



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Gurleen K. Virk	Project Number J1434
Project Title Determining the Longevity of Insecticide in Different Soil Types	
Abstract Objectives/Goals The purpose of my project is to determine the longevity of insecticide in different soil types. I am using crickets in my investigation. I will be putting insecticide on different soil types and see how long the insecticide takes to kill the crickets each day. I would like to figure this out, because many farmers and gardeners use various types of insecticide and it will be easier for them to know when to reapply the insecticide. Though the bottles tell when to reapply some may be wrong. Methods/Materials I will be using sand, loam, and clay soil for my investigation. I will also be using crickets. For my control group I will use 1 container for each soil and fill it up with 1 cup of soil. Then I will place 2 crickets into the container and put a lid on top which has holes in it so the crickets can breath. For the actual tests I will use 5 containers filled with 1 cup of soil. Then I will put 2 teaspoons of insecticide and let it set for 1 hour. Next, I will place 2 crickets into the container and record how long it takes for the crickets to die. I will keep doing these steps until the death rate reaches about 6 hours. Then I will dispose the soil and wash the containers throughly. Finally, I will do all these steps again so I will have a total of 10 trials. Results For the results, the sand soil took the least amount of time to kill the crickets and the clay soil took the most amount of time to kill the crickets. The sand soil took an average of 4,894 min to kill the crickets in the control and it took 106.12 min for the crickets to die in 5 days in the actual test. For the loam soil, in the control it took 5,826 min. and in the actual test it took 175.72 min. to kill the crickets in 5 days. For the clay soil, in the control it took 5,043 min. to kill the crickets and in the actual test it took 230.95 min. to kill the crickets in 5 days. Conclusions/Discussion In conclusion, the sand soil took the least amount and the clay soil took the most amount to kill the crickets. for farmers that use sand soil they should reapply within 5 days and for loam soil they should reapply within 3-4 days. Finally, for the clay soil they should reapply within 2 days. This is only if you are using pure sand, loam, or clay soil.	
Summary Statement The purpose of my project is to see how long it takes for insecticide to kill crickets in different soil types every day.	
Help Received Susan Wright helped edit my papers; Dad helped put things on board	