



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Clara L. Laursen	<b>Project Number</b>  22822
<b>Project Title</b> What Are the Effects of a Stressed Host Plant on Aphids?	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of my project was to determine how various aspects of aphids , such as weight and adaptive behavior(reproduction or translocation), would be affected by living on a stressed host plant.</p> <p><b>Methods/Materials</b> 18 identical sugarbeet sproutlings in identical pots of soil were obtained. Half of them were randomly chosen to be stressed. They were stressed by being transplanted into dry soil identical to that which both had before. Using 1 fine camelhair paintbrush, 72 green peach aphids of the same age were placed 4 to each plant. Everyday for the next approximately week (depending on the age of the aphids and how long it takes them to reproduce) use an opti-visor every day to count the aphids. When all of the aphids were adults, I used a Denver Industrial Company TR-64 top loading balance to weigh each aphid and compare the stressed versus the non-stressed aphids.</p> <p><b>Results</b> There was a consistently larger number of aphids on the healthy plants. However, there was no significant difference in the weight of the aphids.</p> <p><b>Conclusions/Discussion</b> My project suggested that aphid's weight and size are not affected by living on a stressed host plant, and that aphids will deal with the problem of a stressed host plant by simply moving.</p>	
<b>Summary Statement</b> My project is about the effects of a stressed host plant on aphids.	
<b>Help Received</b> Entomologist Greg Walker, from UCR, helped me in several ways. He provided me with aphids, plants, space in a greenhouse, and information on how to care for them.	