



STUDENT SUSTAINABILITY COMMITTEE

Semesterly Report

Thank you for your commitment to green initiatives at the University of Illinois. One of the ongoing requirements listed in the terms of the funding agreement for your project is the submission of semesterly reports with key information about your project. In addition to this form, please provide additional financial documentation and/or progress photos if available.

Please be as accurate as possible in describing the project (including possible setbacks or challenges in meeting the initial goals of the project). Not fully meeting your project's goals will not disqualify you from making future funding requests as long as your reports are as complete and accurate as possible. If you have any questions, please contact the Student Sustainability Committee, at sustainability-committee@illinois.edu.

Project Name: Colony Overwintering and Monitoring Building (COMB). *Previously named the Bee Research Facility Sustainable Auxiliary Building.*

Date of Report Submission: 1/18/2021

Project Purpose:

The importance of honey bees cannot be understated; they are responsible for pollinating 1/3 of the food supply in the USA, worth \$15B annually. But bees are experiencing steep population declines, and beekeepers nationwide fight against the 4 P's: parasites, pesticides, pathogens and poor nutrition to keep their colonies alive and healthy. The Bee Research Facility requested and received funding from the SSC to construct a Colony Overwintering and Monitoring Building (COMB), formerly called Sustainable Auxiliary Building, enabling expansion of a cutting-edge research system able to study the 4 P's in unprecedented level of detail. Overwintering colonies indoors will increase colony survival and the sustainability of campus resources, and provide further research opportunities.

Detailed Accounting of Expenditures to Date:

To date, expenditures total \$156,003.51. This is \$12,437.51 over the amount allotted by the committee. The Department of Entomology has committed to covering any overage on this project up to \$25,000. We are currently making arrangements to transfer the deficit to the Department of Entomology. Please see the attached Expense Report for a detailed accounting of all expenses to date.

Project Progress to Date:

Ground broke on COMB in late May 2020. The building was erected and finished on-site and the HVAC system was installed by early September. The HVAC system met the setpoints required for summer use, however, the system was not capable of maintaining the much cooler setpoints for winter use. Due to this, F&S added an auxiliary air conditioning unit that supplements the primary system's cooling and helps it achieve its lowest setpoint. The auxiliary unit was installed in early November and was adjusted throughout that month to ensure that it would cool the room to the required setpoints. By mid-December we were ready to move honey bee colonies into the building for indoor overwintering. Ten colonies were moved in and are currently being monitored. To date the building and HVAC system are operating as required and aiding the colonies' survival by maintaining a steady, suitable environment.



Fig. 1 COMB Exterior



Fig. 2 Bee hives inside COMB



Fig 3. COMB HVAC systems

Student Involvement and Outreach to Date:

We asked for students participating in research projects at the Bee Research Facility to propose and vote on the new building's name.

The colonies being stored inside COMB this winter are part of a longitudinal study.

Undergraduate and graduate students in the Robinson and Dolezal lab will help with this study during the winter semester.

Marketing and Promotion Efforts to Date:

To date, there has not yet been marketing and promotional efforts.

Additional Comments:

A final report will be submitted when the account deficit has been resolved.