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COVER STORY

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Designed For Excellence

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When I first visited Little Leaf Farms more than six years ago in Devens, Massachusetts, it was clear from the get-go the operation was geared toward success.

Left: One of the four 10-acre ranges at McAdoo, Pennsylvania. Here you can see the walkways, as well as a hybrid supplemental lighting system for two kinds of crops, the red leaf and crispy leaf lettuces.

That first greenhouse in Devens was 2.5 acres, a proof of concept if you will, incorporating automation to move the growing and harvesting process to a hybrid of human and automated labor. As Devens achieved profitability and continued to expand, first another 2.5 acres and then a third 5-acre greenhouse, the exploration of automation grew, with less and less labor involved.

That's not to say no labor—there's plenty, and we'll get to that and where it fits in—but automation is definitely the gamechanger that continues at their McAdoo, Pennsylvania, campus—which is now about to start shipping lettuce this summer from its fourth 10-acre expansion. That puts McAdoo at 40 acres production under glass, for a total of 50 acres overall for Little Leaf Farms.

"Part of the key, I think in hindsight, is we never got into this land grab, over-expanded and raised too much capital, and had that pressure to invest it," says Founder and CEO Paul Sellew of the evolution of the business. "We built the business incrementally, step by step.

"We learned such important lessons along the way, Jen," he continued. "From Devens, we learned what we thought were the next design iterations we needed to make to get the quality and yield breakthrough. And that's what we did down in McAdoo."



Right: Little Leaf Farms won this year's Operational Excellence Award at Indoor Ag-Con as part of the inaugural CEAs—Cultivating Excellence Awards. From left to right: Paul O'Neill (from event sponsor bpgrower.com), Pieter Slaman and Paul Sellew of Little Leaf Farms, Jennifer Polanz and Brian Sullivan (Indoor Ag-Con).

It's why no Little Leaf location will ever mirror another exactly, said both Paul and Jed Sekaran, executive vice president of operations and construction, when I interviewed each of

them. Every expansion and every new location improves upon the last. Jed likened it to building a racecar—there are constant tweaks and modifications that make it incrementally more efficient, more effective, and ultimately increasing the output they want. They also want to be able to have complete control over their systems, so a lot of the automation now is custom-built and proprietary instead of utilizing turn-key offerings already in the marketplace.

That efficiency also allows them to provide retailers the same product at the same cost, even as inflation has required price hikes throughout the produce sector.

“Our long-term vision for Little Leaf is we want to deliver a better product at a better value to more consumers,” Jed said. “And that means you have to upgrade your system, expand your distribution, utilize better plant genetics, operate more efficiently, and all the rest.”

It’s why Little Leaf, over the course of 10 years, has been able to capture more than 50% of the CEA-grown leafy greens market in North America (they sell into both the U.S. and Canada) and why they are the fifth-largest brand of packaged salad in the country. It’s also why they were the inaugural winner of the Operational Excellence Award, part of the CEAs—Cultivating Excellence Awards, presented by Indoor Ag-Con and *Inside Grower* and sponsored by bpgrower.com. After we presented them the award at the Las Vegas show, I was able to get out to McAdoo for a visit to see just how much progress has been made since that first visit to Devens.



Proximity and microclimate

As I drove toward McAdoo through the winding hills of Pennsylvania into the foothills of the Pocono Mountains, I wondered, why here? I asked Jed, who started in 2022 as Paul’s Chief of Staff and took over operations about a year and a half ago. He explained that there were multiple reasons this little town, initially built for coal mining, caught their eye.

Left: You can see from this drone shot the McAdoo campus, which sits on a higher elevation in the foothills of the Pocono Mountains.

