

Project Title: The Whitman Model Farm Project: Baby Salad Greens

Applicant names:

Students:

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Faculty and Staff:

Dr. Heidi Dobson, Biology Department, Whitman College dobsonhe@whitman.edu
 Amy Molitor, Environmental Studies Department, Whitman College molitoam@whitman.edu

Brief Project Description:

We plan to grow baby salad greens in the rooftop greenhouse of the science building and then sell them to Bon Appétit in order to increase the amount of local produce offered in the dining halls and provide data for the consideration of a larger farm project.

Detailed Project Description:

In order to help Bon Appétit reach their goal of increasing the amount of local produce offered in the dining halls to 20 percent, we plan on constructing and installing lettuce boxes in the rooftop greenhouse. We have received permission to use the greenhouse from Professor Dobson and the Biology Department and have use of approximately 136 square feet with which to grow greens. Bon Appétit is willing to support our project and even though their need exceeds our potential production, which demonstrates a guaranteed market for our produce. Two students will hold internship positions to manage the project and receive credit for their work. If we are successful in this test phase, we intend to expand each year through a series of SLRF proposals and grants. Our ultimate goal is a larger scale educational organic farm.

Initial Costs

Construction of one tabletop box		\$100
	x 7 boxes	\$700
Development and Internship Fund		
	(covers unexpected expenses, irrigation development, misc.)	\$300
Total		\$1,000

Sources of Funding

Source	Donation	Loan	Total
CampusGreens	\$100		\$100
ASWC Contingency Fund	\$100		\$200
Sustainability Revolving Loan Fund		\$800	\$1,000

Definition of Sustainability Benefits and Savings:

Extensive research into sustainable growing materials indicates that an initial investment of \$800 is sufficient for the establishment of this lettuce production. Based on optimal yield, we predict that the initial costs of this project will be paid back within two years and if the project continues for five years, it would accrue a net profit of \$1,631.30. Even with the most conservative projected yield, the project would still pay back within three and a half years. These calculations are based upon outdoor, home garden lettuce yields, which are lower than typical greenhouse production rates. Over the next five years, we predict that we can provide the dining halls with over 350 pounds of baby salad greens, which, in turn, will reduce dependency on non-local, commercial produce providers. This project will also foster student involvement in food production and increase awareness of the importance of locally grown foods.

Production Area

Table Area	15 square feet
x Number of tables	7
Total production area	105 square feet

Lettuce Yield Breakdown

Expected Lettuce Yield	Low	Medium	High
Lbs per square foot per month	0.1 lbs	0.15 lbs	0.2 lbs
x Total growing area	105 square feet	105 square feet	105 square feet
Total pounds per month	10.5 lbs per month	15.75 lbs per month	21 lbs per month
x \$3.58 Bon Appetit Price	\$37.59	\$56.39	\$75.18
x 3.5 months per semester	\$131.57	\$197.35	\$263.13

Estimated Payback Analysis

Payback Intervals	Low Expected Yield	Medium Expected Yield	High Expected Yield
Year 1			
1st semester	\$131.57	\$197.35	\$263.13
2nd semester	\$263.13	\$394.70	\$526.26
Year 2			
1st semester	\$394.71	\$592.05	\$789.39
2nd semester	\$526.26	\$789.40	\$1,052.52
Year 3			
1st semester	\$789.42	\$986.75	\$1,315.65
2nd semester	\$789.39	\$1,184.10	\$1,578.78
Year 4			
1st semester	\$920.99	\$1,381.45	\$1,841.91
2nd semester	\$1,052.56	\$1,578.80	\$2,105.04
Payback Period	3.5 years	2.5 years	2 years

Future Management:

Environmental Internship 220

The responsibilities of this internship include coordinating volunteers to maintain the plants (watering, etc), managing planting, maintenance, and harvesting of crops, educating and getting the Whitman community involved, and maintaining and facilitating relationships with Bon Appetit, the Biology Department, and other external parties involved. Incorporating this project into a course will require weekly hours and documentation as well as a midterm and final evaluation that will insure the sustainability of the project and allow for constructive analysis and development towards future goals. Two interns per semester will be responsible for the aforementioned duties. The spring 2010 interns will be Natalie Jamerson and Zoe Pehrson.

Future Goals:

The ultimate goal of our project is the creation of a Whitman Organic Farm through a dynamic incremental process based on experimentation and assessment. Initially, the project will be entirely student-run, with oversight from staff and faculty advisors and evaluation by the administration. The salad greens project is the first step in this process and will pay for itself within two years. Another step includes expanding the edible plants on campus to assess the success of student-grown produce cultivate outdoors as well as promote a broader relationship with Bon Appétit. The information provided will allow the college to consider progressing to a larger, outdoor experimental garden on current Whitman property. We propose the small property adjacent to the soccer fields as a possible location for this next step. Based on the assessment of these initial projects, the college can consider expanding this project to a small, Whitman-owned farm. The farm could integrate more local, sustainable food production into the dining halls and provide a space for academic departments, student clubs, and student researchers to utilize for education, research, outreach and volunteering.