

COVER STORY

Green & growing

When success in the corporate world lost its allure, Schuyler Greens Company founder John McMahon channeled his ingenuity and innovation into hydroponic greens.

Jolene Hansen | Photography by James Linkowitz



Spend a few minutes inside Schuyler Greens Company and you'll notice features uncommon for a growing operation of its size. Beyond the crops of tantalizing leafy greens, you'll discover automation and technology typically reserved for much larger growers. But time spent talking with founder and farm manager John McMahon reveals the dream that drives this controlled-environment agriculture (CEA) farm. The 20,000-square-foot, state-of-the-art facility is a far cry from McMahon's beginnings, but this is only the start.

The evolution of farmer and facility

McMahon founded Schuyler Greens Company in 2015 following a successful corporate career, but his agricultural roots reach back to his youth. Raised in western Pennsylvania, he and his siblings learned to tend the family farm while his father, a medical doctor and gentleman farmer, was on call.

After a family move to Virginia, McMahon pursued business degrees and a corporate career that landed him in New York City and Washington, D.C. After more than five years with a near-constant international travel schedule, corporate burnout was building. And McMahon's lifelong dreams of running his own business stirred.

A rough piece of land near his brother's Virginia farm caught his eye. Located in Schuyler (pronounced SKY-lur), southwest of Charlottesville, the property soon became the stage for Schuyler Greens Company.

"I built what was probably the smallest greenhouse in history for commercial operators — about 1,500-square feet," McMahon says. "Basically, I just started very small and learned the business and pounded the pavement and wore all the hats, like every other small business entrepreneur."

The decision to focus on hydroponic greens came early and easily for McMahon. Talks with potential customers revealed interest in local products, but also concerns about continuity and reliability of supply. With greens, he believed he could overcome those hurdles and supply consistent year-round product for customers — and consistent cash flow for himself.

While the focus on greens stayed constant over the years, McMahon's business model evolved. He started as wholesale direct to restaurants, then shifted to distributors as capacity increased. Institutional customers such as universities and hospitals followed, as did independent grocery stores.

Today, the Schuyler team consists of McMahon and eight employees split roughly between full- and part-time. "Some like the flexibility of not having full-time work. They want to do a few different things, kind of like the gig economy," he says.

Despite pandemic pressures, McMahon has been able to maintain production and avoid downsizing. "The last year has been pretty exhausting, but so far, we've been able to hang in there," he says.

Although business in markets such as food service and restaurant sales through distributors are down, grocery store sales are up. And a new Schuyler Greens direct-to-consumer, home delivery e-commerce component has helped.

Currently, the team produces a variety of lettuces, salad greens, herbs and microgreens — plus some mushrooms, too. Products are grown free from traditional chemical pesticides. McMahon relies on organic options, including probiotics and beneficial insects instead. OMRI-listed treatments combine with a mix of organic and synthetic fertilizers used.

ARTICLE CONTINUES AFTER ADVERTISEMENT

www.lambertpeestmoss.com

"WE CUSTOM BLEND"

SUPERIOR AND CONSISTENT GROWING MEDIA

Germination Mixes

All Purpose Mixes

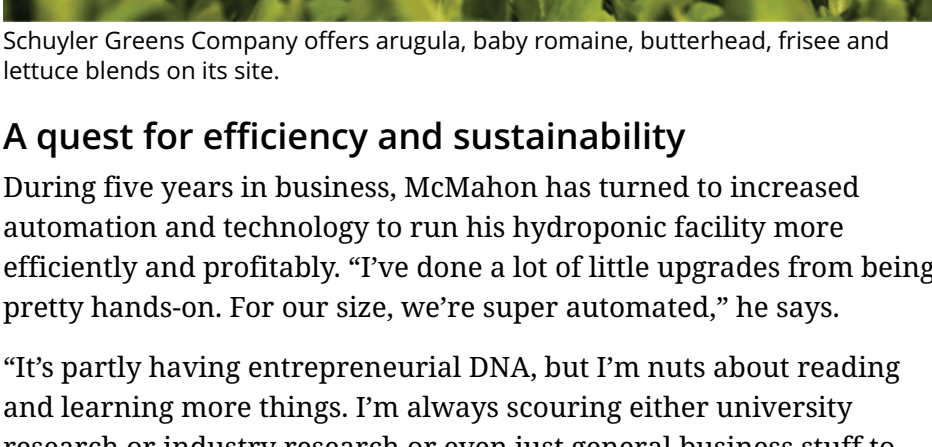
High Porosity Mixes

Organic Mixes

Wes A. Schuyler, Jr. Cell 202-485-1722 w@lambertpeestmoss.com	Jeffrey R. Bishop Cell 202-485-1800 j@lambertpeestmoss.com	Joe Brown Cell 301-340-4480 j@lambertpeestmoss.com	Richard Niles Cell 301-340-4480 r@lambertpeestmoss.com	Bob Hildebrand Cell 301-340-4480 b@lambertpeestmoss.com
---	--	--	--	---

