



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Emily L. Viveros	Project Number J1926
Project Title The Food Preference of Southern Fire Ants	
Abstract Objectives/Goals The purpose of this experiment was to determine ant activity and food preference by the Southern Fire Ants. Methods/Materials The food sources were the following: water, sugar solution, syrup, peanut butter, bacon, and hot dogs. The hot dogs, bacon were cut into small pieces. All the food sources were placed in PVC cup (20mm diameter x 28mm height). Then each cup was weighted in a gram scale. This weight represented the initial weight. The six cups contained the different food sources were randomly placed in a circular pattern on cardboard trays. This procedure was replicated five times. The trays were taken to Southern Fire Ant nest. Ant visits were recorded for seven hours at every hour. Then after 48 hours every cup food station was weighted again to determine the amount of food taken by the ants. Results Ant activity at 10:00 A.M. was mainly at the bacon feeding and hot dog did not attract ants until 12:00 noon. Ant activity continued to increase by the hour in both hot dog, and bacon. This was not the case for peanut butter, sugar solution, and syrup. After seven hours, the total number of ant visits was hot dogs 3330, bacon 495, peanut butter 26, sugar solution 11, syrup 7, and water 2. The amounts of food taken away by the ants were hot dog 6.99g, bacon 3.12g, and zero for the other food sources. Conclusions/Discussion The ant activity data showed that from the beginning bacon was the most preferred food. However, hot dog started to show more ant activity as time went on. In fact, by 3:00 P.M both bacon and hot dog were equal in activity. Ants had a minimum interest in the other food sources. It was a surprise to see very little ant activity on the sugar solution since the Southern Fire Ants feed on honeydew produced by some insects. After 48 hours of feeding exposure 6.99g and 3.12g of hot dog and bacon respectably were taken away by ants. And, there was zero amounts taken away from other food sources. This means that even though there was ant activity on bacon at the beginning of the experiment, ants still preferred hot dog. The reason maybe do to the high amount of fat in this food source.	
Summary Statement Determining activity in food preference of the Southern Fire Ant.	
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