PROPOSAL

A Student Farm at the University of Illinois

by

The Department of Natural Resources and Environmental Sciences

and

The Horticulture Club and Students for Environmental Concerns

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I. Detailed Project Description

Project goals – To start a student-operated farm that produces significant quantities of fruits and vegetables for use in the University food service operations. Successfully developing and operating this farm will yield the following benefits.

1) Contribute to campus sustainability by reducing carbon emissions associated with the transport of fresh produce from farms thousands of miles from campus.

2) Provide training for students who wish to develop their own fruit and vegetable farming operations.

3) Provide abundant, delicious, and locally grown produce for the Campus.

Definition of sustainability

A sustainable practice is one in which natural resources are consumed at the same rate as they are naturally produced. Producing a portion of the food consumed on campus will help improve the carbon balance on campus by reducing the shipment of produce from locations thousands of miles away.

For the last 60 years, farms have become more and more industralized with the efficiency driven by cheap fossil fuels. Farms have become concentrated in areas where production costs are lowest and food is then transported great distances to the consumer. In the United States, much of our produce is grown in three main states – California, Texas, and Florida. To date, consumers have forgone taste for cheap and readily available produce. Fruit and vegetable production in far away places leads to poor tasting fruit and vegetables for consumers because fruits must be harvested before they have fully ripened or they will not be able to withstand the rigors of a 2000 mile journey. Locally produced food should have superior taste and quality since harvest can be done at optimal times.

And we don't just ship food from California, it is common to buy apples from New Zealand or grapes from Chile. The cost of transporting fresh produce such enormous distances can be measured in dollars or in carbon. The more locally sourced food, the more sustainable our campus becomes.

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Longevity and permanence of project

Once initiated, a farm can last indefinitely and can expand and grow by the energy and vision of the student workers. With good leadership and student involvement, the farm could become quite large producing fruits, vegetables, and herbs that could be stored, canned, or frozen for later use on our campus, and potentially other nearby educational institutions like Illinois State University and Eastern Illinois University.

Similar Projects at other campuses

A number of Universities have student farms that are already up and running. Some are land grant universities like the U of I that have horticultural production expertise on the faculty. Examples can be found at Oregon State University, Michigan State University, and University of Minnesota. But interestingly, many private Universities also have student farms. For example, Brown, Yale, and Stanford have student farms.

Our proposal, which is a partnership between our horticulture program and campus students, has the potential to create a farm that is not just a small experiment, but one that contributes substantially to the food needs of this University.

Proposed Farm Operation

We propose to form a cooperative venture between the students from the Horticulture Club and Students for Environmental Concerns and the Horticulture (HORT) program that is currently housed within the Department of Natural Resources and Environmental Sciences to produce fresh fruits and vegetables for the campus food service operations. The HORT program will allocate up to 10 acres of land at our new farm at the SW corner of Lincoln and Windsor for local food production. During the first year, tomatoes, green peppers, sweet corn, apple, and peach trees will be planted. The peach and apple trees will not begin producing fruit until the

fall of 2010 at the earliest. HORT will provide care and advice on maintenance of these crops during each growing season, the student clubs will provide 1-3 interns to work during the summer and fall on the maintenance of the orchards and vegetable crops. All crops will be selected and planted so that harvest will coincide with the needs of the campus food service operation. The HORT program and the student clubs will harvest the produce and deliver it to the food service operation. The Student Clubs will provide labor for harvesting and other hand labor, and HORT will be responsible for planting, maintenance, and general care.

Our vision is to develop two farms – a sustainable farm that uses some commercial production techniques and a separate organic farm. The Horticulture program has access to excellent land on the new Pomology farm at the SE corner of Lincoln and Windsor. A small certified organic site is located at South First street and Windsor.

The University of Illinois Dining services will pay the prevailing market rates for this produce, and we intend to use the funds to hire interns and an HORT employee to oversee the entire process. We anticipate that by 2011 the business will self-sustaining, producing high quality produce for campus, training opportunities for students, and knowledge that we can share with others within Illinois and surrounding states.

