Green Fund Project
Final Report
This report may be published on the SIU sustainability website.

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Faculty Advisor (if applicable): NA
Project Title: Vermicompost Re-Vitalization Project
Project ID #: 16SP102
Award Date: Spring 2016
Completion Date: Fall 2019
Total Funds Used: $11,412.00

1. Provide a summary of your project/project experience.

The purpose of this project was to revitalize the Vermicompost center, as worm beds had become worn down and dilapidated over the years of its operation. It required significant repairs to beds before it could be operational again. This project allowed us to build new beds, and to collect some data on fresh vermicompost made from different waste products.

2. Provide a summary of your results (environmental, social, and/or economic) including quantifiable data as appropriate (ex. # of individuals reached, lbs. diverted from landfill, energy saved, etc.).

First there were several undergraduate students that benefited from working on this project, as there was 8 undergraduate students that worked directly on completing project objectives. Meredith Stamberger was both an undergraduate and graduate student that worked specifically on this project so that we could get it completed. There are numerous local community groups and local schools that come to the Vermicompost center and I would guess that we reached more than 250 children in this manner and at least 50 adults.

Students from my Horticulture classes (HORT 257 - Horticulture Work Experience, HORT 238 - Home Gardening, or HORT 437 - Vegetable Production) were required to spend time out at the Vermicompost Center learning about vermicomposting and the project we were trying to complete for the Greed Fund, regarding re-vitalizing the center. I am guessing that we reached at least 200 students in this manner.

Results from the Project:

Sample #1 (VERML 1) was typical coarsely chopped vegetable kitchen wastes (2.5 lbs) with 0.5 lb of compost and worms added. Temperature reached only 78^{o}F and had a moisture content of 80%, with finished compost weighing 1.10 lbs; so, 2.5 lbs of this waste provided 0.6 lbs of Vermicompost (24% of original weight). The finished material had 56.28 % water, 23.84 lbs N/ton, 5.6 lbs P/ton, 42.94 lbs K/ton, and 33.84 Ca/ton. Other macro and micronutrients were provided in lower amounts (see attached Brookside Laboratories Reports).

Sample #2 (VERML 2) was chopped onion tops and watermelon wastes (2.5 lbs) with 0.5 lb of compost and worms added. Temperature reached only 78°F and had a moisture content of 70%, with finished compost weighing 1.09 lbs, so 2.5 lbs of this waste provided 0.59 lbs of Vermicompost (or 23.6% of original weight). The finished material had 66.08 % water, 20.88 lbs N/ton, 4.68 lbs P per ton, 18.72 lbs K per ton, and 30.46 lbs Ca/ton. Other micronutrients were provided in lower amounts(see attached Brookside Laboratories Reports).

Sample #3 (VERML 3) was chopped onion tops and watermelon wastes (2.5 lbs) with 0.5 lb of compost and worms added. Temperature reached only 79°F and had a moisture content of 90%, with finished compost weighing 1.07 lbs, so 2.5 lbs of this waste provided 0.57 lbs of Vermicompost (or 22.8% of original weight). The finished material had 63.72 % water, 21.66 lbs N/ton, 5.52 lbs P per ton, 28.16 lbs K per ton, and 31.56 lbs Ca/ton. Other micronutrients were provided in lower amounts(see attached Brookside Laboratories Reports).

Sample #4 (VERML 4) was coarsely chopped kitchen wastes (2 lbs) and 0.5 lb coffee wastes, with 0.5 lb of compost and worms added. Temperature reached 82°F and had a moisture content of 70%, with finished compost weighing 1.10 lbs, so 2.5 lbs of this waste mixture provided 0.6 lbs of Vermicompost (or 24% of original weight). The finished material had 58.92 % water, 29.20 lbs N/ton, 5.34 lbs P per ton, 22.60 lbs K per ton, and 29.82 lbs Ca/ton. Other micronutrients were provided in lower amounts(see attached Brookside Laboratories Reports). It also had higher amounts of Carbon compared to other samples, which I'm guessing came from the coffee grounds.

We have had problems with just using coffee grounds alone, as the worms do not like it. This is why we evaluated the mixture to see if we could still use coffee grounds, but only as part of a mixture. It seems to be okay to use coffee grounds in this manner.

All of the Analyses of Vermicompost are attached and labelled VERML 1 to 4.

3. Summarize how your project promoted the Green Fee/Sustainability on campus including, but not limited to, flyers created, screenshots of website, signage, etc. Please include website links, if applicable. (Reminder: you are required to promote your project using at least 2 items from the awardee website promotion list.)

   We shared on social media (Facebook) after we filled the new bin and were feeding worms with dniing hall wastes. According to Meredith, we had lots of likes from the post.

   We taught students about the vermicomposting system and the importance of sustainability and recycling wastes, and the re-vitalization project as they came out to the farm as volunteers or from Horticulture classes (HORT 257 - Horticulture Work Experience, HORT 238 - Home Gardening, or HORT 437 - Vegetable Production)

   Meredith promoted this project as we sold Vegetables through the CSA that we had at the organic farm for several years. I'm sure that those involved in the CSA talked to their friends and family about the re-vitalization of the Vermicompost Center through SIU Green Funds.

Personally both Meredith and I promoted this Re-vitalization project if we were invited to provide updates on ongoing activities at the farm, and we probably reached 250 people in this way.

