







## A People's Movement

West Lafayette entrepreneur Austin Kasso is ready to tackle the world of organic farming

By Shawndra Miller Photography by Josh Marshall **AUSTIN KASSO HAS AN IDEA** that he thinks will revolutionize the food system in his adopted town of West Lafayette. Or maybe all over the Midwest.

Picture an indoor farm full of vertical cylinders stretching almost to the greenhouse ceiling. Springing from planting holes in each cylinder are vigorous tomato, bean and squash vines, along with herbs, strawberries, melons and every kind of green imaginable.

This is Kasso's vision, which ties in with what he calls "the people's organic movement" happening everywhere. He sees a network of such farms, some supporting restaurants, some connected with schools and other institutions, all employing young entrepreneurs like himself.

The 23-year-old has started a nonprofit enterprise called Red Giant Union that will spread this innovation in urban agriculture. The nonprofit model allows profits of each farm to fund the next one in the network.

Using a vertical growing technology called the Tower Garden, Red Giant Union will offer greenhouse-raised, aeroponic produce, all grown without pesticides or herbicides.

Aeroponic growing is similar to hydroponics: Neither uses soil, and both depend on a nutrient solution. But in aeroponics, the roots are mostly exposed to air, and nutrient-laced water drips over the roots. A small pump cycles the nutrients through this closed system, and evaporation is minimal. Kasso has high hopes for the efficiency and effectiveness of this method, which can inspire even the brownest thumb to garden.

Hearkening back to his high school astronomy club, Kasso's fascination with red giants, a type of star, inspired the name of his new endeavor. Red giants, he says, "can either become a supernova or a white dwarf."

"In my philosophy," he says, "I want (my project) to be a high mass red giant star that supernovas, that doesn't fizzle out and turn into a dwarf."

"High mass" also refers to the way he sees the organization developing — unionizing entrepreneurs who open Tower Garden farms. "Essentially we're all organized together as a workers union," he says.

There are many ways to grow produce up in a space-saving setup, and the general concept has gained momentum, particularly in urban environments. In fact the Bloomington-based Garden Tower Project offers a locally made garden barrel, which features a center tube for worm composting. But Kasso favors the soilless Tower Garden for its ease of use.

"The no-soil ones are a growing movement," he says, "If people are growing their own fruits and vegetables at home, soil makes it more complicated." That's important, because not only will Red Giant Union members proffer locally grown fruits and vegetables, they will also nurture other would-be gardeners, helping people set up their own Tower Gardens.

His mentor, Las Vegas-based entrepreneur Loren Slocum Lahav, says another benefit of soil-free gardening is addressing issues of soil contamination and depletion. "You're getting all the nutrients you need (in Tower Gardengrown produce)," she says. "Because our soil is so depleted, we're not getting the nutrients we need from the soil."

Slocum Lahav has personal experience with the Tower Garden, growing food for herself and three children on her Las Vegas property. "I'd like to be a gardener, but I'm not that good," she jokes. "I like it because I can actually do it without it dying. I like that I can go away for two weeks and check acidity of the water, and that's all I have to do."







Though the setup does require electricity, she notes that the pump for each self-contained Tower Garden only uses the same amount of energy as a light bulb.

As marketing director for JuicePlus, Tower Garden's parent company, she says Kasso's project is poised to "get people participating in their own rescue.

"He really wants to make a difference," she says of the young founder. "He's seen the wounds of his generation. They're getting sicker; they're not getting quality food."

Kasso's laser focus, she believes, will serve him well in this ambitious

endeavor. "He's got such a servant heart," she says, "and he can get people to understand that this is important long term, for generations to come."

Red Giant Union backers are raising funds to set up an initial indoor urban farm that they see as just the beginning of this urban farming revolution. A greenhouse full of Tower Gardens would, in time, create revenues that would facilitate the opening of future similar farms, Kasso says. Some would be connected to schools and restaurants. All would offer Tippecanoe County residents high-quality fruits and vegetables, free of genetically modified organisms (GMOs).

**CLOCKWISE** Tafari and Kasso check the pH level of the water before planting seeds. Members of the Red Giant Union work together on a Tower Garden.







cLOCKWISE Seeds prepared for planting. Watering the rock wool growth medium to prepare it for seeds. Kasso holds broccoli seeds that he hopes will soon sprout into full blooms of broccoli.

How does one so young come to such a far-reaching vision? The Long Island, New York, native, who moved to Indiana in 2009 and started coursework at Ivy Tech, has always had an interest in social issues. As a high school senior, he proclaimed that organic agriculture was the movement of the future, and though his teachers "made fun," he has not changed his mind.

His passion for alternative agriculture developed during his teens, when he spent summers far from his suburban home. Working on his cousin's Durham, North Carolina, organic farm, he found a way of life that resonated.

"They agreed to let me visit for a few months and work on the farm," he says. "It really opened my eyes in terms of the lifestyle and how healthy they were eating and how self-sufficient they were." Rarely did the couple head for the grocery store; nearly everything they needed was sourced right from their land.