ASK FOR **ECOPEAT** MIXES (EPA), "GROWER FRIENDLY" VERY FERTILE MIXES*

(http://גיעדנ.אזרעוועבסאייטס.נעט/advertisement/click?add=75572&issueld=103805&subscriptionid=null)



Schuyler Greens Company offers arugula, baby romaine, butterhead, frisee and lettuce blends on its site.

A quest for efficiency and sustainability

During five years in business, McMahon has turned to increased automation and technology to run his hydroponic facility more efficiently and profitably. "I've done a lot of little upgrades from being pretty hands-on. For our size, we're super automated," he says.

"It's partly having entrepreneurial DNA, but I'm nuts about reading and learning more things. I'm always scouring either university research or industry research or even just general business stuff to get better with production or business and technology to try to be more efficient," he says.

A strong believer in the benefits of CEA, McMahon feels hydroponic growing allows him to "take it up a level" to meet his growing goals.

"Whatever you're doing, by controlling your growing environment to some degree, you have more consistent yield, you have better quality crops, and it's more efficient," he says. "The goal is to use fewer resources to produce the same or more output. Then also, to be as sustainable or efficient as possible with resources when we produce."

Cut product, not heads, constitutes most of Schuyler Greens' product line. With the industry's migration toward salanova-type and higher-density baby greens, automation from seeding to harvest has been crucial to growth.

McMahon recalls hand seeding arugula in Oasis for his original nutrient film technique (NFT) system. What then took four to five hours — often paired with frustration — now takes 10 minutes with the automated seeding line.

Harvesting is another critical area of automation gains. McMahon still retains some of the NFT system he first launched with, but deep water culture (DWC) production and automated harvesting now dominate.

"We run the baby greens through a harvesting system the rafts go through. That cuts the product versus hand cutting," he says. "It's cut our production time compared to our older NFT system. We can produce twice as much in the same time period with less physical labor."

A switch from high-pressure sodium (HPS) lighting to light-emitting diode (LED) technology also yielded significant gains. Benefits include increased energy savings, reduced HPS-produced heat, and enhanced plant color. "We use a blend of blue and red light spectrum that results in a purplish hue," McMahon says. "It triggers anthocyanin, so it enables us to have more attractive colors on our plants."

Regarding return on investment, McMahon says the LEDs have more than paid for themselves: "I've seen a lot of positives from them, from a much more attractive crop to lower energy costs."

Unlike similar e-commerce efforts built on partnerships and shared expenses, McMahon chose a different route. He purchases the products sold on the site, picks them up from local producers, packs the orders at his facility, and delivers to consumers' homes.

For his producer network, he focused on commercial growers that are serious about food safety and familiar with wholesale pricing and practices. Then he designed a site and service with consumers in mind.

"I'm very customer-oriented or customer-driven, so I don't like locking people into boxes. I want people to be able to pick what they want, when they want it," McMahon says. The result is a remarkably flexible, easy-to-use, e-commerce experience that beats driving to the store.

McMahon acknowledges that "a lot of blood, sweat and tears" went into the launch. When COVID hit, he discovered that implementing his preferred e-commerce and delivery platform would take 12 weeks. But he knew the window of opportunity required he act fast.

So, he launched a less sophisticated system to get into the market and buy time. Then, behind the scenes, he implemented upgraded technology and software with the complexity needed for managing direct-to-consumer sales, fulfillment and logistics.

The response has been positive, but McMahon says benefits transcend sales. He's been able to connect with consumers who appreciate his produce and help fellow farmers, too. "It's been meaningful to help people get good food. They've been appreciative, we're so appreciative of the business, and then the other farms have been appreciative," he says. "When things have been so bleak, it's nice to feel good."

Like growers across the country, McMahon has been watching the COVID-driven migration toward direct-to-consumer sales. Time will tell if he keeps direct sales, splits it off from the greenhouse, or even sells that business segment off. "It will be interesting to see how the next 12 months shake out," he says.

