



STUDENT SUSTAINABILITY COMMITTEE

Funding Award and Acceptance Letter

February 27, 2014

Project Leaders: Bruce Branham

Project Team: Matt Turino, Zack Grant

Project: Biomass Heating for Vermicomposting Transplant Greenhouse at the Student Farm

Re: Sustainable Campus Environment Fee – Award Recommendation

Dear Mr. Branham:

On behalf of the University of Illinois at Urbana-Champaign Student Sustainability Committee (SSC), I would like to thank you for considering the funds raised by the Sustainable Campus Environment Fee to implement a project that improves the sustainability of our campus. SSC is pleased to inform you that we are recommending to the Institute for Sustainability, Energy, and Environment (ISEE) that the Biomass Heating for Vermicomposting Transplant Greenhouse at the Student Farm project receives **\$8,570.00 in grant funding**.

In order to remain eligible for this award, you must agree to the following conditions:

1. A final report of all work completed should be provided to the SSC Program Advisor by January 31, 2017.
2. Project status updates and detailed account statements must be provided at the end of each semester until the project is completed.
3. Any substantial modifications to project scope, budget, or timeline must first be approved by SSC. These requests must be submitted in a formal letter to the Chair and Program Advisor.
4. All projects will be expected to follow campus policies and procedures as well as any applicable State and Federal laws.
5. SSC reserves the right to revoke funding if the project does not comply with the terms and conditions outlined in this letter.
6. Any press releases or educational/promotional materials involving the project should acknowledge SSC funding. Projects must communicate with the SSC's External Vice Chair to come up with appropriate marketing for the project.
7. Projects must participate in the Campus Sustainability Symposium at least once before June 30, 2018.

If you agree to the terms and conditions for the funding, please sign on the designated line at the bottom of this letter. If you have any questions regarding these requirements please contact the Chair, Amy Liu, at amy.linqin.liu@gmail.com or the SSC Program Advisor, Micah Kenfield, at kenfield@illinois.edu. You will be notified when the Institute for Sustainability, Energy, and Environment officially approves this project. Again, thank you for your interest in improving the sustainability of the University of Illinois at Urbana-Champaign. We look forward to working with you in the future.



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Project Information

Project: Biomass Heating for Vermicomposting Transplant Greenhouse at the Student Farm

Funding Source: Sustainable Campus Environment Fee

Funding Amount: \$8,570

Award Code: 1-303692-802050-XXXXXX

Receiving Campus Unit: Crop Science

Unit Financial Contact: Anna Tammen, Crop Science

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Primary Contact: Bruce Branham

E-mail: bbranham@illinois.edu **Phone:** 217-333-7848

Secondary Contact: Matt Turino, Crop Science

E-mail: mturino@gmail.com

Project Description:

The SSC awarded the Sustainable Student Farm a grant in 2013 to build a transplant greenhouse that also housed a vermicomposting pilot project with Dining Services. This was meant to test the feasibility of collecting pre-consumer food waste from the Dining hall facilities and converting it into worm compost for use on the student farm. In its first year of operation the greenhouse has been heated solely from propane, which is the most common and simplest heating system for these types of greenhouses. The nature of the worms used in this type of composting require an ideal temperature range of 40-80F. In order to attain this, the greenhouse needs to be heated during the winter months.

In 2014 the greenhouse consumed approximately 1600 gallons of propane for heating. At an average price of \$2 this equals \$3200/year in heating costs. By comparison if the biomass furnace is used and can replace 80% of the heating requirements that would only cost \$1664/year in heating costs. The main replacement fuel would be #2 Shell Corn @ 15% moisture. This is readily available in the midwest and costs on average about \$3.5/bushel. It would take about 366 bushels of corn to replace the BTU's provided by the propane. The nature of managing the biomass furnace would allow us to replace only 80% of the heating requirements for the greenhouse. Future development of these furnaces could one day replace the requirement completely. However, the propane system will be kept as a back up.