



CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

Name(s) Sarah M. Prince	Project Number 22406
Project Title The Effect of Salt on How Venus Fly Traps Close	
Abstract <p>Objectives/Goals The objective of my project is to see if adding salt to Venus fly traps affects whether or not they close, and how quickly.</p> <p>Methods/Materials As needed, I watered Venus fly traps with water (control), 0.1 M NaCl, and 0.2 M NaCl. I used six plants for each treatment. On four days over a one-week period, I checked how quickly they would close. To do this, I used a toothpick to brush across the hairs on the leaves, which should cause them to close. I timed how quickly they closed, if at all. How quickly they closed and what percentage of them closed was recorded.</p> <p>Results I calculated the average closing time for each day and each salt concentration. It turned out that the Venus fly traps that were given the most salt closed the slowest, although the standard deviations were high. After so many days of getting watered with the correct solution, some of the leaves didn't even close at all. As time went on the plants watered with 0.2M salt looked sicker and sicker. In fact on two of the days none of the 0.2 M's closed at all (1/11 and 1/17). The mean closing time for the control plants (0 salt) didn't change over time in this experiment. Both the 0.1M and the 0.2M treatments caused longer closing time by the end. In addition to the mean and the standard deviation, I calculated the percent of plants that closed, since not all of the leaves were able to close at all after being watered with salt water. Over time a lower percent of the plants closed, for each of the three treatments. Surprisingly, early on the 0.1M did better than the control. There was always a smaller percentage of 0.2M that closed.</p> <p>Conclusions/Discussion In the end, my data supported my hypothesis. The leaves on the plants that got the most salt closed more slowly. Maybe this is because the sodium got in the way of the potassium, which moves through the same holes in the cell membrane. The plants without salt closed the quickest. Also, the plants that got the most salt had the lowest percentage of leaves that closed, too. These plants also didn't look very healthy, maybe the leaves closed slowest for that reason. The 0.1 M NaCl plants and the control plants still looked healthy at the end of my experiment.</p>	
Summary Statement To see if salt affects how fast Venus fly traps close.	
Help Received My dad told me about how Venus fly traps close and helped me with a stopwatch and Cricket graph. My mom helped me paste my poster together.	