



CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

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Project Title Ants: Farmer's Friend or Foe?	
Abstract Objectives/Goals The objective of this experiment is to determine the effects of the western harvester ant, <i>phaenogaster cockerelli</i> , on nearby plant growth such as radishes, greenbeans, kohlrabi and squash. I believe that harvester ants will improve height, germination speed and germination rate of plants. Methods/Materials I planted two seed sets of 40 radishes, 10 green beans, 10 cucumbers, 40 kohlrabi and 10 squash in two identical plastic planters measuring 8" by 16". I placed thirty western harvester ants in one of the planters. The planters were placed side by side in the attic, under 2 120-watt grow lights. I watered the planters at 7:30 AM and 6:00 PM, and measured the plants at 6:00 PM each day for 28 days. Results The seeds planted in the planter infested with harvester ants had higher germination rates, germinated more quickly, and grew taller. The greatest improvements occurred in radishes, green beans and kohlrabi, where germination speed and germination rate increased dramatically with the help of harvester ants. Kohlrabi and green beans also grew taller with ant influence. Harvester ants had the least impact on cucumbers and squash, where there was no difference in germination speed or germination rate. The cucumbers grew taller near harvester ants, but squash heights were not affected. Conclusions/Discussion From the data collected in this experiment I can conclude that harvester ants improve plant growth, and could increase agricultural fertility. Further study, using a complete harvester ant colony with a laying queen and a full agricultural cycle in a larger growth area, might determine if this data holds commercial value.	
Summary Statement The purpose of this experiment is to determine the effect of harvester ants on plant growth.	
Help Received Mother drove me to buy the supplies and taught me how to best cut backings for the presentation board.	