Proposal for Another, More Accessible, Educational, and Community Student Farm at the University of Kansas

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Executive Summary:

In addition to the other measures taken by the University of Kansas (KU) in furthering sustainability we propose a second student farm. This would supplement the student, faculty, and community services provided by the original site set up two years ago at the KU Medicinal Plant Research Center by being closer to the main campus facilitating participation, and by acting as a prompt encouraging other sustainable behaviors (McKenzie-Mohr 1999). A new student farm would reconnect the student population to their food, be a teaching tool for professors, help students develop lifelong botanical knowledge, possibly provide supplementary food for KU Dining Services to expand their local food selection, and provide an additional food opportunity that students may need. A new student farm would help KU embrace the new local food movement (Merrigan 2008) as well as present KU as a forward thinking Midwestern university in contrast to the stigma of backwardness sometimes assigned by coastal colleges, where farm to college programs have concentrated (Sayre 2011). The maintenance and leadership of the student farm would be handled primarily by the already existing KU Student Farm group that also contains many of the same people involved with KU Environs, another probably heavily interested student group. Community volunteers would be expected to invest as well.

We propose and provid a brief cost-benefit analysis of four potential sites: 21st and Iowa, Bob Billings Parkway and Kasold Drive, Pioneer Cemetery, and a plot of land at Sunflower Road and Sunnyside Avenue. We conclude, and heavily emphasize, that the land at the 21st and Iowa site would be the best location for a new student farm though considering the lower start-up cost, ease of access, and existing infrastructure. The next step after approving that land as a farm site being going through the necessary channels and formal proceedings to set up water access, provide an enclosure for tools so preliminary work can start, and mitigate any problems with the soil. Since the 21st and Iowa site was previously a fraternity house there is the possibility of lead contamination and excess nutrients due to landscaping. The soil will have to be tested using the local Kansas State extension office and our facilities at KU, and then restoration can occur to ensure a long lasting, successful student farm.
**Vision:** To promote leadership, research, education, and sustainability in food production.

**Mission:** A new KU student farm closer to main campus will provide more opportunities for personal development, research, education, and sustainable behavior. Though a KU student farm already exists, its distance away from campus makes it inaccessible to some students, and therefore this new farm is necessary to encourage environmentally conscious actions in students and faculty (McKenzie-Mohr 1999). This new farm will give students and staff an easier opportunity to explore and discover what it takes to get one’s food from seed to their table in accordance with KU’s Sustainability Plan.

**Objectives:**

1) To propose potential sites for a new student farm more accessible to students by being closer to campus.
2) To help reconnect the student population of the University of Kansas to their food consumption (i.e., where it came from, how it's grown and cultivated, etc.)
3) To develop management and operational practices of the proposed Student Farm.
4) Provide a tool for professors and faculty throughout the University to tie in class material in a hands on environment.
5) Promote the growth and usage of home-grown crops and plants.
6) Help students develop lifelong knowledge through the process of growing one's own food.
7) Provide a source of food to be utilized by campus food services.
8) Allow students who wish to garden but do not have the means to do so to have that opportunity in an easy and convenient fashion.

**Background:**

Since the environmental movement of the 1960s-70s KU has embraced various principles of sustainability. From making a cork pathway around Potter’s Lake, to creating the Environmental Studies Program itself, to more recently establishing the Center for Sustainability, KU has proven itself to be a forward thinking place for learning. Two years ago Environmental Studies students took this commitment further by proposing a student farm at KU in partnership with the KU Medicinal Plant Garden. The student farm is a success, providing cropland for students, faculty, and community members that may not otherwise have the chance to grow food. However, its distance from campus is proving to be a challenge. Therefore, our group is proposing a newer student farm with a location closer to campus that is also capable of providing resources for education and sustainability.

The KU student farm is a physical implementation of the goals of the recent buy-local movement of the late 1990’s and early 2000s (Merrigan 2008). The rationale behind the project is that growing one’s own food encourages sustainable practices, teaches about farming and botany, among other things, reduces carbon footprints because people are able to procure food outside of a supermarket, and makes people more food secure as there is now a supplementary nutrition source (Yale 2012). This even got national attention in the 2002 Farm Bill which directed the Secretary of Agriculture to encourage educational institutions to purchase locally...
produced food whenever possible (Merrigan 2008). More than 768 school districts in 34 states now have farm-to-school programs demonstrating their appeal and the imperative that KU continue to embrace student farming which again brings us to the reason for our new proposal (Merrigan 2008).

