CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY

Name(s)
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Project Number
S1905

Project Title
A Comparative Analysis of Various Types of Manure on Plant Growth

Abstract

Objectives/Goals
My objective was to find what manure would produce the largest,fullest plants, for one's garden.

Methods/Materials
I tested five commonly used manures for plant growth: dairy cow manure, horse manure, goat manure, chicken manure, and rabbit manure. All manures were obtained locally, they were not store bought. I then tested each type of manure on three different types of flowers: primroses, pansies, and Iceland poppies. I tested these flowers spacificly because they are commonly used and also, they are very hardy plants. Every 2-4 days I would give each pot ¼ of a cup of water, depending on how hot it was. All the flowers received the same amount of sunlight. I measured the width, height, the number of leaves, wilted leaves, flowers, wilted flowers, and buds. I also took pictures of the flowers weekly. These tests lasted one month.

Results
By the end of one month, I discovered that rabbit manure was the best overall fertilizer for pansies, primroses, and Iceland poppies. These flowers excelled in width, height, fullness of flowers, leaves and were one of the fastest to bloom. In addition, rabbit manure was beneficial because it allowed the flowers to withstand the heat as well as the cold. During the four weeks all the flowers experienced frequent changes in the weather, however flowers with rabbit manure were the only ones that were not negatively affected by the weather. In fact some of the flowers even grew more during this time.

Conclusions/Discussion
This type of experiment occurred to me because I have rabbits, and I have always used their manure to fertilize my plants. When I would use the manure I would always see really good results. So I tested my theory, and I believe this project could help my community greatly. I live in a agricultural community, and I think it is important for farmers and plant growers to know which fertilizer is the most powerful. In addition, California is one of the most agricultural states in the nation. California feeds more than 50% of the nation and as much as 12% of the world. California plant growers need the best fertilizer for their plants. I believe that my project could have a impact on my state.

Summary Statement
My research project tested five manure-based fertilizers, obtained locally in Chico, to determine what would produce the largest, fullest growth on three popular flowering plants.

Help Received
Mother supervised the experament. Also, heped with calculating the measurements for the plants; My Chemistry teacher helped me come up with the idea; My English teacher helped me with my Abstract; Home Depot donated all the flowers; Friends and the Chico State Agricultural Department provided