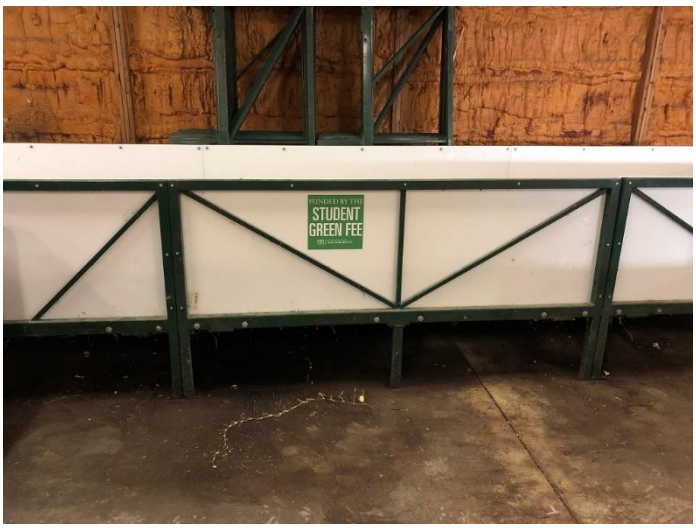
4. Provide evidence of how you used the Green Fund Marker in your project.
   See attached photo of the marker on the new Vermicompost bed built from funds

5. Is there anything you would do differently if you were to do a similar project in the future? If so, please describe.

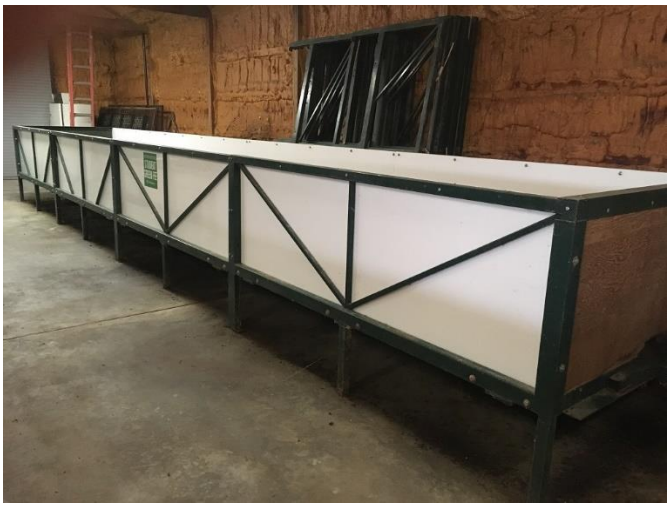
   Completed project sooner, but the sustainable farm and vermicompost center has been in transition since 2016, or since the project was funded. But we finally got the project completed.

6. Provide as an attachment to the email (see email address below) a minimum of 5 digital images. Images should be of high a quality as possible and be attached in jpg format, if available. Images will be used to promote interest in sustainability projects on campus and may be used on our website and in other promotional material. These can be photos of the progress of the project or the completed project. Provide captions for photos here.

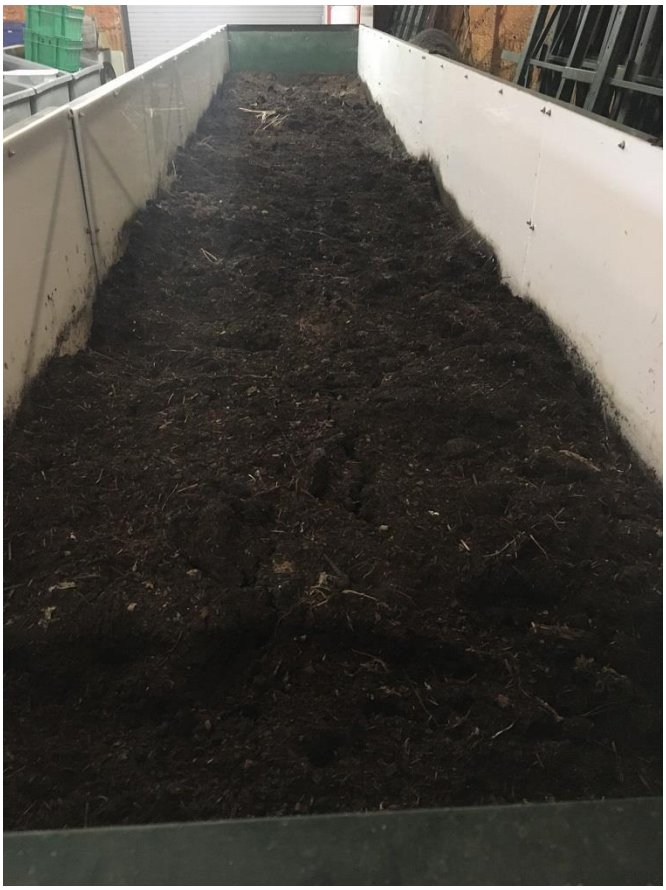
   Green fund marker on new vermicompost bed



Vermicompost bed showing length of new bed



Vermicompost bed showing Vermicompost inside



Vermicompost samples sent off for analysis

Up-close Vermicompost sample from new Bed

7. List suggestions for the SIU Sustainability Council to improve the Green Fund Award Process here: **You guys do a good job with the Green Fund Process and I commend you for it**

Final Report forms should be sent electronically, in editable Microsoft Word format, to greenfund@siu.edu. This should be completed before requesting final reimbursement. A Sustainability Council designate will review final reports before releasing funds.