



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Daniel E. Castanon	Project Number J1609
Project Title The Effect of the Timing of the Application of Potassium on Antirrhinum majus Growth	
Abstract Objectives/Goals The objective of my experiment was to see how the timing of the application of potassium affects plant growth. Methods/Materials There were four groups of twelve plants each. Group A received no potassium. Group B received 1.25 ml of potassium at the time of planting. Group C received 1.25 ml of potassium two weeks later. Six weeks later, group D received 1.25 ml of potassium. Plant height and leaf length and width were measured for five weeks. Leaf amount was measured for the last five weeks of the experiment. Each plant's root growth was rated. Results Group A had the greatest average height. Group B had the lowest average height. Group A had the greatest average leaf length and width and group B had the lowest. Group A had the greatest average number of leaves and group B had the lowest. Groups A and C tied for highest average root amount and group B had the lowest average root amount. Conclusions/Discussion The application and timing of the application of potassium did not positively affect plant growth. Group A did the best on most of the measures and tied with group C on root growth. Excess potassium can cause nitrogen deficiency in plants and may affect the uptake of other ions. Excess potassium can compete and limit other nutrients from entering into the plants. In addition, excess potassium can harm a plant by reducing growth, burning or scorching leaves, causing dead spots and wilting. This experiment expands our knowledge of the effects of potassium in general and how too much can harm a plant.	
Summary Statement This project explores the effect of potassium and the timing of its application on plant growth.	
Help Received Mother helped edit grammar; science teacher provided technical support; father explained Microsoft Excel	