



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Phaivanh Phonxaylinkham	Project Number J0824
Project Title Comparing How Pesticide Will Penetrate through Different Ash and Soil Combinations	
Abstract Objectives/Goals The purpose of my science project is to compare how pesticide will penetrate through different ash and soil combinations. I want to know if slash and burn techniques are beneficial by doing this experiment. Methods/Materials I used soil, 5 different types of wood ash(lemon,grapefruit,cherry,grape,and orange),pesticide,crickets, cardboard rolls, ducktape, dropper, mallet,match, measuring cups, containers, razor, and a timer. Before i started my experiment, I had to tape 2 cardboard rolls together and make two slits with the razor on top of the plastic containers so that the roll can fit into the slits, but before I put to roll into the slits, I had to pock two pinholes on the bottom of the rolls. Then after I did that i began my project. Results The results of my experiment showed that the grapfruit ash mixed with soil was the best into allowing the pesticide to penetrate through it faster to kill an average of 4.25 crickets within a 20 minute time limit. The control (just soil) did the least effect into killing to crickets. The average amount for the control was zero. The orange and cherry wood ash came 2nd best with an average of 2 crickets dead within a 20 minute time limit. The grape and lemon wood ash came in 2nd to last into killing an average of 1 cricket within a 20 minute time limit. Conclusions/Discussion After completing my project I found my hypothesis incorrect. It stated that the grapefruit wood ash will make the pesticide penetrate through it slower than the orange wood ash within a 20 minute time limit. The grapefruit ash did the best and the control did the very least. The cherry wood ash and the orange wood ash came in 2nd best. The lemon and grape wood ash came in 2nd to last. I observed that some of the different types of ash was probably thicker than each other. I learned that different types of wood can make a difference in thickness or softness. When having ash in soil, it loosens it up and the pesticide penetrates through it faster. From my research I foug that wood ash can actually help the soil. In conclusion people who farm can try adding wood ash to their lands. It could raise the alkalinity in the soil and it wouldn't take so long for insects to die after pesticide is sprayed on. YOu can getr rid of the pest in a quicker manner, which means you won't have as much damage to your crops.	
Summary Statement My project is to find out if slash and burn techniques are beneficial.	
Help Received My science teacher revised my introduction and made sure I did all my papers required to be on the board; my father supervised my during my experiment.	