Food safety and GAP certifications

From the beginning, McMahon has gone above and beyond the food safety measures one might expect from a grower his size. "I learned what I needed to do, and then as I built up the facility, I put in more features that were conducive to food safety," he says.

ARTICLE CONTINUES AFTER ADVERTISEMENT

ARBICO organics
Serving Growers Since 1976

© 2021 ARBICO Organics® All Rights Reserved

(http://גיעדנ.אזרעוועבסאייטס.נעט/advertisement/click?add=75569&issueld=103805&subscriptionid=null)

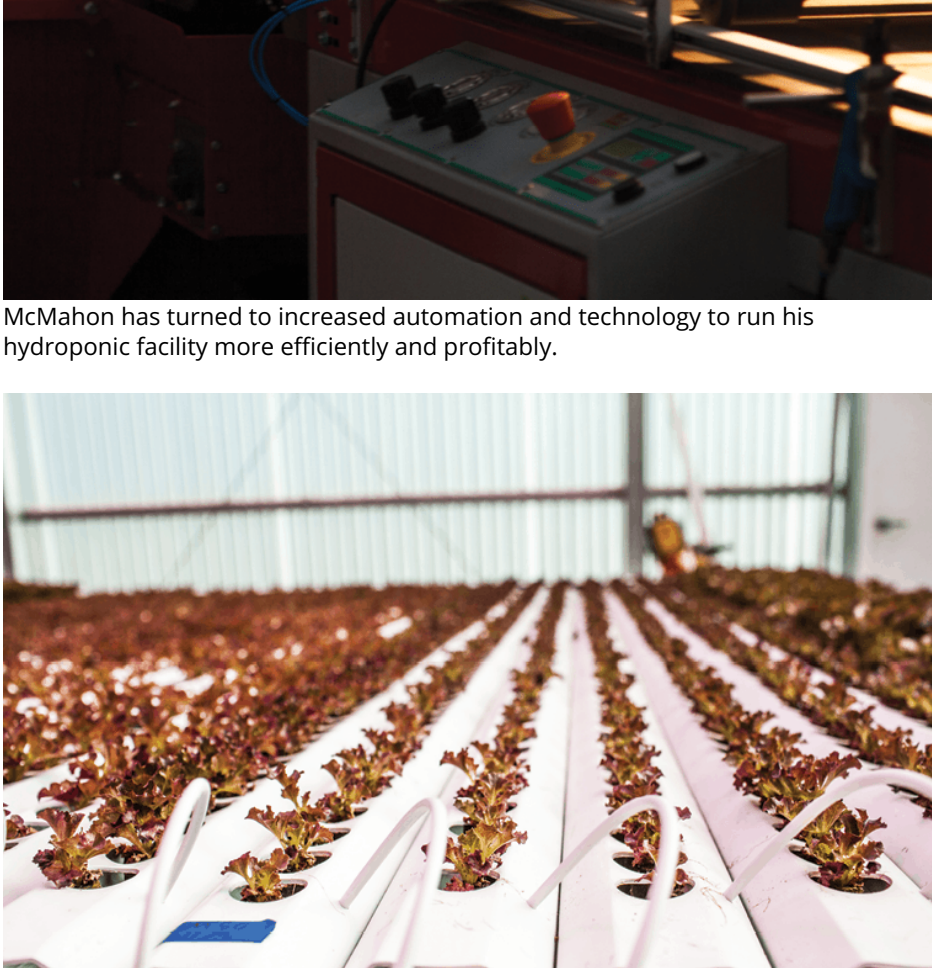
Schuyler Greens Company received U.S. Department of Agriculture GAP (Good Agricultural Practices) certification early on. Food safety auditors wondered why they were testing such a small production facility that obviously couldn't support the large customers that required the certification. But McMahon had even higher goals.

This year, he took the step to upgrade food safety standards and become USDA Harmonized GAP Certified for Food Safety. The certification was a personal victory for McMahon. He suspects that few end consumers understand the standard operating procedures, controls, checks and documentation H-GAP certification requires, but that wasn't his goal.

