CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY

Name(s)
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Project Number
J1622

Project Title
It's a Miracle: The Effect of Fertilizers on Plants Grown in Various Soil Types

Abstract

Objectives/Goals
My project was to determine the effect of fertilizers on plants grown in various soil types.

Methods/Materials
A total of 96 radish plants were grown from seed. The project included 12 subject plants for each of the 8 categories in this project. The 8 categories were based on 4 types of soil: potting, loam, sand, and clay. One half of the plants were grown with fertilier and water, while the other half were grown with water only. Each plant was measured once a week for a one month period. The average plant growth was compared for each of the eight categories. The impact on plant growth was determined by comparing the average plant growth with fertilizer to the average plant growth with water only for each type of soil.

Results
Fertilizer and water had the biggest impact on the plants grown in clay, showing a 20.97% increase in growth. Fertilizer and water had the smallest impact on the plants grown in sand, showing a 4.35% increase.

Conclusions/Discussion
I was able to conclude that fertilizer and water had the biggest impact on the plants grown in soil that lacked a balance of the major nutients (nitrogen, phosphorus, and potassium)needed for optimal plant growth.

Summary Statement
The purpose of my project was to determine if fertilizer had an effect on plants grown in different soil types; the data showed that plants grown in various soils receiving fertilizer grew at different rates.

Help Received
Mother helped me type. My father helped me learn how to organize my data into graphs.