



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Bryn E. Cloud	Project Number J1507
Project Title Hippodamia convergens: Determining the Toxicity of Pesticides on this Beneficial Bug	
Abstract Objectives/Goals The objective is to determine the toxicity of different categories of pesticides on <i>Hippodamia convergens</i> , commonly known as ladybugs. Ladybugs are beneficial to farmers and gardeners because they consume harmful pests. I believe that that the synthetic pesticides will be the most lethal to ladybugs. Methods/Materials The pesticide categories tested were synthetic, organic, and inorganic. Three pesticides in each category were tested. A control using no pesticide was also examined. Ten trials were performed per variable using ten ladybugs each for a total of 100 ladybugs per test variable. The percentage of toxicity for each trial was recorded. Results For the overall pesticide results the most toxic was synthetic pesticide with an average toxicity of 96%. The least toxic was inorganic pesticides with a 42.3% toxicity rate. Organic pesticides overall toxicity was 93.6%. The average toxicity for the control was 10%. Conclusions/Discussion After completing my investigation on the toxicity level of different categories of pesticides on ladybugs, I found that my overall hypothesis was correct. When compared to other pesticides, I found that the average toxicity rate for the synthetic was 96%, the inorganic pesticides was 42.3%, and the organic pesticide was 93.6%. The synthetic and organic pesticides were about nine times more toxic than the control which had an average toxicity of 10%. This data suggests that organic pesticides are more lethal than people may think. The best pesticides for protecting ladybugs are inorganic pesticides.	
Summary Statement The purpose of my science project is to determine the toxicity of pesticides on <i>Hippodamia convergens</i> .	
Help Received Mother helped type report and supervised experiments	