Partnership with Student Clubs

A key to making this farm successful is the partnership with Student Clubs. The Student Clubs will be a joint partner in the project. Land for the farm will be rented from the Horticulture program at a rate of $500 per acre. The Student farm will pay the costs of fertilizer, any pest control applications, seed, other materials, the farm coordinator, and one to three student interns. At the end of each calendar year, the net profits resulting from the farm, that is gross sales minus the above costs, will be split 50/50 between the Student Clubs and the Horticulture program. The Student Clubs can use these funds as the Board determines, but we anticipate that most of these funds will be returned to student volunteers in the form of scholarships. The Horticulture portion of the proceeds will go fund either expansion of the farm or general farm operations. This cost/labor sharing arrangement will be examined at the end of each year by the governing board and adjustments made at that time.

Board of Governance

A governing Board will consist of two UIUC faculty advisors, two student representatives from each student club, i.e. two Horticulture club members and two Students for Environmental Concerns members, and a representative of the U of I dining service. The Board will provide oversight and management of the farm coordinator, set policy for farm operations, develop grants for new programs and opportunities, and resolve issues and conflicts as they arise. The Board will be responsible for developing a business plan that will serve as the basis for operating the Farm and adjust that business plan as needed to create a sustainable Student farming operation. The board will report to the Dean of the College of Agriculture, Consumer, and Environmental Sciences, or his/her designee, and will submit a report of the operations of the farm each year by December 1.

OUTCOMES

Fresh, Flavorful, and Abundant Local Produce

Locally produced food should be of higher quality, fresher, and tastier than produce that must be shipped several thousand miles. We will produce fresh vegetables, fruits, salad greens, and other produce as needed. The fruits and vegetables we produce can be consumed within hours of harvest.

A More Sustainable Campus Community

Producing foods locally will yield decreases in the carbon footprint of Campus and contribute to Campus sustainability goals. The student farm can serve as a model for other Universities and large institutions.

Small-scale Farming Systems Entrepreneurship Program

The farm will serve as a "living laboratory" that will allow students to understand the economics, production issues, and challenges of running a small farm. The farm will serve as an incubator with our student interns learning the challenges and opportunities that face small farmers in the future. The interns can receive course credit and training during the summer including visits from local area farmers, trips to other commercial specialty crop operations, and considerable "sweat equity".

Local Food Production Extension and Outreach

As an educational institution, we have an obligation to do more than just produce fruits and vegetables. Our local farm coordinator will have UI extension responsibility to produce publications and disseminate information on the challenges and opportunities for local food production in Illinois. This position will not only focus on day-to-day operation of small farms, but will be responsible to develop and disseminate information that will allow other Universities, hospitals, and large organization to understand how to economically produce their own food.

Local Food Research Programs

Running two small farms side-by-side gives us some unique opportunities to compare organic production practices to more traditional, but sustainable approaches to production. We also intend to conduct research on high tunnel production practices. Thus, the proposal facility will further the three missions of our University – teaching, research, and outreach.

II. Budget & Fundraising

We believe this farm can be self-sustaining. We are requesting funds to get this farm started and functioning, and we then believe that we can be a sustainable, profitable venture. Below is the budget needed for calendar years 2009 and 2010. We request full funding for the first year, one half of our estimated budget for the second year, and we expect to be self-sustaining by year 3 (2011).

Calendar year 2009 (Year One)

Material

300 apple and peach trees at $11/tree	3300
Tomato, pepper, and sweet corn seed.....	250
Fertilizer and plant care products	5000
Stakes, trellises, and miscellaneous equipment	5000
Equipment to construct 5000 ft2 of high tunnel production.....	10000

Personnel

Local farm coordinator $42000/year plus benefits @ 29.3 %	54306
Two horticulture summer intern $9/hour * 40 hour/wk * 12 wk	8640
Student club harvest crew	-0-
Total year 2009	**$86,496**
Portion requested from Student Sustainability group	**$50,000**

Calendar year 2010 (Year Two)

Material

300 trees at $11/tree	3300
Fertilizer and plant care products	2500
Equipment to construct 5000 ft2 of high tunnel production.....	10000

Labor

0.40 time Local farm coordinator $43680/year plus benefits	22600
One horticulture summer intern $9.50/hour * 40 hour/wk* 12 wk	4560
Student club harvest crew	-0-
Total year 2010	$**42.960**
Portion requested from Student Sustainability group	**$25,000**

Calendar Year 2011 (Year Three)

No budget request; we will be self-sustaining at this point.

