



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Chingiz R. Bigalimov	Project Number J1603
Project Title Plant Food: Does It Work?	
Objectives/Goals In my experiment, I wanted to test how much of a difference plant fertilizers have on the growth and health of bulb plants.	
Abstract	
Methods/Materials Materials: Narcissus bulbs, soil, pots, distilled water # beakers, gravel, 30 cm ruler, meter stick, Schultz fertilizer, SuperThrive fertilizer, camera, scale or a balance.	
Procedure: A: Plant bulbs in soil; divide into 3 groups (12 bulbs per group). One group was watered with distilled water (DI) only, one with Schultz in DI third group with SuperThrive in DI and the fourth group with red food coloring. The height of stems were measured for 27 days B: Suspend bulbs (3 groups- 12 bulbs per group) with only base in water or fertilizer solutions. Measure the length of both stems and roots for 21 days. Observe for any fungal growth.	
Results Results: Experiment A-bulbs in soil: The bulbs grown with water or with Schultz plant food grew about the same. The bulbs with SuperThrive did not grow as well. The average growth of the stems with just water was 43 cm at day 27, with the additive Schultz it was 46 cm at day 27; the average growth of the stem with the additive SuperThrive was 38 cm at day 27; and the average growth of the stem with Red Food Coloring was 41 cm. Experiment B-bulbs in water: The bulbs grown with distilled water had an average of 46 cm stem length and five plants# root length was 55 cm at 21 days. The bulbs with Schultz fertilizer had average of 8 cm stems length and only 4 plants had roots that were in the range of 12-35cm at 21 days and the bulbs in SuperThrive had an average of 20 cm stems length and only a few had roots with a range of 20-33 at 21 days. The bulbs grown in Schultz and SuperThrive showed fungal growth, 9 out of 12 plants from Schultz group had fungus and 11 out of 12 plants had fungus from the SuperThrive. Only 3 bulbs from the distilled water group showed fungal growth.	
Conclusions/Discussion Conclusion: My results did not support the hypothesis that plant fertilizers improve the growth of bulbs. Bulbs grown in soil and watered with just water or grown above just water showed the best overall growth. In fact the fertilizers increased fungus growth in bulbs grown above water. Bulbs with fungal	
Summary Statement In my project i wanted to see whether plant fertilizer really does improve the plant's health and growth rate.	
Help Received I used the lab equipment at the UCI university under the supervision of Dr. Debra Mauzy-Melitz; participant in the Orange County Science Engineering Fair	