*Please submit this completed application, the supplemental budget spreadsheet, and any relevant supporting documentation by the deadline indicated in your Step 1 notification letter to* *Sustainability-Committee@Illinois.edu**.The Working Group Chairs will be in contact with you regarding any questions about the application. If you have any questions about the application process, please contact the SSC Program Advisor, Micah Kenfield, at* *kenfield@illinois.edu*

# General Information

**Project Name:** Sustainable Agricultural Food System – Flour Milling

**Total Amount Requested from SSC:** $248,832

**Project Topic Area(s):** [ ] Energy [ ] Education [x] Food & Waste

 [ ] Land [ ] Water [ ] Transportation

# Contact Information

### Project Lead

Applicant Name: Brian Jacobson

Unit/Department: Food Science & Human Nutrition (FSHN)

Email Address: bjacobs3@illinois.edu

Phone Number: (217) 300-5404

### Financial Contact *(Must be Full-time University of Illinois Staff Member)*

Contact Name: Janice Trudell

Unit/Department: Food Science & Human Nutrition (FSHN)

Email Address: jmhall@illinois.edu

Phone Number: (217) 265-0378

Organization Code: 698010

### Facilities Management Contact *(If Applicable)*

Contact Name: Brian Jacobson

Email Address: bjacobs3@illinois.edu

**Primary Project Team**

|  |  |  |
| --- | --- | --- |
| **Name** | **Department** | **Email** |
| Youngsoo Lee/Nicki Engeseth | Food Science | Email Address |
| Allison Krill/Bruce Branham | Crop Science | Email Address |
| Dawn Aubrey/Carrie Anderson | UIUC Dining | Email Address |
| Bill Davison  | UIUC Extension | Email Address |

# Project Description

**Please provide a brief background of the project, the goals, and the desired outcomes:**

This exciting project proposes to process wheat and oats grown on several of the UIUC campus farms into a finished flour product that will be utilized in the UIUC Campus Dining Halls. There are currently ~20 acres of ground planted in wheat/oats on the Urbana campus as part of large breeding program, and many more acres available off of the direct Urbana campus. Additionally, the University has significant acreage on campus that could be converted if we grew beyond current capacity. None of this current capacity is utilized on campus for food products.

Each acre of wheat produces 40-80 bushels of grain (2400-4800 lbs) depending on variety, producing up to ~4000 typical loaves of bread. The varieties of flour can be used to produce a number of products (bread, pastries, cakes, pasta, biscuits, etc.). One of the more exciting possibilities is making pizza dough to combine with the pizza sauce project already running, bringing us very near an entirely locally produced pizza product on the UIUC campus.

The funding request to the SSC is for the equipment necessary to process the grain safely into flour, with continued funding for the project coming from redirected dollars that UIUC Dining is now using to pay outside vendors for flour. The tomato sauce project works very successfully under the same model, including a paid student intern and assistants who run the project.

Our overall goal is to provide a locally-sourced, safe, and nutritious product for UIUC Dining to serve to the campus population, while providing an educational experience to the student body. For those heavily interested, there will be opportunities to actually work within the project producing flour; and for the rest of the campus (and off-campus) community, presentations, videos, articles, and tours will be made available. Possibly most importantly, this project will reach every student who eats a flour-based product in the Dining Halls.

As an additional benefit to this project, our experiences will be invaluable to a budding group of local grain growers in the Central Illinois (and farther) area. This group is working with Extension Educator Bill Davison to prove the viability of locally grown specialty wheat/oats to our market. We will be working with the breeding program, experts at cataloguing the data relevant to which varieties may grow the best in our climate, and which produce the best quality flour. The FSHN Pilot Plant’s experience in milling, and example products created by UIUC Dining will also prove the quality of the flour, and serve as proof of concept for the market.

**How will the project improve the sustainability of the Illinois campus and how will the project go above and beyond campus standards?**

This project will increase the percentage of local, healthy foods that will be served to students on campus, while providing an educational experience to those involved in processing or eating the product. iCAP has established a goal that 30% of all food served on campus be locally (within 100 miles) grown and/or processed. This project will be both locally grown and processed, all within a 5 mile radius of the Dining Hall where it will be served. To my knowledge, no other peer institution has a program like this.

**Where will the project be located? Will special permissions be required to enact the project on this site? If so, please explain and submit any relevant letters of support with the application.**

The equipment for the project will be located and utilized in the FSHN Pilot Plant in the Agricultural Engineering Sciences Building. This space is managed by Brian Jacobson, so no special permission is required. Many pieces of beneficial equipment, and a support infrastructure already in place will be beneficial to the success of this project.

This lab currently houses the tomato processing project, and is undergoing a $3M renovation. This renovation is separate of this project, and will be completed well in advance of this project requiring the space.

**Other than the project team, who will have a stake in the project? Please list other individuals, groups, or departments affiliated directly or indirectly by the project. This includes any entity providing funding (immediate, future, ongoing, matching, in-kind, etc.) and any entities that will be benefitting from this project. Please attach letters of commitment or support at the end of the application.**

The 3 stakeholders in this project are the Department of FSHN, Department of Crop Sciences, and UIUC Dining Services. Each entity has an active member(s) on the team, and has worked together on many other projects, including one funded by the SSC (tomato processing).

