The urban edge: The role of urban student organic farms in raising awareness of food system inequities

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Abstract

A small handful of agricultural universities are located in large urban centers (populations greater than 500,000) in North America. Urban, university-affiliated teaching farms provide unique opportunities to educate students as well as the broader community about agroecosystems, food production, urban/local/global food systems, and diverse and healthy diets. In particular, such venues provide valuable opportunities for collaboration with urban communities, including low-income, immigrants and refugees, and at-risk youth. This case study will discuss the innovative programming at three urban, university-affiliated farms: the University of Minnesota (UMN), the University of British Columbia (UBC), and the Ohio State University (OSU). We will provide examples upon which others can draw to enhance their own university-community partnerships in urban food systems.

Keywords

teaching farms, sustainable agriculture education, urban farmers, food justice, immigrant farmers, curriculum

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STUDENT FARMS IN HIGHER EDUCATION: ORIGIN, PURPOSE, AND POTENTIAL

Student farms (SFs) have been associated with land-grant colleges and universities and other secondary education institutions for more than a century (Sayre, 2011). Despite this, it has only been in the last approximately 30 years that SFs have sought to primarily serve their institutions' sustainable agriculture and food systems (SAFS) curriculum (Parr and Trexler, 2011). In conjunction with the rise of SAFS curricula in the last 15 years or so, Leis at al. (2011) found that at least 41 new SFs arose between 2000 and 2011, with seven of them starting in or after 2005. This and other SF data suggest that the trajectory and presence of SFs only stands to increase, and that as such, they should be considered a potentially useful component when creating or amending SAFS curricula.

Student farms have generally been created for and by students, and for a diversity of reasons (Parr and Trexler, 2011). For instance, at Michigan State University, a student farm was begun in 2003 in order to teach farming and Community Supported Agriculture (CSA) operation methods through experiential learning (Biernbaum, Thorp, and Ngouajio, 2006). At the University of California at Davis, the Student Experimental Farm was created for students to explore alternative agricultural systems in 1977 (Parr and Van Horn, 2006). This reasoning was supported by research by Parr and Trexler (2011) via a series of focus groups, where students expressed a desire to gain hands-on experience with SAFS through a production lens. One student emphasized the horizontal nature of knowledge creation in this setting, where students and their SF community of practice co-constructed knowledge by doing together, building relationships, and sharing learned information and reflections. Similarly, another student expressed the effectiveness of sharing knowledge from person to person as opposed to being given knowledge from a lecture. Other motivations for starting or being involved with a SF have included a desire for a sense of belonging and to be part of a community, as well as to empower students and encourage self-direction. It is clear that SF creation has invoked an intentionality from students and educators to create a robust system of experiential learning, where a community of learners is grown through improvement-

oriented and purposeful actions that transform conceptual knowledge into new, action-based knowledge (Kolb, 1984).

Existing SAFS curricula are driven by the need to improve food systems and the desire of students, staff, and faculty to create change in the ways that food is produced, distributed, and consumed. In colleges of agriculture, ecological solutions tend to be the primary focus of food systems studies. A stark omission, however, has been the lack of engagement with the broader community by SAFS students through the SFs. As pointed out by Parr and Trexler (2011), traditional SAFS classroom and SF-based education does little to expose students to the agricultural innovations developed by civil society, outside of academia. Moreover, according to the Sustainable Agriculture Education Association's listing of SFs in North America, exactly half of SFs are located in urban areas as defined by the US Census (SAEA, 2016; US Census Bureau, 2010). Thus, there is an excellent potential for SFs to engage with urban communities.

