

Award Title

Student Union Roof-Top Garden and Bee Farm

Awards Categories

Student Union, Student Activities, Greek Life, Leadership and related

Executive Summary

Executive Summary: Environmental Studies students created a plan for a roof-top garden at the Student Union. The students wanted a place on campus to experiment and learn about urban agriculture. The Student Union had a large unused patio that the Director was willing to devote to this idea. Soon students, faculty and staff were working together to lay the groundwork for the project. A mission statement and job description were written and the first internships made available. Mission Statement: Provide students with academic credit internships involving organic urban agriculture. The program's objectives are to grow organic foods for the student dining hall, The Boise River Cafe (BRC); be financially self-sustaining; provide an experimental learning environment; and collaborate with other university departments on service learning projects. Internship Job Description The Rooftop Garden Internship may include, but is not limited to; managing the roof-top garden urban organic agricultural program, managing the bee farm, exploring and implementing new urban agricultural programs, overseeing the business and accounting processes, collaborating with various university departments and community organizations to provide service learning opportunities. Interns will be encouraged to contribute new ideas and innovations to an evolving program that will benefit the entire student body and create sustainable resources for the university. Weekly meetings with the internship supervisor will be required. Two credits a semester may be earned in exchange for ten hours per week and completion of all assignments.

Award Description

Awards Description: The Roof-Top Garden and Bee farm project is a student focused and student led initiative that encourages students to put theory into practice and connect with the local community to develop working relationships and learn best practices. The students measure their work through meaningful assessment methods during the course of their internship and at the end of the semester. The program ties directly to the University's mission as a Metropolitan University of Distinction by supporting academic excellence.

Summer 2010 was the first semester for the Roof-Top Garden Project. Before the internship and garden project began the patio area that was identified to be used for a potential garden was covered with a high tech roofing membrane. This was specifically selected for its warranty and rating allowing for gardening activities and heavy foot traffic. Water was also plumbed from the building to this area identified for the garden.

At about the same time faculty was contacted in the Environmental Studies Program about the viability and support for internships focused on a roof-top garden project. The response was very positive and planning began right away for the summer session 2010.

The first two interns from the Environmental Studies Program spent the summer semester establishing the infrastructure for the garden and developing the vision for what the project would embody. Four raised 4'x8' garden beds, an irrigation system, and a passive solar greenhouse were built and installed by the students.

The Interns also spent time researching the possibility of a bee farm and a flower garden. These initiatives and the information gathered were handed off to the incoming interns for the Fall Semester.

Fall 2010 the interns prepared the beds and greenhouse for the winter and made the decision to start a bee farm. The bee hives, tools and bee suits were procured and installed. A spring planting program was developed along with a seedlings program for the greenhouses. Additionally four smaller 4'x4' raised beds were built and installed.

The fall interns also contacted the city to apply for a business license permitting the sale of produce to University Dining Services and also to be able to sell at the Farmer's Market in downtown Boise. To date all of the produce has been sold to University Dining Services. The Organic Certification has not yet been completed but this is a continued priority for the interns. All organic practices are being employed but getting the official certification takes about two years.

Spring Semester 2011 was the start of the first full growing season for the garden. It was a cool spring and May 2011 was the wettest spring on record for Boise. The greenhouse seedlings were planted in mid March. This includes a variety of vegetables, herbs and flowers. Throughout the summer all of the vegetables and herbs harvested were sold to the Student Dining Hall known as the Boise River Café (BRC). The organic produce was promoted with signs on the salad bar and through selected recipes at the various action stations in BRC.

Organic Produce used in the dining hall, Boise River Café (BRC) and Flowers for the Bee Farm
•Lettuce (4 varieties) •Broccoli •Tomatoes (7 varieties) •Peppers (6 varieties) •Squash (3 varieties) •Strawberries •Cucumbers •Green Beans •Radishes •Basil •Greek Oregano •Parsley •Dill •Cilantro •Pineapple Sage •Onion Chives •Rosemary •Lemon Thyme •Phlox •Snapdragons •Salvia •Mums •Lavender •Marigolds

Roof-Top Garden Expense/Revenue Semester-Summer 2010 Fall 2010 Spring 2010 Summer 2011 Expense \$1600 \$800 \$1200 \$700 Revenue 0 0 \$75 \$625 YTD Sept

The first semester was devoted to the start up of the organic garden. The capital costs incurred were for the materials and supplies to build the garden. Summer 2011 is shown as the start of the second year to illustrate the beginning of the return on the investment.