Impressed, Kasso decided to pursue a degree in agriculture at Purdue

University, which is still in the plan, now that he's gotten early course credits out of the way and established residency. Meanwhile, his learning continued as he sought alternatives to the conventional agriculture being taught in his coursework.

He built a support system by starting a Facebook group. Soon the 1,000 members encouraged him to think big. Innovations in other communities spurred him to action.

"It occurred to me that I can develop a nonprofit organization to raise funds to build an urban greenhouse," he says, "because I had seen it happen on the East and West coast."

He hasn't enrolled in Purdue yet, but his quest has already created ties with the university's students, alumni, faculty and organizations like the Purdue Social Justice Coalition.

And the experience of growing food stays with him. "I definitely want to have my own urban farm," he says. If all goes well, he may expand operations into mushroom cultivation.

For now, though, the project's goals are threefold: to provide the community with affordable, locally grown, GMO-free food; to create living wage jobs; and to raise awareness of healthy food choices. By showing homeowners, restaurateurs and teachers how to grow their own, Kasso expects a high uptick in consumption of high-quality, economical produce. "And all this ties into our vision of a sustainable economy or a self-sustaining community," he says.

As a local supplier of Tower Gardens, Red Giant Union will help facilitate this transition. The residential models enable people to set up vertical gardens in any small space, with a footprint of only 2½ square feet.

Local production of the food served in restaurants and school lunchrooms is a win-win, he says, both in terms of lowered costs and smaller environmental impact. Also, people will notice a vast difference in the quality of produce served within a short time of harvest versus that shipped in from elsewhere.

The 8-foot-tall commercial version of the Tower Garden holds some 40 plants, while a shorter residential version can hold 20 to 28. Kasso envisions starting with at least 40 of the towers. A visitor to the farm would encounter rows of lush vegetables, fruits and herbs, seemingly growing on trees.

Vertical gardeners elsewhere offer ample inspiration. "It's really spectacular if you were to see what the farms look like," he says.

On the West Coast, Chapala Gardens markets rooftop-grown produce in drought-stricken Santa Barbara, California. Out East, the Green Bronx Machine installs Tower Gardens in New York City classrooms.

And in Oklahoma, a Tower Garden operation called Scissortail Farms grows lettuces and other greens under cover. "It provides the whole (Tulsa) community, restaurants, schools and the public with locally grown produce in a food desert," says Kasso. "Originally they weren't really able to grow food out there. They built a greenhouse that sustains itself and is very costeffective. It inspired me to do smaller projects like that around here."

Tower Gardens' manufacturer, Florida-based Future Growing, claims that such a setup requires 95 percent less water on 90 percent less land than a more conventional growing plan. "We are literally going to change Indiana food production in Lafayette and West Lafayette. We're going to see a huge change in where restaurants and the public get their produce from." —AUSTIN KASSO

As a nonprofit, Red Giant Union is more than just a business. The initial facility is intended to seed many others through its proceeds. "We need the public to donate in order for it to work," says Kasso. Startup costs are the reason, but he maintains that the system runs so efficiently, it can pay for itself within a year.

For each 12 Tower Gardens, one hire would be added to the enterprise. Already a half dozen would-be farmers are helping him lay the groundwork.

Kasso says he'd like to have an organic salad bar and juice bar at the greenhouse, but the bulk of the produce would be sold at Lafayette's City Foods Co-op and at farmers markets. Greens will be harvested roots and all, then sold "live," preserving freshness for maximum taste and nutrition.

In setting up the facility itself, Kasso would like to repurpose unused space if possible. "There are a few farmers I've been put in touch with through the co-op in town who have greenhouses they're not using," he says. "We can take what's not being utilized and refurbish it."

The response to his concept, he says, has been "110 percent positive. Everybody I've talked to loves this idea."

That's good, because he's relying on a crowdfunding campaign to kickstart the enterprise. Though his goal is to raise \$10,000 over 60 days to fund the startup, he expects the funding to come in much higher.

"It's such a revolutionary idea," he says, "and once people actually see it and understand it, it's like a no-brainer. It doesn't take much to get 100,000 people to donate at least a dollar."

He plans to start building as soon as the crowdfunding campaign closes in early spring. "We are literally going to change Indiana food production in Lafayette and West Lafayette," he says. "We're going to see a huge change in where restaurants and the public get their produce from."

Orange County, California, resident Nancy Ross, who sponsors Kasso in his business development, says she has no doubt that he has what it takes to see his vision through. "Austin is a very unique individual in that he has no fear," she says. "He's designed a plan, and he really wants to bring the urban farming to the mainstream. ... He's just going for it. The man will definitely be very successful in his endeavor."

Lahav agrees, saying he embodies the mantra of "Say yes; tell the world; figure it out."

"That's really how Austin lives," she says. "He said yes, he's telling the world about it and he'll figure it out."

## MORE INFORMATION:

To see a working Tower Garden, visit City Foods Co-op, 632 Main St., Lafayette.

To contribute to the project, go to redgiantunion.org.