In this paper, we examine three SFs in urban areas across North America, looking specifically at their history, their connections with SAFS curricula, community outreach, and opportunities for student-community engagement to better expose students to food system inequities by interviewing a representative of each SF. We argue that urban-based SFs, in particular, are well-positioned to improve student-community engagement, to amplify student empowerment by working with the community to explore their "values, ideals, and deeper sense of purpose" (Parr & Trexler, 2011), and to better teach students about diversity. We highlight the SFs at the University of Minnesota (Minneapolis-St. Paul, MN), The Ohio State University (Columbus, OH), and the University of British Columbia (Vancouver, BC, Canada). These SFs are located in diverse urban areas with many grower populations who are largely marginalized. Students stand to gain both practical SAFS knowledge, as well as a deeper sense of empathy by engaging with community stakeholders. In doing so, students have an opportunity to learn firsthand about food system inequities and can gain greater motivation to make positive change. The SFs discussed in depth in this paper provide examples of community partnerships that liaise students with their own food and agricultural communities.

DEVELOPMENT AND OPERATION OF THREE NORTH AMERICAN STUDENT FARMS

The Ohio State University: OSU Student Farm

In 2009, an OSU student group, Students for Food Sovereignty, initiated the OSU Student Farm (OSF) near campus on the university's 105-hectare Waterman Agricultural and Natural Resources Laboratory (hereafter Waterman Farm). Alongside the row crops, ornamentals, and research plots dotting this research station, the OSF operated a diverse fruit and vegetable operation that covered nearly 1.4 hectares at its height of production and incorporated high-tunnel production. In creating the farm, the student group, other students, and staff and faculty came together to determine how the farm would be managed, and by whom.

In the same spring the farm was initiated, a new class was offered from the Department of Horticulture and Crop Sciences (now designated HCS 2306). The course, Sustainable Vegetable Production Practicum, was designed around the OSF and students were taught the basics of low-input fruit and vegetable production, as well as farm planning, by instructors and visiting lecturers within the local scientific, farming, and governmental community. Much of the coursework for HCS 2306 was done at or for the farm in the latter

half of the term. The farm was also used for many other courses from across campus to varying extents and was toured by courses from the departments of Geography, Horticulture and Crop Science, Entomology, and Agricultural Engineering.

Community involvement on the farm was strong. The OSF, in part with funding from the PAST Foundation's Growing America Summer Program, partnered with three racially diverse nearby high schools. Student groups worked on the farm to learn about their food's supply chain. Programs during the school year were used as a means to bolster students' science curricula and entrepreneurial training. One high school in particular, Metro Early College High School, had a strong relationship with the OSF and engaged more significantly with the farm in planning and operations. Metro also hosted one of the multiple weekly farmers markets at which OSF produce was sold. The OSF ran a CSA and sold produce to the OSU Dining Services and local food co-ops to engage with buyers at the University and surrounding neighborhoods. OSF also provided outreach to community groups touring the farm, as well as part of training sessions for high school agriculture teachers. As of 2014, the OSF disbanded, mostly due to lack of a consistent student workforce despite the use of paid employees and interns.

Despite this history of engagement, interactions between undergraduate learners and marginalized communities in the area were not extensive, which may have been driven by OSF's location and aims. Columbus is a diverse urban area, with more than one-third of the population consisting of communities of color and is home to more than one-quarter of Ohio's immigrant population, especially Somali refugees. By contrast, the farm was located in a wealthy neighborhood with fewer than 1% black residents and home prices that are three times the Columbus average. The disconnect between the farm and Columbus urban community represents a lost opportunity to pursue community goals while better connecting students to their broader community.

Fortunately, there is interest among administrators, students (including strong student groups), and faculty in reviving the OSF. Recent developments at Waterman Farm may dovetail nicely with goals of a future student farm, including a new multi-species animal facility that could support involvement of small animal production within a student farm. Additionally, there are plans for the construction of greenhouses that grow food for campus dining services year-round; a new Franklin County extension office will be built that could facilitate community engagement; the expansion of the James Cancer Center Garden of Hope and Ross Heart Hospital Garden could enable engagement with those constituencies; and ideas for building a test kitchen could let a future OSF engage in outreach on healthy eating. Importantly, there has also been a growing understanding within the administration that urban food security should receive more emphasis (and space), stimulating engagement with a future OSF. Finally, faculty across the university engage with the diverse, urban community in Columbus. Future OSF programs may try to plug into existing programming in ways we cannot foresee. In these ways, students forming a future OSF may well find multiple ways to expand its engagement with the diverse urban community in Columbus.