“This location in particular is very interesting because it’s on a very key intersection of Highway 80 and Highway 81. That allows us to ship out from the Northeast effectively, while also being only a five-hour drive from Devens and our New England home base,” Jed noted. That proximity is vital when there’s people and materials flowing between the two facilities. Of course, the location was also chosen due to its microclimate, which is key for the lettuce grown within. That’s also another reason why the systems have to be customized—as the conditions for growing change, the growers need to adapt and adjust to create the ultimate climate.

Learning and growing



As we walked through one of the 10-acre growing ranges, it was clear they have continued to learn and adjust as they go. The setup is multi-level, with a proprietary NFT gutter system and automation that starts at the back of the greenhouse with a system that fills gutters with media and places seeds in their spaces before moving it to the germination chamber.

Right: The greenhouse vents outside air into this hallway, where fans pull the air into the growing range below the crops for better air circulation.

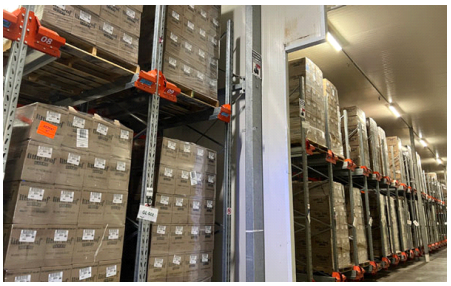
Once out of the chamber, gutters are moved through the automated system starting at the back of the greenhouse and moved toward the front, adjusting spacing as needed until harvest day, when the gutter moves through an automated harvester, cutting the leaves off the top and sending them on into the packhouse while the gutter and its remaining contents travel below the growing level to get cleaned out, sanitized and staged for the next round of seeding. All told, it's about 25 days from seed to harvest.

In the packhouse an automated machine weighs and fills containers, then sends the containers down the conveyor for a human to add the lid (so far the only thing that's not fully automated—yet). They run two shifts in the packhouse seven days a week, and ship to customers by the pallet, which is about 150 lb. of lettuce.

It's not all automated, though; there are a wide variety of jobs done by the more than 500 people employed by Little Leaf, including packing, shipping, sanitation, quality, maintenance (a very important part of an automated system), and many others. Chief Growing & R&D Officer Pieter Slaman has a team of 19 growers, too, between the two facilities, who constantly work to ensure the plants are at peak performance.

It's an interesting balance, and I joked with Pieter that with all that automation, what do the growers actually do? Fortunately he took it as intended and laughed, because there is a LOT to do with 50 total acres under glass, and more on the way.

"The technology has changed, but the job didn't change," he said, noting that the health of the plant and the root zone is still the key, and there are still four seasons to adapt to and change the climate settings. "We continue learning, and every new greenhouse we build is different."



Left: Little Leaf Farms sells by the pallet to customers—that's a lotta lettuce!

For example, one change that started with the second Devens expansion were elevated walkways above the plants that provided space for more plants and gave growers a bird's-eye view of what's happening throughout the ranges. Along with that multi-level setup, they have a robust fan system below that pulls outside air into the greenhouse below the crops for better air circulation. They utilize time-tested biological control methods, from nematodes for shore flies, sticky tape and beneficials for aphids and thrips, as well as insect screening in the sidewall and roof vents, all techniques Pieter had used for decades, having grown up in the greenhouse business in the Netherlands. They also planted wildflowers in berms outside the greenhouses to attract beneficial insects to kill the bad bugs before they even get inside—a colorful moat around the castle, if you will.

And although the grower's job is still focused on the crop, it does require a more complex set of integrated skills than it used to—Pieter has a 250-page grower manual for new growers to learn when they arrive on the job. And his team is constantly conducting research and development on new systems, new technology, and even new breeding, to see if there's something better.

Growers now have to understand the entire operation—from the engineering to the plant health side, to the biocontrols and pest management, to business and profitability—and they play an integral role in planning and developing the physical environment for the plant to thrive in.

"It's all about listening to each other—that's the key, the word 'listening,'" Pieter added.