A bee farm was started in the spring. This was decided after the Fall Semester Interns, as part of the assessment process, were assigned to read the Beekeepers Handbook and attend the monthly Treasure Valley Beekeepers Club meetings. Once it was determined that this was a viable option the program was set into motion and planned for an April installation starting initially with two hives.

Overall the first season of the bee farm season was successful. The interns were able to grow the hives substantially, and gained a new third hive in the process. Honey production was high, measured at 50-70 lbs per hive. This is considered to be a good first year and the expectation is that the second full year will yield honey for sale and consumption.

Bee Farm Expense/Revenue Semester- Summer 2010 Fall 2010 Spring 2010 Summer 2011
Expense 0 \$600 \$300 \$175 Revenue 0 0 0 0

The capital costs incurred were for the materials, supplies, and the bees. The return on investment will not begin until the second year when honey can be harvested, jarred and sold. There are currently three healthy beehives and the anticipated return on each hive is 70 lbs of honey equaling \$700 in sales per hive. New possibilities are being explored by the interns to include; a worm farm, organic composting, solar powered irrigation, rain water collection, Children's Center gardening curriculum and flowers for sale in the convenience store and bookstore locations. Additionally, the garden and bee farm are expected to produce higher yields and income.

The Children's Center has taken steps to develop a curriculum based gardening class for pre-school children. The program will collaborate with the Roof-Top Garden interns to provide garden space for the class. Field trips to the garden and bee farm have already begun and the plan for the coming season is to have the children participate with plants of their own and for the interns to have the opportunity to teach and share their knowledge of urban gardening

A Service Learning component has been added this fall which requires the interns to coordinate two Saturday Service Learning opportunities for Environmental Studies students. The interns go to assigned classes and present the Service Learning opportunities and allow students to sign up at that time or over the next week. The students then receive extra credit for their participation.

The first scheduled event in mid October will center on preparing the garden for the winter and construction of new raised beds for flowers. In November the interns will coordinate a project involving the Bee Farm.

These actions and expected outcomes all directly contribute to the program's core values, which states, "be financially self-sustaining; provide an experimental learning environment; and collaborate with other university departments on Service Learning projects.

Assessment Data

Assessment Data: The internship's objectives are to provide the students with an experimental learning environment that is financially self sustaining through the sale of locally grown

products. These objectives are measured and evaluated during and at the end of each semester.

- Interns set goals at the beginning of each semester. Goals are reviewed weekly with the Program Coordinator and at the end of the semester.
- Service Learning projects are established with the Faculty Internship Coordinator at the start of each semester and evaluated at the end of the semester.
- The student internship evaluation is completed at the end of each semester by the Program Coordinator. The evaluation takes into account the student's initiative, ability to work with others, completion of objectives and other course criteria. The internship is a pass/fail course.
- Interns measure the output of the produce and honey cultivated and the market value. All products are sold to the dining hall for consumption by students. Each semester a dollar amount is totaled from the sale of goods. The ROI is assessed and a budget developed for the coming year.
- Learning outcomes are measured by the student intern's end of the semester final which is a summary of the semester/season and what they learned and experienced taking care of the garden and the bee farm.
- Feedback data from the Executive Chef is collected at the end of the growing season on the quality and quantities provided to determine the crop plan for the coming season.

Open-ended feedback included:

- The internship was a great hands-on experience that made me think outside the norm and work with my hands at the same time.
- I enjoyed making connections in the community that contributed to the project's success.
- It was challenging and a bit scary to be the first one responsible for the bees but exciting at the same time.
- Growing food on the roof of the Sub is something I want to be a part of and help to invent new and better ways to make this happen.
- I have not had much gardening experience but wanted to learn and try. I appreciate that the internship did not require prior experience in this area.