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Sky Vegetables: Taking Green Roofs to New Heights

By **Joel Makower**
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"Hi, I'm Keith. We take underutilized space in urban areas and grow food there, creating green jobs, providing access to fresh produce, localizing the economy, and creating a better life by building communities through growing vegetables."

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I have to admit, it was one of the cooler, more compelling elevator pitches I've heard, and I've heard a lot. This one came at a cocktail reception several weeks ago, at the Food Marketing Institute's Sustainability Summit, a gathering of major retailers and consumer packaged goods brands, where I was a keynote speaker. As such

conferences are, this one was a magnet for a wide range of consultancies and service providers aiming to connect with Big Food.

Keith Agoada was one of those. He attended in order to talk up his young company, [Sky Vegetables](#). At first blush, he looked like yet-another fresh-faced recent college grad -- which he is -- seeking to break into the "green space," as it is often called. But when he opened his mouth to tell me his story, I realized that this was a kid with a vision.

The vision is both simple and elegant: green rooftops, not just as gardens, but as urban agriculture hubs for herbs and edible greens, utilizing off-the-shelf hydroponics and aquaponics equipment in greenhouses to grow food to sell for profit within the community.

The idea came to Agoada just before his senior year at the University of Wisconsin, Madison, from which he graduated last year. "I saw the community gardens in Chicago and thought that it was fantastic that they were building community by growing food and doing it in the city," he told me recently. "So I went back my senior year at Wisconsin and received three credits for doing a feasibility study to see if rooftops could be commercial farming locations."

He quickly learned that it was possible to grow a myriad of things in the middle of a Wisconsin winter, "when it's below zero and it's covered in snow." That led to a business plan competition, which he won, garnering local press coverage and investor interest.


Amid all this, Agoada remained a reluctant businessman. "It's funny. I studied entrepreneurship in school and I learned that I didn't want to be an entrepreneur. I didn't want the gut-wrenching, the roller coaster -- everything that they told me in business school what would happen if you start a company and try to make it a growth company, and that it's ruthless. I didn't want to take that path. I'd rather go to the farm or do something laid back, but the opportunity was great." He eventually took on investors and business partners, based in the Boston area, a continent away from Agoada's Berkeley, Calif., base. And Sky Vegetables was born.

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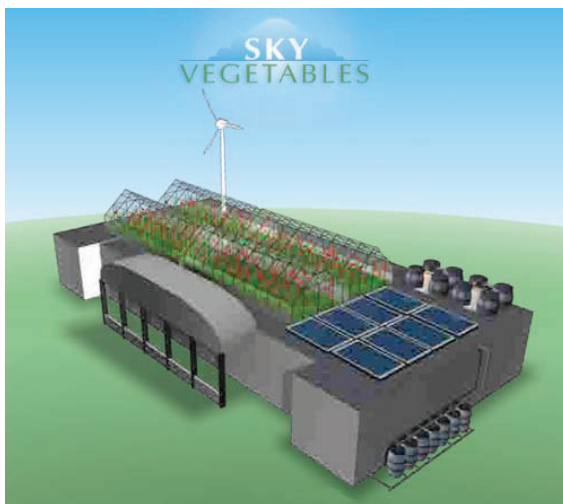
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Agoada walked me through the basics. "We come in on the rooftop as a tenant of the building. We rent the rooftop space. We pay for the upgrade, the insurance costs, the fixed costs for planning and development and the soft costs of architects, etc. We take all of that on. We outsource the equipment. We don't invent technologies. We're taking existing proven technologies and applying them to this rooftop. Then we make our money off the sale of the produce. The technology is controlled-environment greenhouses, year-around systems keeping constant temperatures and controlling the environment there. No pesticides, no herbicides, all integrative pest management systems and composting and trying to use paper and food waste from the building as the nutrient stream for our plants."



A conceptual rendering of a Sky Vegetables greenhouse, taken from SkyVegetables.com.

A typical project covers about 20,000 square feet -- about half an acre -- and fairly efficient, says Agoada. "Our growing techniques use somewhere between 5% and 10% of the water that they're using to grow lettuce out in Salinas Valley," in California's Central Valley, considered the nation's breadbasket. Given that around 80% of water use in the state goes toward agriculture -- and about a fifth of the state's total energy use goes to move and treat water -- such efforts could create significant water-efficiency and greenhouse gas benefits, should the Sky Vegetables model catch on.

That remains to be seen, of course. Agoada has done small-scale projects but is searching for his first major rooftop, most likely in my home town of Oakland, Calif., a city that marries a hunger for attracting green businesses; countless warehouses with large, flat roofs; high unemployment; and vast "food deserts," impoverished areas that lack easy access to grocery stores offering fresh produce. It's a perfect laboratory.

For now, it's merely a terrific vision, one I'm rooting for, but it doesn't necessarily stop with simply selling rosemary or romaine. "One of the projects we're looking at is a mixed-use building with a lot of residents," says Agoada. "Our pitch is to hire some of the people part-time and start to train them. Maybe one day, they become full-time there. Another idea we had was to let the building have open spaces. Maybe the building rents them out and people create their own pesto sauce or their own pressed soap business. We might contract with them. Or we'll grow mint or lavender or basil and turn these added-value products where we're creating more jobs down the line."

I love the vision, but also the unlimited potential. Says Agoada: "If you look at how many rooftop spaces are out there that can handle a 10,000 to 40,000 square-foot farm, you just keep adding zeroes to it. The economic potential of what we're doing is mind-blowing. But from a more general perspective, we'd be a catalyst in trying to localize food systems and localize vegetables, and protein perhaps as well."

Indeed. Sky Vegetables has unlimited potential to fill a hunger -- not just for nutritious edibles, but for a simple but powerful model of food production that feeds all of our appetites for creative and conscious capitalism.

Chicago green rooftop photo CC-licensed by Wikimedia user [TonyTheTiger](#).

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