CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)
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Project Number
J2016

Project Title
Hyperbaric Radishes

Abstract

Objectives/Goals
The objective is to grow radishes in pressurized vessels to determine if increased air pressure will be helpful or harmful to the plants. Plants will also be grown in identical un-pressurized vessel to use as a control.

Methods/Materials
I will build pressure vessels out of 2-liter soda bottles using automotive tire valve stems installed in the screw on tops. Using nursery potting soil as a growing medium, I will plant radish seeds in the bottles, moisten the soil, screw on the tops and pressurize the "vessels" with an air compressor to various pressures ie. 10, 20, 30, and 40 lbs. per sq. inch. I will observe and record the data.

Results
The results of this experiment were that increased air pressure does affect the growth of the plants. A slight increase of pressure causes an increased growth rate as compared to the control, whereas a drastic increase in pressure has a detrimental affect.

Conclusions/Discussion
As stated above, air pressure does affect plant growth. This information could be used to increase yield in food crops in times of famine, or possibly this information could be helpful in trying to grow food crops in space colonies. I think a good follow-up experiment would be to grow plants in negative pressures(vacuums).

Summary Statement
This project is about growing radishes in pressurized vessels and comparing them to radishes grown under normal pressure.

Help Received
Mother helped type report.