



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<p><b>Your Name</b> (List all student names if multiple authors.) <b>Dacia Nelson</b></p>	<p><b>Science Fair Use Only</b></p>
<p><b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>Ashes to Ashes Will Ash "Supercharge" Insecticide</b></p>	<p style="font-size: 2em;"><b>J1025</b></p>
<p><b>Preferred Category</b> (See page 5 for descriptions.) <b>5 - Earth Sciences/ Planetary Sciences/ Physical Environments</b></p>	<p><b>Division</b> <u>X</u> <b>Junior (6-8)</b> _ <b>Senior (9-12)</b></p>
<p><b>Abstract</b> (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> <p><b>Objective:</b> 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><b>Materials and Methods:</b> 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><b>Discussion of Results:</b> 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><b>Conclusion:</b> 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>	
<p><b>Summary Statement</b> (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.</p>	
<p><b>Help Received in Doing Project</b> (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.</p>	