CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
An Q. Nguyen

Project Number
J1926

Project Title
Gyration Cultivation

Abstract

Objectives/Goals
The objective of this experiment is to find out if centripetal force has a positive or negative correlation with the growths of Lima bean plants. If a positive correlation is shown, new invention that involve centripetal force could be made and will maximize plant growth. This will greatly benefits plant owners as they would want their plants to grow faster in a shorter period of time.

Methods/Materials
The experiment main requirement was a ceiling fan. The fan was then mounted against a flat surface facing downwards. Next Tupperware cases were tape rigidly on the blades. Plants then were grown inside the cases after 550 grams of potting soil was added to each of them. The experiment consist of 2 testing periods. One was the low speed group and part of the control group and the second was the medium speed group and the other part of the control group. The low speed group and the medium speed group were both spun for 6 hours a day for 3 weeks. They were also misted 2 times a day, before and after being spun.

Results
The Low speed group ends up with the highest height average of 20.36 cm and has an angle average of 15.75 degrees after 3 weeks of growth. The Medium speed group ends up with the lowest height average of 16.72 cm, but has the second highest angle average of 14.42 degrees. Finally the control group has the second highest height average of 19.34 and the lowest angle average of 11.58 degrees. More testing to be conducted before state.

Conclusions/Discussion
The ending results did attain the objective, as centripetal force can result in having a positive correlation with the growth of bean plants. Hopefully future experimenters can continue to expand on this experiment, perhaps even track hormones movement and possibly fine the right force of centripetal that will greatly benefit plants the most. Conclusion may change before state.

Summary Statement
How Centripetal Motion affects the growth of Lima bean plants.

Help Received
Mrs. Gillum help gave information on the science fair and ideas on doing it, Dad help mount the ceiling fan and getting materials, Mom supported and gave ideas on the topic, Brother help me understand the concept better.