University of Minnesota: Cornercopia Student Organic Farm

Students at the University of Minnesota (UMN) in the Twin Cities initiated the organic student farm on campus in 2004, leveraging an annual seminar series to request campus research land to grow vegetables. Quickly following the request, students were granted 0.4 hectares to establish what is now Cornercopia, the student-run farm. The farm is now

approximately two hectares, all of which is in production or serving organic research projects.

Graduate students involved in creating the farm also developed a course that served as an independent study for undergraduates in the Sustainable Agriculture minor. As a main activity of the course, students developed a mission and plan for the farm, implemented in summer 2005. This course (HORT 3131, Student Organic Farm Planning, Growing, and Marketing) has continued to be held for the last 12 years, and has evolved in accordance with current topics, changes in curriculum, and farm and student needs. Students learn about organic certification, marketing considerations, planning necessities, and the practical skills involved in vegetable production, as well as engaging with noteworthy farmers in the region. It is geared toward undergraduate students in UMN's relatively young Food Systems major, most of whom are interested in pursuing careers as farmers or that otherwise involve agricultural communities. Cornercopia is used as the accompanying farm space and model for topics from economics and marketing to hands-on experience with agricultural equipment and tools. Following the course, seven to ten students serve as paid interns or summer researchers with Cornercopia. Current efforts include design of a year-long apprenticeship for students who take the course and wish to experience farm production more in-depth for two additional semesters.

The diversity of Minneapolis-St. Paul urban, peri-urban, and regional farming communities mainly draws from immigrant and refugee populations. Notably, Minneapolis boasts the largest Somali refugee population in the U.S., and has sizable Hmong and Latino populations. These communities of color represent a large proportion of the metro area's produce growers, many of whom work within self-organized cooperatives such as HAFA (the Hmong American Farmers Association) and MFA (the Minnesota Food Association).

Cornercopia has a long-standing relationship with several urban farms and farmers. An example is the relationship that Cornercopia has with Frogtown Farm, a community farm in a predominantly immigrant neighborhood. Many students from the SAFS program at UMN as well as farm staff and interns participate in practical and relational activities with Frogtown Farm. One such instance of this is the farm's weekly organized Knowledge Shares, where interns, growers, neighbors, and researchers discuss their goals and achievements, ultimately trading knowledge with one another. Further, for the last nine years, Cornercopia has partnered with a local high school for at-risk youth, to bring them to the farm weekly to learn more about agriculture and science, and to reflect on possible career and further educational options. More recently, the UMN SF has designed a new ambitious strategic plan that will guide the farm into the next three to five years. Part of this plan is the fortification of a relationship with another NGO situated directly adjacent to Cornercopia, The Good Acre. The Good Acre was built in 2015 and is a food hub providing infrastructure to small-scale immigrant, refugee, and minority growers and combining their products into more marketable CSA shares. It also serves as a community classroom for agricultural teaching workshops and cooking demonstrations, providing an impressive array of opportunities for student engagement, including co-farming plots of land.

Despite Cornercopia's integration into the agricultural community of the Twin Cities metro region, a formalized connection between UMN SAFS undergraduate curriculum and the surrounding farming community hasn't materialized. Students in the new Food Systems major have Cornercopia on campus as a living laboratory, but a more intentional structuring of the farm, to emphasize the power of knowledge and skill sharing with the diverse farming community, may offer a deeper relationship between the University and growers. Moreover,

students may stand to benefit directly from increased interaction with marginalized area growers through increased learning about farming challenges, food accessibility issues, or even policy related to value added production.

