-art labs and a well-trained workforce so we can meet your project requirements and help you achieve your business goals. From our people to our facilities, you'll see we're flexible and adaptable, enabling us to quickly pivot and scale to meet your evolving needs. Learn more at www.cjbindustries.com.



Your Partner for Formulation Development, Process Optimization and Pilot Plant Services

CJB Applied Technologies is at the forefront of product development and optimization. We specialize in both biological and chemical formulations with facilities that feature state-of-the-art Biosafety Level II bioconversions and synthetic chemistry laboratories, an onsite greenhouse, pilot plant production services and commercial scale-up capabilities. Learn more at www.cjbappliedtechnologies.com.

To put our flexibility, experience, responsiveness and collaboration to work for you, contact us today.

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