



# Sustainable and Regenerative Agriculture



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Physics

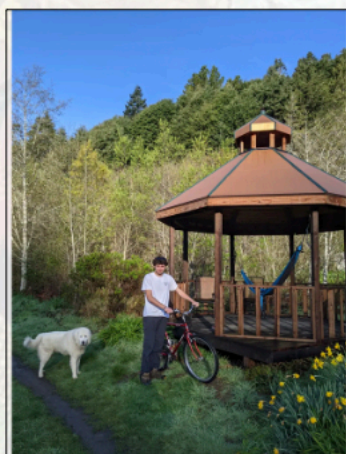
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## Introduction

I flew to Northern California and Mayaguez, PR to work on off-grid, regenerative sustainable farms with the purpose of learning how we can make agriculture net zero emissions.

WWOOF is a worldwide movement linking volunteers with organic farmers to promote cultural and educational experiences to build a sustainable global community.



## Activities

I learned about and then helped implement the following techniques:

- Compost (right)
- Pollinator habitats
- Vegetative barriers
- Biomass planting
- Crop diversity



These are all amazing solutions to improving soil health, biodiversity, and erosion prevention.

## WHY IS THIS IMPORTANT?

Worldwide current population: 8,000,000,000 and exponentially increasing. This causes a sudden increase in scale of agriculture that cuts corners when it comes to sustainability.

Currently, agriculture produces over 10% of US greenhouse gas pollutions. However, the pollution not accounted for lies in the form of **chemical fertilizer**.

Used widely throughout the US, runoff dumps huge amounts of phosphorus, ammonia, and nitrogen into marine habitats and drinking water. This causes **eutrophication** and **harmful algae blooms** (right) which have devastating consequences on chains of **interconnecting ecosystems**.



## Why Mendocino County and Mayaguez?

- First, Mendocino county **banned** farmers from using **GMOs**. This means that organic farmers can grow without worry of contamination of their crops.
- Mendocino county has incredible biodiversity. Wetlands, tidepools, and Redwood forests all within a dozen acres weave a complex connection of **interdependent ecosystems**.
- Buena Fruta Farm has 75 varieties of species of tropical fruits and nuts
- Island – critical and innumerable ecosystems

## Impact

I learned about how to convey this information to you! Part of my training involved learning how to spread awareness of sustainable agriculture.

Participating in this inspired a sense of purpose. I gained cultural exchanges, knowledge on current solutions to immediate and grave problems, and work-away on-site experience.



Buena Fruta Farm

DeHaven  
Creek  
Farm



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