CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY

Name(s)
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Project Number
J1430

Project Title
Crickets and Caffeine

Abstract

Objectives/Goals
My project was to determine if caffeine could be used as a natural pesticide for crickets.

Methods/Materials
90 live field crickets were separated evenly into nine disposable Tupperware containers. Holes were poked into the lids for ventilation. Vivarin, which is pure caffeine, was crushed into a fine powder and sprinkled onto the thin slices of juicy potato. Three slices were left plain for the control group. Three slices had 400 milligrams worth of caffeine on them. Three slices had 800 milligrams worth of caffeine on them. The potatoes were placed in the boxes with the crickets. The boxes were checked every day at 8:00 a.m. and 8:00 p.m. and the dead crickets were counted.

Results
The crickets that ate the caffeine had a much higher death rate than the control group. By day six, in the 400 and 800 milligram groups, nine to ten crickets out of ten were dead. The control groups only had three, four, and six crickets dead by the sixth day.

Conclusions/Discussion
Caffeine does work as a natural pesticide for crickets. My next step would be to try more of a variety of amounts of caffeine to see the lowest amount that would be effective to kill crickets.

Summary Statement
My project determines that caffeine is a natural pesticide for crickets.

Help Received
Mom and Dad helped sort crickets and buy supplies.