Since the student farm is a community and educational device to foster sustainable behavior, it serves as a prompt or norm to induce change in students’ actions and thinking (McKenzie-Mohr 1999). Its effectiveness is then also predicated on people’s participation and knowledge of the program. Unfortunately KU did not make its student farm that accessible, being nearly 5 miles away from the main campus, and space is limited for more people to get involved. Thankfully we have surveyed and provided a cost-benefit analysis of four potential sites for an additional student farm closer to the main campus. This new farm would be easier for students and faculty to walk to, encouraging participation from all interest groups and professions, and would demonstrate to visitors and community members that KU breaks the stigma as a Midwestern university falling behind coastal centers where student farming has concentrated (Sayre 2011).

A new student farm also has the possibility of supplementing the local food selection provided by KU Dining Services, cutting costs and creating more student inclusiveness in campus affairs (Sullivan 2011). If the proposed student farm would ever want to consider a partnership with KU Dining Services by producing food served at their service locations, the student farm operation would have to acquire GAP (Good Agricultural Practices) certification. In a meeting with the Director and Assistant Director of Dining Services, Nona Collage and Sheryl Kidwell, respectively, the directors stressed the importance of food safety when sourcing food for KU Dining Services. Additionally, they stated that any potential producers of food would have to possess GAP certification in order to even be considered as a food source, a guarantee that a farm operation utilizes safe agricultural practices that decrease potential health hazards, for example Salmonella outbreaks (FAO 2012).

As KU is first and foremost a learning establishment, the new student farm should also provide opportunities for growth and development. One educational opportunity that we can consider for sites with steeper slopes is the possibility for row cropping. The National Resource Conservation Service has specific slope parameters and single row sizes that they recommend for maximum agricultural viability (NRCS, 2007). According to these recommendations, the large steeply sloped portion of the Triangle site could be devoted to row cropping, while a smaller portion would be constituted of standard, flat plots. Likewise, the 21st and Iowa site has some smaller areas of steep slopes which could have row cropping while the bulk of the site would have plots. The Bob Billings and Kasold location would not be a viable location for a row cropping venture considering the gradual sloping throughout the site.

These techniques can be adjusted for classes in the Geography (GEOG 576 Geography of American Foodways), Ecology and Evolutionary Biology (any of the many botany classes as well as BIOL 415 Field Ecology), and the Environmental Studies department (EVRN 460 Field Ecology and EVRN 420 Permaculture). More importantly though, a new student farm would serve as a space for these departments to engage their students in whatever criteria needed for the class work, and may prove for other unrealized disciplines.

Leadership and Management:

A very important issue that most student farms throughout the United States and even in
our own already established student farm is to create a solid, dependable management system with either KU students or Non Ku students. We want to set up a type of management system that will enable KU University not to end up taking over the burden of managing the Student Farm once student volunteers decrease due to graduation, internships or other activities in life. The Rodale Institute in Kutztown, Pennsylvania has a large problem regarding the turnover rate of students who volunteer at the farm (Rodale Institute 2011). This caused a lot of problems in management as each new turnover period (usually correlating with graduation times) created a huge need for trained students to take their place.

After emailing a student named Sarah from Rodale Institute, we learned that the way the farm was managed after every turnover differed and the volunteers who stayed would have to relearn and adapt to the different kinds of rules and regulations the new management proposed. She stated, “Nothing was ever consistent and that made working there [at the farm] not as enjoyable or efficient” (Gobson 2012). As solution, they devised a new management system is not purely based on volunteers. Instead they have initiated a paid set of preferably non student employees by the university to work on the farm. This new set of core employees takes over the responsibilities of the core students who will end up graduating in one to four years. These groups of full time non Rodale Institute students who work yearly on the farm help solidify a consistent management system (Rodale 2011).

Agricultural Sustainability Institute at UC Davis has also found that paying a set of core employees who are not affected by the turnover rate works very well in sustaining a solid leadership (UC Regents 2012). Therefore we propose that in order to create a consistent core management which will help in efficiency and stability of the farm, the new student farm should have a small core full time non student employee base who oversees and delegates work needed on the farm to the volunteers who will most likely be students of the University of Kansas.

If we are to create a stable foundation of core employees that manage the farm throughout the year we will have to find money in order to pay for these employees. Many student farms, including the ones at UC Davis and Rodale Institute have proposed another working solution to this issue. They sell produce that the volunteers and other people using the farm haven’t used or eaten at the local farmers market (UC Regents 2012). They are able to make enough money to pay a small salary to the few core employees and also purchase tools, seeds, etc. that the farm needs. In the example of Rodale Institute’s student farm they also use tuition money from classes utilizing the farm for education and donations from volunteers and the Institution to pay their employees’ salaries (Rodale 2011).