Marketing and product development

Part of the success of Little Leaf is in the consistency of the product. It is year-round and the same in January as it is in July. "We define it as a kind of day-to-day execution," Paul said of the consistency. "We have millions and millions of plants in all of our greenhouses. We operate the business seven days a week. It's in service of the plants that we're growing. And so that orchestra, in effect, is what makes Little Leaf Farms."

That consistency opens doors and shelf space, as retailers know they can count on the company to provide reliable products, reliably. And that means more opportunity to sell new products, something Little Leaf explores but doesn't rush into until they know they can grow it well, and consistently.

When I wrote my 2019 cover story on Little Leaf, they offered three options: a Spring Mix (arugula, green leaf and red leaf lettuce), a Red & Green Mix and Baby Crispy Green Leaf. Today, that's expanded to include Sweet Baby Butter Leaf and a Sweet & Crispy Mix (butter leaf and crispy green leaf), along with three salad kits (Crispy Caesar, Southwest and Sesame Ginger—all with a base of the Baby Crispy Green Leaf). Paul told me in late March that Baby Romaine is now in production at McAdoo and will be available this spring, adding a new offering that continues to expand their shelf space and market share.

The consistency isn't just for the retailers to be able to stock a reliable product. It also helps the end consumer feel confident about buying each week, and even buying online—we all know from our Covid experience of having others shop for us that produce can be notoriously tricky to order.

Little Leaf takes its marketing to the next level by offering up happy customer testimonials, even going as far as putting their social URLs and phone number on the inside bottom of the salad kits to encourage customers to leave feedback. Here's one from the website, from customer Julia G.: "I used to say that I didn't think salads really counted as 'food.' Since discovering your product line, I not only enjoy salads, I actually eat the lettuce first."

What's next?

It's a little obvious, isn't it? Expansion is the name of the game. But Little Leaf does it with a measured approach. They are looking at potential locations in the Southeast and Midwest to maximize reach and increase their customer base, with the goal of offering large population centers freshly harvested product. The approach is multi-pronged, with the team looking at site locations, exploring the technology that would further increase yields and efficiencies, and R&Ding new varieties that could potentially add more revenue streams. Paul noted, too, that automation to further improve the packing process will be key in the future expansions.

The folks at Little Leaf think there's still a ton of opportunity out there for CEA-grown leafy greens, as the market share is still about 93% field grown. But while most produce sales are stagnant, packaged salad sales have grown, and CEA-grown packaged salad has grown even more, Jed said, adding that leafy greens could see a similar growth trajectory to greenhouse tomatoes.

And while Paul noted the financial landscape has returned to the pre-Covid days, it favors companies that can prove their value.

"The environment today is you have to demonstrate proven unit economics and corporate level profitability, or it's very difficult to raise capital," he says. "There was this period where massive amounts of capital was available. And now it's kind of back to what I consider to be normal."

Wherever the expansion occurs, you can bet Little Leaf's focus will continue to be more of the same.

"Our mantra is we want to deliver better lettuce at a better value to more people," Jed says. "And so value is at the core of what we're going for."

Creating Kits

Little Leaf Farms joined the salad kit foray two years ago with the introduction of its Crispy Caesar Salad Kit and Southwest Salad Kit, then last year added the Sesame Ginger Salad Kit. It's a packed field and one that continues to grow as consumers look for healthy and convenient choices.

"We do think that this is going to continue to be a growth engine for Little Leaf Farms," said EVP Jed Sekaran. "And I think kits are exciting because it combines consumers desire for convenience and expands Little Leaf into a slightly different segment of the market than our other product offerings do."

CEO Paul Sellew noted, too, that the most important aspect of the kit is the lettuce, and that's what they do best. They researched quality partners to provide the additional ingredients, which they pack into the final kits at the Devens, Massachusetts, facility.

"It's a fast-growing (and big) category," Paul added. "So we wanted to participate, and we felt we could win by delivering a better quality lettuce to the consumer."