University of British Columbia: UBC Farm

In contrast to the relatively young OSU and UMN farms, the student farm at UBC was originally planned in 1910 and has existed in various forms for approximately the last century. The UBC campus and farm reside on the ancestral and unceded land of the Musqueam First Nation, and the farm community has a deeply respectful relationship with a range of indigenous-led programs and initiatives. The farm was moved in the 1960s closer to the UBC South Campus, where it covers 24 hectares today. After some years of disuse, students and community members initiated a re-visioning of the UBC Farm as an organically managed living laboratory for community engagement in 2005. Of this total acreage, about 3 hectares are currently in organically certified cultivation; the remaining acreage is in perennial hedgerows, orchard, pasture, gardens, and forested stands. The governing institution of the UBC Farm is the Centre for Sustainable Food Systems (CSFS), and directors and managers of the farm consist of five staff positions. In the growing season, the number of employees expands to about 30 people – many of whom are students – consisting of full-time, part-time, and internship positions. Many volunteers from the broader urban community, outside of UBC, are also involved in working shifts on the farm, and a sign-up and training are maintained to accommodate this opportunity. The overarching missions of the farm are broad and include research, student engagement, and community outreach goals, and these are often combined. For example, the farmers market meets student curricula objectives for food production and marketing while also serving as a platform for community interaction and engagement. To this end, agricultural production supports broader student and community engagement as well as specific agroecological research objectives.

Many UBC courses and academic programs utilize the farm. Approximately 50 courses per year sign up for farm tours, and farm staff are often invited to guest lecture in courses. Beyond one-time interactions, students are able to be involved with the farm as interns, volunteers, and through work-learn appointments. Through CSFS, seven land-based projects centered on the farm existed in 2016. As a culmination of their work, the farm hosts an annual symposium to highlight student learning. The farm also offers a certificate in Sustainable Agriculture through an eight-month long experiential practicum, which is available both to UBC students and to community members as a stand-alone program.

The indigenous community has a strong presence on the UBC farm. Their initiatives account for approximately 4,500 farm visits and nearly 500 student engagements annually. Four major initiatives highlight the indigenous communities surrounding UBC. The Tu'wusht Garden is a gathering place for aboriginal elders and youth to grow and prepare food and celebrate seasonal shifts together. The Indigenous Health Research & Education Garden (IHREG) aims to use research to bolster food sovereignty of the indigenous community through multiple programs. In addition, two culturally specific gardens exist within the farm to carry forward their agricultural crops and traditions, the Musqueam Garden and the Maya in Exile Garden. To engage the wider community, the farm also hosts a Joy of Feeding fundraising event that features distinct dishes made by cooks from 15 countries.

MOVING FORWARD: BRINGING HEART TO FOOD SYSTEMS CURRICULA

Multiple pedagogical frameworks exist that support the use of SFs to better engage students to create positive change in the relationship between sustainable agriculture, food system inequities, and diversity. Transformative Learning Theory, in particular, emphasizes the need for critical reflection, emotional engagement, and empathetic knowing (Taylor, 2007). Transformative learning was drawn upon by Orr in 1992 to create the Head, Hands, and Heart model (Orr, 1992), which was later furthered by Sipos et al. (2008). Here, the *head* refers to knowledge transfer that occurs most frequently in classrooms, where students gain from conceptual coursework. Developments in the last several decades to focus on sustainable and alternative agriculture approaches meet this goal. *Hands* refer to the learning that occurs through the psychomotor domain, or when students learn by doing. This learning had been greatly bolstered by the increase in SFs, where students can apply the concepts they have learned and complement that knowledge with new practical skills in the field or greenhouse. Finally, *heart* is the development of ethics and values, and can be considered the model's driver in that it motivates students to use their new knowledge and skillset to create change. In the HHH model, empathy can serve as a strong *heart* motivator to promote student learning and collaborative change-making with diverse urban food systems and communities.

In conclusion, we are facing food systems inequities in desperate need of attention. Communities of color often have less access to healthy food than wealthy, predominantly white communities, and growers of diverse backgrounds in urban settings often face challenges, such as gaining land tenure, that neither urban nor rural white farmers tend to face. In addition, students who are not from agricultural backgrounds (like many students now in SAFS programs) have not encountered these challenges firsthand. Linking students with people who are negatively affected by food systems inequities, using SFs as liaisons, may propel students to create lasting and meaningful change toward a more just food system.

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