CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)
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Project Number
J1111

Project Title
Impacts of Restoration vs. Natural Recovery on Coastal Scrub Soil

Abstract

Objectives/Goals
I wanted to find out how well plants grew back after a fire. The reason I did this project was to investigate how the aftermath of a fire should be handled and how people can help plants grow back after a fire. I believed that plants in an undisturbed burned area will grow better than the plants in planted areas.

Methods/Materials
For this project I used a three way meter, rapitest soil test kit, and a ruler to collect data from my 24 samples. I tested the samples for moisture, light,temperature, ph, nitrogen, phosphorus, and potassium.

Results
The results I found supported my hypothesis. The soil in the restoration area was very high in nitrogen and had a very acidic ph level. This can cause plants to be susceptible to diseases and the bacteria responsible for breaking down the nutrients required for plant growth.

Conclusions/Discussion
These results show that we should perhaps leave burned areas alone after a fire instead of trying to plant and add more minerals. The reason for this is when more minerals added to soil, the faster plants will grow, but they may not be able to survive long due to having weak cell walls and may be unable to reproduce. I would recommend leaving burned areas undisturbed after a fire and letting plants grow back naturally. If one wanted to plant after a fire, I would recommend to not add any extra minerals. I would also recommend taking a wider variety of results.

Summary Statement
My project compared plant growth after a fire in an undisturbed area versus are planted area.

Help Received
Roxanne Hunker, Kimberly Gooding