**Please indicate how this project will involve or impact students. What role will students play in the project?**

Student interns will be responsible for the actual operation of the project, from planting, through harvesting and processing to flour. Student employees in Dining will even have the opportunity to create dishes for their peers using our flour, while working side by side with trained chefs.

The completed product will be consumed by any student who eats in the campus Dining Halls. This extremely local source of food will be well-documented and advertised with the finished product. Additionally, any student who has a class in the FSHN Pilot Plant, or tours it through events like EOH/ExplorACES will have the opportunity to learn the hands-on process of producing flour from a local source.

# Financial Information

*In addition to the below questions, please submit the supplemental budget spreadsheet available on the Student Sustainability Committee website. Submission of both documents by the submission deadline is required for consideration of your project.*

**Have you applied for funding from SSC before? If so, for what project?**

Yes, the “Sustainable Agricultural Food System – Tomato Processing” project. This project has been very successful, and is ongoing. Last year, we provided ~33% of pizza sauce served in the Dining Halls, with a goal of reaching 100% in 2017, along with expanding to other tomato based products. The equipment also allowed us to participate in several successful Guinness World Record attempts, and many other test trials involving other Sustainable Student Farm produce.

**If this project is implemented, will there be any ongoing funding required? What is the strategy for supporting the project in order to cover replacement, operation, or renewal costs?

Please note that SSC provides funding on a case by case basis annually and should not be considered as an ongoing source of funding.**

All ongoing funding will be provided by UIUC Dining Services and FSHN. Dining pays a fee for the processing time on the equipment, and this money is used to pay for student internships and equipment maintenance.

**Please include any other sources of funding that have been obtained or applied for. Please attach any relevant letters of support as needed in a separate document.**

N/A

# Environmental, Economic, and Awareness Impacts

*In addition to the below questions, please indicate specific measurable impacts as applicable on the supplemental budget spreadsheet.*

**Which aspects of sustainability does your project address, and how? Does the project fit within any of the iCAP goals? If so, how does the project go beyond the university status quo standards and policies.**

The project most specifically addresses the procurement and waste section of the iCAP goals, directly assisting campus in its goal of procuring >30% of its food served on campus from local sources. This has indirect effects of reducing carbon emissions from trucking goods to campus, and also educating students who are eating this product at point of consumption through Dining local food labeling, and events/tours held in the FSHN Pilot Plant. As I mentioned above, I am not aware of any other peer institution who has a program such as this in place.

**How will the environmental impacts of your project be measured in the near and long term? What specific monitoring and evaluation processes will you be using to track outcomes and progress?**

We will track the amount of flour purchased by Dining Services, and can then calculate a percentage purchased locally versus their traditional vendors. Additional products will be added to the mix, and tracked as well.

**What is the plan for publicizing the project on campus? In addition to SSC, where will information about this project be reported?**

This project will be publicized in three main ways.

The greatest impact will be had by the marketing program Dining Services will put in place at point of consumption. Locally grown and processed food is specifically called out in all Dining Halls where it is served, and every student who passes through will be exposed. As we continue to grow the number of products processed on campus, we hope to expand this “at consumption” marketing, as well as publicize the program outside of campus, and at peer institutions.

The second method of publication will be through marketing materials and outreach provided through existing campus channels. Organizations such as iSEE, Extension, and the Crop Science and FSHN departments publish stories, host events, and create marketing materials both on and off campus. These collaborations have been very successful in publicizing the existing Tomato Sauce project, and we expect the addition of another project will simply add to the critical mass. Some examples include prime positioning in the College of ACES Alumni Magazine, Department of FSHN Annual Publication, and an iSEE Youtube video.

The final method will touch the smallest group of people, but will hopefully leave the most profound impact. As the project is student run (with staff guidance), the ongoing internships provided to these students will provide an immersive experience not likely to found elsewhere. From planting and harvesting to safely processing and baking, the students will see the entire method of creating locally processed grain. Our hope is they will take that experience and use it to make sustainable choices within their future careers.

**What are your specific, measurable outreach goals? How will these be measured?**

We do not have any specific plans in place to survey students on their awareness or knowledge of the project, but do expect to ensure proper marketing is displayed at point of consumption at Dining Services, and that several wide-market publications are produced. Additionally, we will be able to gauge some measure of success by tracking the students who had internships with this project, and where their future employment leads them. Our hope is down a sustainable path.

**Do you have any additional comments or relevant information to aid in evaluation of this application?**

This project is meant to be run in a very similar model to the existing and ongoing Tomato Sauce project funded by the SSC over the past years. This project is running in full swing now that all of the equipment has arrived, and plans are in place to produce 100% of Dining Service’s pizza sauce needs by 2017, with expansion then into different products. 3 student interns have run the project each Summer, and have had very positive reactions from the experience. The project has been featured in many articles, publications, and even an iSEE Youtube video.

Ongoing funding for the tomato sauce project (and this grain milling project) is provided by Dining Services through the funding they use to purchase product from their traditional vendors. This allows for an ongoing project without additional funding from the SSC.

If desired, I can provide some photos and descriptions of the equipment to be purchased to the Working Group through an informal presentation.