CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
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Project Number
31888

Project Title
Radish Round-Up

Abstract

Objectives/Goals
The goal of my Radish Round-Up science project was two-fold: to see if fertilizer aided the growth of radish seeds; and to find out if organic compost or store-bought fertilizer had a positive or negative effect on the plants' growth.

Methods/Materials
Nine pots, divided into three groups, were planted with radish seeds. The control group used potting soil without fertilizer. The store-bought fertilizer group had potting soil and fertilizer from Home Depot. My final group again used potting soil with homemade compost consisting of eggshells, coffee grounds, and fruit and vegetable waste. I observed the growth of the plants for seven weeks, taking measurements once a week.

Results
After observing the plants, I compared results and found the plants with no fertilizer grew fastest, sprouting first in Week 2, and to a height of 4 cm. The plants with store-bought fertilizer grew largest, topping off at 4.5 cm. The seedlings with homemade compost did not sprout during the seven weeks of observation.

Conclusions/Discussion
My hypothesis for the project was the three plants with homemade compost would grow the fastest and strongest. My hypothesis was proved wrong by results. However, www.howtocompost.com stated apple peels, potato skins, orange peels, dryer lint and eggshells would provide the plants with all necessary nutrients. To back this up, www.eartheasy.com website claims eggshells contain the nutrients nitrogen and carbon, fruit and vegetable scraps contain nitrogen, and dryer lint contains carbon, all of which are essential parts of all fertilizers, both store-bought and homemade. Despite including all these ingredients in my compost, the plants that were grown with it grew the slowest. The website www.howtocompost.com also claimed that plants grown with homemade compost would grow healthier and faster than plants grown with synthetic fertilizers.
It was proved through my experiment that compost is not in fact better than store-bought fertilizer. Homemade compost was the slowest and weakest group of plants grown. The plants grown with no fertilizer grew the fastest while the plants that received store-bought fertilizer grew the largest.
During my experiment, I had one problem - I at first did not know what to put in my compost. I researched compost ingredients and many different options for the content of my compost were given.
Overall, this project was fun, easy and a great experience.

Summary Statement
My project was designed to compare fertilizer, soil, and homemade compost during the growth of radish plants.

Help Received
My friend helped me plant my original pots.