This project will need funding to move forward. We are requesting funding from other campus sources and from individuals not associated with the University. The College of ACES has indicated a willingness to provide partial support for this proposal. Therefore, we are requesting $**50,000** in 2009 and **25,000** in 2010 for the Campus Sustainability Committee. We pledge to raise the remainder of the funds needed for this project from other sources.

III. Timeline

Beginning January 2, 2009, we will initiate a local search for a farm coordinator and request applications for the student intern positions. By February 15, 2009 we anticipate that the farm coordinator position will be filled and the incumbent candidate can begin ordering seed, trees, and materials for construction of several high tunnels used to extend the growing season.

Planting will begin in the spring at the Horticulture farm at the corner of Lincoln and Windsor. Plants will be established based upon sound horticultural practice. Peach and apple trees will be established at this time as well as vegetables and other fruit crops. Planting decisions will be made after consultation with University Dining Services. Dining services has indicated that they have demand for fresh produce throughout the summer with a big increase when students return to campus in late August. Our goal for the first year is to produce significant quantities of vegetables while learning the challenges that face a small farming operation.

IV. Energy, Environmental, Social, and Economic Impact

Environmental Impact

The push for local food production is gaining momentum across the country. As our country moves towards a more sustainable model, the realization that our current food system is not sustainable has begun to register with many citizens. It is estimated that the average item in a grocery store produce section has traveled 1500 miles. The term "food miles" has been used to describe the distance from farm gate to your plate. However, there is considerable controversy over the idea that transporting food long distances creates more greenhouse gases. For example, British scientist, Jones, 2002, reported that transporting apples from New Zealand to Britain resulted in more greenhouse gas production than producing apples in Britain. Conversely, New Zealand-based scientists, Saunders et al. (2006), came to the opposite conclusion. Clearly, if production systems are similar, locally produced food should produce less greenhouse gas emissions over the life cycle of the food. Other comparisons have shown that in some cases shipping food longer distances can result in less greenhouse gas emissions. For example, tomatoes grown in a temperate climate during the winter are typically grown in a greenhouse and the cost of heating a greenhouse can eliminate the carbon savings of local food production.

Our farm will be sustainable and use sustainable production practices. We will explore the use of high tunnels – essentially small structures covered in plastic that use the solar heating to extend the growing season beyond what is normal for central Illinois. This will extend food production well into the fall and in late winter, which better matches student demand.

The use of synthetic fertilizers and pest control agents are typically energy intensive processes. We will explore the use of natural products including manures, composts, etc. as

natural fertilizer sources to minimize the use of synthetic fertilizers. We will use integrated pest management techniques to minimize pest control applications.

Social and Economic Impact

We envision a farm that is more than just a novelty, it can and should contribute meaningfully to the campus food needs. A vibrant student farm will be a place where students can work and socialize while learning about basics of food production. This campus has a food-processing laboratory and we hope that as the farm grows and matures, we can begin canning food items like tomatoes and peaches for use throughout the year. We would like to see that all incoming freshman are asked to pledge to work 4 hours during their freshman year on campus to assist on campus sustainability projects, of which the farm would be one. Students could come in the fall and help harvest apples, peaches, tomatoes, etc. and increase the sense of community on this campus.

The economic impact would be substantial for the community. Funds that normally leave campus would stay within the community. Proceeds from the sales would be used to first cover all the costs of production, labor, etc. and any profits would be split evenly between the Horticulture program and the student clubs. Improvements at the farm will be financed with the profits of the venture. For instance, as apple production ramps up, we may want to invest in storage facilities for apples.

V. Outreach and Education

The farm will serve as a "living laboratory" that will allow students to understand the economics, production issues, and challenges of running a small farm. The farm will serve as an incubator with our student interns learning the challenges and opportunities that face small farmers in the future. The interns will receive course credit and training during the summer including visits from local area farmers, trips to other commercial specialty crop operations, and considerable "sweat equity".

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Literature Cited

Jones, A. 2002. An environmental assessment of food supply chains: a case study on dessert apples. Environmental Management, 30:560-576.

Saunders, C., Barber, A., and Taylor, G.(2006. Food miles - comparative energy/emissions performance of New Zealand's agriculture industry. AERU Research Report No. 285. Lincoln,New Zealand: Lincoln University.