



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Lacey A. Benefiel</b>	<b>Project Number</b> <b>J1403</b>
<b>Project Title</b> <b>Environmentally Friendly Pesticides</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The goal of my project is to find an environmentally friendly way to kill or repel pests. The reason I am doing this project is because different chemical pesticides either kill other animals or infect our drinking water. Sometimes they don't even work because the pests adapt and are able to build resistance against the pesticide. From this, I will learn if chemical pesticides are the only ones that work or if there is an environmentally friendly way to kill and repel pests.</p> <p><b>Methods/Materials</b> In my search to find environmentally friendly pesticides, I will use crickets to represent pests that might be found in crops and daphnia to make sure that the ground water will not be polluted. I will create a terrarium by tipping a plastic container so that the 100 ML of water will stay on one side. I will put 2 crickets on the dry (land) part and 2 daphnia in the water. For each different, natural pesticide, I will put it in a spray bottle and spray it 2 times for each trial. The different natural pesticides I will be using are: vinegar, jalapenos, orange peels, garlic, and water (control group).</p> <p><b>Results</b> The results of my investigation to find an environmentally friendly pesticide indicated that jalapenos worked best to kill and repel pests. The jalapenos killed more pests in an fastest averaged time period. The orange peels killed the same amount of pests, but in a slower averaged time. Of the remaining pesticides, each only killed 1 pest, but the garlic did it in a faster time.</p> <p><b>Conclusions/Discussion</b> After my search, I found that the jalepenos worked best as an environmentally friendly pesticide. It killed the greatest amount of pests in a faster averaged time. I also found that the vinegar was the least effective pesticide and killed only a small amount of pests in a longer time period. In conclusion, we should be careful with any chemical pesticides we may use so we don't harm the environment around us. If more farmers used natural pesticides like jalapenos, our planet would be better off.</p>	
<b>Summary Statement</b> I am looking for an environmentally friendly pesticide to replace harmful chemical pesticides which are used today.	
<b>Help Received</b> Mr. Karl Gong, District Science Specialist, and Miss Heather Gray, Project Advisor, helped to improve project; Mother and Grandmother helped type report; Father and friends helped put board together.	