Proposed Sites:

Triangle: 12% Slope Grade, 4,700 meters squared

This site is located on the triangle-shaped expanse at the intersection of Sunflower Road and Sunnyside Avenue, just to the south-east of the main campus (See Figure 1).

- Water: There are two water hydrants on this site; one on the north-east corner and another at the southern tip.
- Soil: Vinland-Martin complex (7-15 percent slopes) is prevalent throughout. Therefore, this site has somewhat excessive drainage.
• Slope: The slope of the more northern part of the site is likely too steep for farm plots. However, this section of the site could be devoted to row cropping while the southern, flat portion of the area could host the standard plots.
• Parking: Parking space is limited; students would have to possess a yellow or red permit in order to park nearby.
• Sunlight: The area is open and without trees, so sunlight should be a very small concern.
• Vegetation: Lawn which is likely fertilized and sprayed.
• Other Structures: This site is in a fairly visible area of the campus and surrounding neighborhood, so issues may arise concerning campus landscape aesthetics in addition to being an eyesore for those who live in the vicinity.

Figure 1:

21st and Iowa/Steward Drive: 2.1% slope, 2,000 meters squared

This site formerly held various “Greek” structures that belonged to the University of Kansas. This section of land is still owned by KU Endowment and has not been in use since the demolition of the two houses earlier in the decade (See Figure 2).

• Parking: 30-40 readily available paved spaces
• Water: available due to abandoned waterlines
• General Landscape: 2.1% slope in areas, but generally flat
• Vegetation: fertilized, mowed grasses
• Soil: medium-quality fill dirt, it can be re-worked with horse manure/nutrients to revitalize the soil
• Sunlight: taller trees to the north could provide some shade but limited
• Surrounding Structures: Apartment housing on the east side, Iowa Street runs along the west side, and a fire station is on the north side
• Concrete pad already in place (ideal for a shed foundation)
- Accessibility: Slight walk from campus (within two blocks of the Daisy Hill residence halls), located directly on bus route 38 (25th and Melrose route)

Figure 2:

Kasold Dr and Bob Billings Pkwy: 3.6% slope, proposed area about 7,000 meters squared

Another possible site for the new student farm could be the bare land at the intersection of Kasold Dr and Bob Billings Pkwy (See Figure e). The land is relatively flat with rolling hills making the threat of erosion minimal and much easier to break the soil to start gardening. This site also does not conflict with the master building plan for campus (Livingood 2012).

- Parking: There is a neighboring shopping center that could provide temporary parking for visitors and gardeners before a driveway and parking could be built for the site.
- Water: The infrastructure for water and future electricity is possible making this student farm similar to those at other universities (Yale 2012).
- Vegetation: It appears that the vegetation is primarily brome grass, Kentucky blue grass, and other introduced varieties meaning that there is no danger of disturbing a native prairie environment.
- Soil: The primary soils on this site are Oska silty loam (3-6% slopes), Pawnee clay loam (1-3% slopes), and Vinland complex (3-5% slopes). The Oska and Pawnee soils are well to moderately well drained, thus they are viable for agricultural production. These soils are located in the more flat portions of this site, so the precise location of the plots themselves should be located atop the Oska and Pawnee areas, shown in Figure 3 (to be inserted). Being almost excessively drained and slightly eroded, the Vinland complex is
less desirable for our student farm; therefore it is recommended that plot areas not be situated on this soil. However, these sloped areas would be possible candidates for row cropping plots.

- Sunlight: There is plenty of uninterrupted sun exposure throughout the day because of no surrounding trees or structures.
- Surrounding Structures: This site used to be farm land, and therefore there are no surrounding structures to impede farming and any trees have already been cleared.