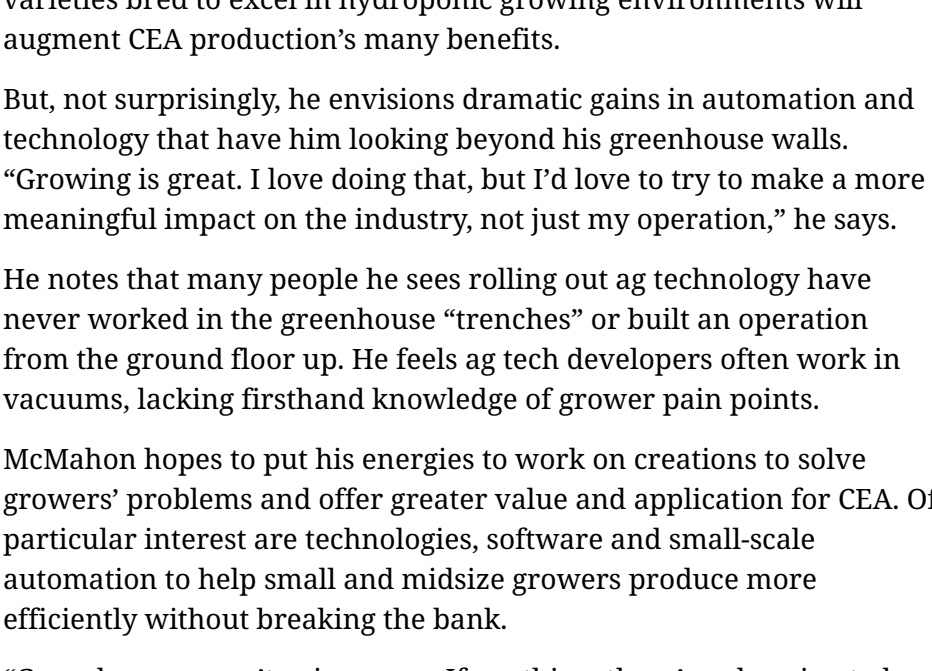
"We have the procedures or protocols in place to really manage food safety and take it seriously. Because to me, we can't afford to have any food safety issues. I don't think anyone really can," he says. "For me, as a business operator and a grower, I can sleep at night knowing we're doing the best we can possibly do to not cut corners and to reduce our risk profile."

It's also good marketing. Regardless of size, the certification clearly sets a grower apart from competitors with less strenuous food safety measures and reassures customers that what they're buying is safe.

"Customers have no idea what it is. But your institutional buyers and the grocery stores and distributors, they're all over it," McMahon says. "Because of the world we live in, it's a very regulatory-focused industry — especially leafy greens."



McMahon has turned to increased automation and technology to run his hydroponic facility more efficiently and profitably.



McMahon decided early on to focus on hydroponic greens, starting with restaurant customers and later adding distributors, independent grocery stores and more.

Future plans fueled by innovation

McMahon expects significant changes in the produce industry over the next 10 to 15 years. He believes that plant breeders focused on varieties bred to excel in hydroponic growing environments will augment CEA production's many benefits.

But, not surprisingly, he envisions dramatic gains in automation and technology that have him looking beyond his greenhouse walls. "Growing is great. I love doing that, but I'd love to try to make a more meaningful impact on the industry, not just my operation," he says.

He notes that many people he sees rolling out ag technology have never worked in the greenhouse "trenches" or built an operation from the ground floor up. He feels ag tech developers often work in vacuums, lacking firsthand knowledge of grower pain points.

McMahon hopes to put his energies to work on creations to solve growers' problems and offer greater value and application for CEA. Of particular interest are technologies, software and small-scale automation to help small and midsize growers produce more efficiently without breaking the bank.

"Greenhouses aren't going away. If anything, there's only going to be a lot more of them," he says. "So how do we do things more efficiently and keep pushing the industry forward and keep getting better?" While he's quick to say there's no time frame attached to his goal, helping elevate the industry is increasingly on his mind.

For others interested in CEA production, McMahon offers this advice: First, only do it if you're passionate about it. That goes for any business ventures, he adds. "Know that even though this is high-tech and controlled-environment ag and all those really cool buzzwords, it is a lot of work and it's still farming. So, make sure you know what you're getting into," he says.

Second, he urges would-be and current growers to reach out to mentors, consultants or knowledgeable people and learn all they can. "They can really help shorten the learning curve. I think that's true in all things in life," he says. "Learn from people that are more experienced and more knowledgeable than you. I've definitely done that here."

The author is a Minnesota-based freelance writer specializing in horticulture-related industries and a frequent contributor to Produce Grower magazine. Reach her at jolene@jolenehansen.com (mailto:jolene@jolenehansen.com).