



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

Your Name (List all student names if multiple authors.) Dacia Nelson	Science Fair Use Only
Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) Ashes to Ashes Will Ash "Supercharge" Insecticide	J1025
Preferred Category (See page 5 for descriptions.) 5 - Earth Sciences/ Planetary Sciences/ Physical Environments	Division <input checked="" type="checkbox"/> Junior (6-8) <input type="checkbox"/> Senior (9-12)
Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.	
<p>Objective: The objective is to determine if any kind of ash mixed with soil can make insecticides work better or longer than just plain soil.</p> <p>Materials and Methods: Crickets were used because they are a hard pest to kill and were readily available. An insecticide that was made to kill crickets. 4 types of ash (1/4 cups each). 1/2 cups of soil for each type of ash. 3/4 cups soil for the control group which is just plain soil. 5 plastic cups for each type of mixture. Cling Wrap to cover each lid so the crickets won't jump out, then I poked holes in them with a needle so they wouldn't get suffocated by the lack of air. I used rubberbands to keep the Cling Wrap on. I used a stopwatch to time how long it took them to die. I used 70 crickets to do my experiments on. I put 2 crickets in each cup right after I had sprayed them with insecticide (every other time I didn't spray because I wanted to see if the spray would last after 4 hours and if so how long). I recorded my times. I did this for 7 tests and/or days.</p> <p>Discussion of Results: The results of the tests was that the insecticide worked very well after the insecticide was sprayed, but didn't work well after 24 hours. Lemon mixture averaged 11.57 hrs.; Weed mixture averaged 14.09 hrs.; Cherry mixture averaged 12.87 hrs.; Mixture of all three ashes averaged 12.51 hrs.; and the Control averaged 14.33 hrs.</p> <p>Conclusion: Mixing ashes into soil helps insecticide work better and longer than in soil without ashes. In all, the Lemon wood ashes did the best.</p>	
Summary Statement (In one sentence, state what your project is about.) My project compares the effectiveness of insecticide on house crickets when ashes from different types of plants were mixed into the soil.	
Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Dad helped find research, make graphs, and edited my work; Mom helped put board together; Mr. Gong helped find which method of testing I should use.	