Figure 3:

![Image of Pioneer Cemetery, 3.2 acres](image)

**Pioneer Cemetery, 3.2 acres**

This site is located on the northwest corner of 19th and Iowa Street. The land is moderately sloped from north to south and contains few ecological obstacles, appropriate soils, and adequate sun exposure (See Figure 4). The KU Endowment Association owns the property and it is currently mowed and maintained. Significant historical features of this proposed property include Pioneer Cemetery, located directly north of the proposed land

- Parking: Parking is available in the lots provided for the Endowment Association and Nichols Hall. Additional parking is available in the Lied Center parking lot.
- Water: No spigot or tap currently exists on the premises; however, active city water lines are present.
- General Landscape: A stand of trees directly south of Pioneer Cemetery provides a shade resting area. Slightly sloping from north to south.
- Vegetation: The parcel has no formal landscaping. The grass is mowed and maintained.
- Soil: Of the approximately 3.2 acres, 52% of the soils are Sogn-Vinland complex with 3-25% slopes, 47% of soils are Vinland complex with 3-7% slopes, and .5% are soils of Vinland-Martin complex with 7-15% slopes. Soil is tillable and useful for farming and horticultural practices.
- Sunlight: The site provides full sun, with a stand of mature trees directly south of Pioneer Cemetery, providing necessary shade.
Surrounding Structures: The surrounding structures of historical significance include Pioneer Cemetery, directly north of the proposed location. KU's Endowment Association Building is directly west of the proposed lot and Nichols Hall is located to the North-West.

Figure 4:

Logistics, Labor, and Pricing:

The projected initial costs for student farms at the Bob Billings and Kasold, Triangle, Rain Garden, and Pioneer Cemetery sites are presented in Table 1 and the Stewart Drive site’s projected costs are provided in Table 2 (Hollyer 2000; Low Maintenance Landscape Inc 2012; Krogh 2012). The costs include the vision of a cooking/educational building to fully integrate the student farm into class curriculum and eventually lead the student farm to GAP certification in order to partner with KU Dining services (FAO 2012). The envisioned facilities will be also similar to those available at University of California Davis and other universities, but currently nonexistent in the Midwest (Sayre 2011). Though the upfront cost is substantial the benefits for KU and the example it would then serve for the rest of the region are indispensable.
### Table 1:

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<th>Cost</th>
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<td>Irrigation</td>
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<tr>
<td>Greenhouse</td>
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<tr>
<td>Hoophouses (2)</td>
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</tr>
<tr>
<td>Teaching/Preparation Platform</td>
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</tr>
<tr>
<td>Cooking/Educational Building</td>
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<td>Water Installation</td>
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<td>Plumbing and City Water Use</td>
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<td>Compost Bin</td>
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<tr>
<td>Tools</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

Bob Billings and Kasold, Triangle, and Pioneer Cemetery Student Farm Projected Cost

### Table 2:

<table>
<thead>
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<tbody>
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Stewart Drive Student Farm Projected Cost
Affiliated Sites on the KU Campus:

KU Student Farm     http://kustudentfarm.wordpress.com/
KU Environ          http://groups.ku.edu/~environs/
KU Center for Sustainability   http://www.sustainability.ku.edu/
KU Environmental Studies Program   http://esp.ku.edu/
KU Geography Program           http://www.geog.ku.edu/
KU Ecology and Evolutionary Biology Program http://www2.ku.edu/~eeb/
KU Landscaping

Conclusion:

It is our recommendation that this KU Endowment Committee consider 1) the importance and benefits of a new student farm near campus and 2) that the Stewart Drive site would be the best one to create such a project. It is close enough to campus to serve as a prompt (McKenzie-Mohr 1999), but not so visible that it might possibly offend people not accustomed to the site of a farm out of season. It would have the possibility of partnering with KU Dining Services, aligning in spirit and message with the Ku Sustainability Plan, but could immediately serve as an outdoor classroom resource. The current KU Student Farm and KU Environ student groups will also maintain the upkeep of the garden and plot allotment procedures in accordance with the KU Student Farm’s formal guidelines. This will ensure that plots are maintained and that no work should have to be taken by KU Landscaping or other officials.

The University of Kansas has seen fit to refer to itself as the “Harvard of the West” because of its academic prowess and ideals, but unless KU is willing to build on models set by Harvard, Yale, and University of California Davis, for example, regarding student farming then it fails to live up to its title (Wiederkehr 2009, Sayre 2011, and Yale 2012). KU has already made progress by creating one student farm, but unless another, more accessible and visible, one is constructed then the effort may have been made in vain.
References:


Gobson, Sarah, Personal Interview, 23 March 2012.


Krogh, Emily, Administrative Support Lawrence Utilities Department, email message to Caleb Hall, March 13, 2012.

Livingood, Peg, Project Manager Office of Design & Construction Management, email message to Caleb Hall, February 27, 2012.


“Rodale Institute Organic Pioneers,” last modified 2011 http://rodaleinstitute.org/new_farm


Sullivan, Dan, “From Dining Hall to Farm Power,” Biocycle, January 2011.

