Vertical Tower Gardens: Lively New Additions to the Dining Atmosphere at the University of Michigan
By Sophia May

Is it a bird? Is it a plane? Two lively new additions to the East Quad and Bursley dining halls at the University of Michigan in Ann Arbor have sparked wonder and curiosity from the students, faculty and staff alike who frequent these facilities daily. Officially known as tower gardens, these vertical fields are just as much educational pieces as they are works of art.

For U-M Junior Carly Rosenberg, what started as a group assignment in her Environmental Studies course turned into a project with a concrete outcome. This past winter semester, Rosenberg connected with Keith Soster and Alex Bryan at Michigan Dining to gauge actual interest for tower gardens in dining halls across campus. “I was eager to extend this project beyond my semester-long class,” Rosenberg expressed.

This past summer, Rosenberg interned for LA Urban Farms, an urban farm in Los Angeles that grows out of tower gardens. Over the course of the summer, she was on a team tasked with tending to tower gardens in the Los Angeles area, located both in commercial and in residential areas. “University of Southern California and University of California - Los Angeles both have several tower gardens on their campuses that supply food to their dining halls. Seeing these gave me a similar vision for U-M.” This experience helped Rosenberg solidify her idea for tower gardens at the University of Michigan, and to her facilitating an interdisciplinary relationship between LA Urban Farms, the U-M Campus Farm, and MDining.

Standing around 4 feet, the gardens at U-M are Pylon growing towers supplied by LA Urban Farms. They are easy to take care of, use no soil, and require 90% less water than traditional gardens. Better yet, harvesting is possible 2-3 weeks after seedlings are transferred to the gardens.

The seedlings planted in the East Quad tower garden are grown in-house under grow lights, whereas the garden in Bursley cultivates plants grown in conjunction with the U-M Campus Farm. “We decided to get involved because it’s a great way to connect people to where their food comes from,” says Connor Kippe, one of the Student Managers at the Campus Farm. “We usually start seedlings of leafy greens to transfer to the garden, because they are easier to manage, and require lower energy and nutrient inputs than fruiting veggies.”

The Campus Farm starts the seeds in their greenhouse, growing them in squares of rockwool. After the seedlings germinate, they are brought from the Farm to Bursley and set directly into the tower garden.

The gardens’ locations were determined based on the unique features of campus dining halls - East Quad’s Sustainable Monday initiative and Bursley’s influence as the main dining facility on U-M’s North Campus allowed opportunity for both an educational supplement as well as cross-campus reach.
The tower gardens engage students and staff alike - dining hall staff members have the opportunity to assist in garden maintenance. Ashlee O’Brien, Assistant Manager at the Bursley dining hall, immediately volunteered to help oversee the garden at Bursley. O’Brien has a background with aeroponic gardening, tending to similar tower gardens at home. “Growing is something I love to do,” O’Brien expressed. “It’s already my hobby at home, so when I’m [tending to the Bursley garden], I’m in my comfort zone. I’m still working, but I’m simultaneously doing something that I’m passionate about.”

East Quad Sous Chef Nick Ringe, eager to get his hands dirty, volunteered to take responsibility for the garden in East Quad. Ringe, who has personal experience in gardening, has managed every step of the process since the arrival of the garden in , growing seedlings in-house, planting them, monitoring plant growth, and eventually harvesting the vegetables just a few weeks later.

The tower gardens serve a purpose beyond adding greenery and aesthetic value to the dining space. While the gardens grow edible food, their main objective is to act as educational pieces, showing students where their produce comes from, even if it isn’t directly featured in the sautéed swiss chard or caesar salad that is portioned out at dining hall stations. While the vegetables harvested from the garden are edible, they are not used in dining hall dishes, Rosenberg explained, “due to food safety concerns. But the dining hall staff who take care of garden are able to take the produce home and cook it themselves.”

“The gardens won’t create enough food for dining halls, but by featuring them, we’re able to engage students in a broader education of where our food is coming from, and bring light to MDining’s ongoing relationship with the U-M Campus Farm,” emphasized Alex Bryan, Director of the University of Michigan Sustainable Food Program. “The tower gardens allow MDining to experiment with a new production method while giving students a space to learn outside the classroom, where they least expect it.”

Keith Soster, Director of Student Engagement at MDining, is passionate about exploring alternative ways to grow produce. “At MDining, we’ve looked into freight farms, hydroponics, and aquaponics. We researched the feasibility of a rooftop garden on campus, but have yet to find a location that meets safety needs.” With the tower gardens, MDining is able to showcase one alternative growing method, aeroponics, to show students an innovative method of food production that challenges traditional growing practices that require inputs of either soil or water.

Even though the gardens are a step in the right direction in considering greener ways to cultivate food, they still can be improved upon. The gardens are sustainable in the sense that we’re keeping food local, producing it in house, and exploring supplemental growing methods. The downfall is that bottled synthetic fertilizers are the currently the most practical way to deliver vital nutrients. I would love to see it become a closed loop system and use fertilizers produced on campus.”

O’Brien voiced a similar concern. “What discourages me is the waste from the garden, because what is grown there is not something we can consume in the dining hall.” O’Brien
envisions multiple tower gardens in every dining hall - one on display, and the rest in the kitchens, where they aren’t public access. “I would love to do especially to supply herbs, because they frequently arrive wilted.” Chefs at Bursley have also conveyed interest in using tower gardens to supply at least some of their vegetables in the future.

While installing the tower gardens in U-M dining halls is a triumph in and of itself, Rosenberg does not want to stop there. “I’m working with Alex [Bryan] to take data from the tower gardens to see if they actually are more efficient and sustainable than growing produce in the ground or in a hoop house during the winter,” Rosenberg related. “I’m specifically analyzing the energy consumption because of the gardens’ grow lights to determine what impact that has. I’m also going to look at how much energy and water is used compared to the amount that is harvested to see if it is both productive and environmentally sound.”

Different classes, student groups, or simply interested individuals can get involved to expand the reach of the gardens on campus, and research ways to make them more sustainable - it’s how this initiative started, after all. The tower gardens are a unifying force in inviting multiple groups - MDining, LA Urban Farms, the U-M Campus Farm, students, and staff - to engage with the relationship between food production and its end consumer, and investigate how to further reinvent that relationship in a way that is both feasible and sustainably sound. And Bryan agrees. “It’s a critical role for MDining to play in shaping the campus of the future.”

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