

Biochar Research and Development

Butte Community College



Internal Communications Improvement

Project 1: Greenhouse Biochar Beds

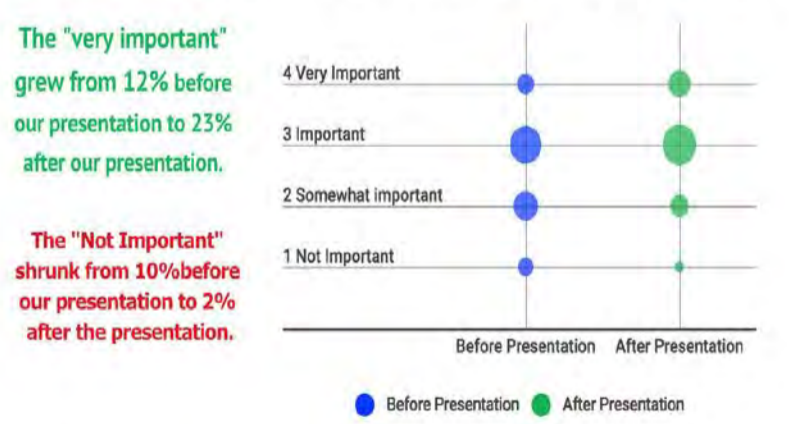
The goal of the Greenhouse project was to see how new plant starts will grow when their soil bed is topped with different increments of Biochar. Lettuce starts, and a variation of different seeds were planted in rows inside of each bed. The beds are watered daily and notes of any change is taken. The idea is to see the difference of growth in the different depths of char compared to just using regular soil.



Project 2: High School Engagement

A group effort to spread the word of sustainability between the interns of Biochar R&D and Solar Energy Alternatives. Us interns made a few presentations to the upper class high school students at Oroville High School. Our R&D is ocused on why we need sustainability efforts, and how it is the younger generation's problem to fix. We passed out some before and after surveys hoping that they will be engaged in finding new ways to think of sustainability.

How important is sustainability to you?



Achievements / Results / Outcomes

Greenhouse Biochar Beds

Although this project still has time to run through, some observations have been made. All the lettuce starts died in every bed regardless of having biochar. The conditions were too rough for the lettuce to flourish. In every bed the seeds germinated and have sprouted out from the soil. The growth rates vary with different thicknesses. This experiment has showed that raw biochar can be used as a top soil and it won't prevent life from growing.

High School Engagement

I would say that overall, the students benefited from us presenting to them. Rosy Hernandez crunched the data from the surveys and found that over half of the students said that they were interested in learning more about sustainability.

Lessons Learned / Intern Experience

Overview of lessons learned

Successful Strategies:

1. Finding resources in your surrounding area by networking.
2. Communication and Team Work.
3. Understand what's in front of you and think big picture.

Biochar Research and Development is supported by \$90,000 from EPA P3 Phase I and Phase II grants 2016 through 2020!

Intern Background: I am a 2nd year student at Butte College, currently working on completing a bachelor's degree in Aerospace Engineering. After Butte I plan on attending an engineering school down in SoCal to continue my quest for knowledge .

Sage McNeil

Acknowledgements:

Many thanks everyone who has been a part of this journey. Steve Feher my mentor, Nena and everyone in MESA, John Dahlgren, BOG, my biochar team, and everyone else at Butte who has worked so hard on giving, us students the opportunity to show our work/knowledge off.

