



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Natasha L. Meyers-Cherry	Project Number 22137
Project Title The Effects of Fertilizer Variations on Plant Growth	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my project is to determine whether different types of fertilizers promote varying growth patterns in plants. The three types of fertilizers that I used were: organic vegetarian wastes (rabbit), organic carnivorous wastes (dog), and inorganic, commercially prepared. I propose that the rabbit manure group will have the largest overall growth patterns. I further planned to research the field of fertilizers for further implications for plant growth in the future.</p> <p>Methods/Materials The following materials were used in my experiment: nine pansies, nine flower pots, 100g commercial fertilizer with 100g soil, 100g rabbit manure with 100g soil, 100g dog manure with 100g soil, one hand-sized shovel, 60ml water per plant per week, and one south-facing window to promote optimal growth. Plant three pansies in each fertilizer type. Label the groups so that the growth can be measured individually as well as averaged within the group. I chose VR1, VR2, VR3 (vegetarian/rabbit), CD1, CD2, CD3 (carnivorous/dog), and CP1, CP2, CP3 (commercially prepared). Measure and record your initial data. I recorded: plant height, # of flowers, # of bulbs, # of stems, and stem height. Measure and water the plants twice a week. Record your data weekly in your journal.</p> <p>Results After seeing the outcome of the data, it is clear that the rabbit manure group has, by far, grown the largest. According to my data tables, the rabbit manure group has far exceeded the average growth of the other two groups in the areas of: plant height, # of flowers, # of bulbs, and width of flowers. Individually all of the rabbit manure plants exhibited the same patterns throughout the data. The commercially prepared fertilizer was the second most effective, promoting the greatest stem height with the dog manure trailing far behind.</p> <p>Conclusions/Discussion After reviewing the results of my data, I found that my hypothesis was validated by my results. The research in the field of fertilizers concurred with the results of my experiment. Research suggests that a certain percentage of nutrients, nitrogen (N), phosphate (P), and potash (K) is essential to promote optimal plant growth. One of the best nutrient N:P:K ratios exists in rabbit manure, second only to bat manure! The research further supported my hypothesis and the results of my experiment. The implications of this project could be tremendous in the fields of farming, flower production, and even backyard gardening.</p>	
Summary Statement My project is designed to demonstrate the effects of three different fertilizers on the growth of plants.	
Help Received My mother helped me cut out the background for my board layout.	