CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY

Name(s)
Zachary R. Bassi

Project Number
J1703

Project Title
The Wonders of Organic Fertilizer

Abstract

Objectives/Goals
To find the affects of the placement and concentration levels of an organic fertilizer on bean seed germination. I believe that this information will help farmers and gardeners produce higher quality crops and use less fertilizer in the process.

Methods/Materials
I applied the organic fertilizer to the bean seed by shaking it in a plastic bag with 100 seeds and 1 ounce of fertilizer and then planted the seed in sand on plastic testing trays 50 seeds at a time. I then planted 50 untreated seeds in the sand of another tray and sprayed that with the fertilizer that I had placed in a plastic spray bottle. Upon completing that, I planted 50 more untreated seeds in the sand of a separate tray. I made 8 trays of 50 seeds for each kind of treatment. After those trays were set up I doubled the concentration rate of the fertilizer by increasing the amount of it and repeated the process of adding fertilizer.

Results
The standard concentration level yielded the highest germination rate and the seed that was treated directly had the highest germination rate and the best looking plants as well.

Conclusions/Discussion
My results convey that a normal concentration rate of fertilizer placed directly on the seed is the best way to achieve the most abundant and high quality plants. By demonstrating that a targeted application with a standard rate of materials, growers can increase their yields and minimize excessive fertilizer use in the environment.

Summary Statement
My project is about finding a way to minimize fertilizer use and maximize seed germination rates through testing the concentration rates and placement of organic fertilizer on bean seed.

Help Received
Father helped collect data, Mother helped make board