

# Closed-loop Campus: Vermicompost at UCR

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## Introduction

Soil health is an incredibly important resource for our planet as it is the basis for plant health. These plants, in turn, feed us and sequester CO<sub>2</sub>. While conventional farming methods strip the soil of its nutrients with pesticides, chemicals, and inorganic fertilizers, compost can restore these vital nutrients to the soil. Conventional farming is the second greatest contributor to climate change. Many conventional farms claim that other farming methods have low yields and high rates of pests. However, through integrated pest management, crop rotation, and composting, crops can flourish. In the meantime, consumers of the produce don't have to worry about all the negative environmental impacts their meal just had.

This project entails teaching students, who live both on and off campus, accessible ways to compost in their residences through workshops. Workshops will be held in the R'Garden primarily. This project focuses on carrying out UN Sustainable Development Goal 11: Sustainable Cities and Communities. Compost generated may be returned to the R'Garden or used at students' residences for small, urban gardens.



## Project Goals

Personal Goals:

- Further my understanding of CNI
- Work directly with the Office of Sustainability and R'Garden to develop a relationship
- Communicate with UCR students about Vermicomposting

CNI Goals:

- Lower the amount of food waste from students at UCR
- Effectively teach UCR students to vermicompost

## Materials and Methods

- Zoom
- Vermicompost Speaker from the city of Riverside's Waste Department
- Google Slides

We used Google Slides to create a digital zine with a section on vermicompost. We also hosted a Zoom call with a speaker from Riverside's Waste Department to talk about food waste and vermicomposting.

## Results and Outcomes

This project shifted a lot from what I originally submitted it to be. Because of financial limitations, it was extremely difficult to get the vermicomposting bin in the R'Garden up and running. Much of the things that needed to take place for this project to be a success needed to happen through the institution. There was not sufficient communication between the institution, the R'Garden, and me to get the vermicompost bin going.

Once I recognized the challenges I faced institutionally, I tried to downsize the project. We were going to hold vermicompost workshops in the R'Garden during spring 2020, but our plans were disrupted due to Covid-19. What we were able to do instead was hold a virtual Vermicompost workshop. We also created a digital "Green Zine" with a section on vermicompost.

## Conclusions

This project did not accomplish as much as I would have liked. However, I do feel I did the best I could under the circumstances.

Vermicomposting is an accessible, efficient way for homes to compost and I hope that message was received by UCR's students.

Composting at the R'Garden would be very beneficial to soil health and reduce a lot of food waste. I hope that this is possible for the institution in the future.



## Future Goals

I hope to be able to host composting workshops in the R'Garden once we are able to gather in person again. I also hope to implement a composting system for the R'Garden.

If it is not possible to get the vermicompost bin up and running due to institutional reasons, I hope that the community garden section can implement a vermicompost system on a smaller scale.



## Literature Cited

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