



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Christine Chen; Marian Slocum	Project Number J1507
Project Title Alcoholic... Insects?	
Objectives/Goals The objective is to determine how the amount of alcohol affects the lifespans of <i>D. melanogaster</i> fruit flies and <i>R. rohweri</i> fruit flies. It was hypothesized that a 50-50 or 25-75 water-alcohol combination would allow the flies to live the longest. This is because the flies have an alcohol-based diet and water has no nutritional value for the flies.	
Abstract A brief procedure of the experiment is as follows. First, food was made with different combinations of Budweiser, water, and flour. 15 of <i>D. melanogaster</i> were placed in each jar along with the food and a leaf in jars A1- E5, while 10 of <i>R. rohweri</i> , the food, and a leaf in were in jars AA1-EE5. For each type of fly there were five different combinations of water and alcohol, and there was a total of five trials for each variation. The jars were placed in a well-lighted area of a ventilated room that was kept between 75-80 degrees F. Every morning and afternoon for ten days, the number of flies alive was recorded. The data was taken and recorded the same way for every trial.	
Methods/Materials A brief procedure of the experiment is as follows. First, food was made with different combinations of Budweiser, water, and flour. 15 of <i>D. melanogaster</i> were placed in each jar along with the food and a leaf in jars A1- E5, while 10 of <i>R. rohweri</i> , the food, and a leaf in were in jars AA1-EE5. For each type of fly there were five different combinations of water and alcohol, and there was a total of five trials for each variation. The jars were placed in a well-lighted area of a ventilated room that was kept between 75-80 degrees F. Every morning and afternoon for ten days, the number of flies alive was recorded. The data was taken and recorded the same way for every trial.	
Results The results gathered from the experiment proved our hypothesis correct. Both types of flies did live longer in the 50-50 and 25-75 water-alcohol combination jars, but an equal amount of liquids was still the better of the two. The <i>R. rohweri</i> generally also lived longer than <i>D. melanogaster</i> .	
Conclusions/Discussion This experiment demonstrates that a moderation of alcohol, as well as water, is best for fruit flies, and that too much of a supposedly good thing, alcohol, can be bad. This experiment also gathers that home-remedy pesticides including equal amounts of alcohol and water may not work, but will actually lengthen the lives.	
Summary Statement This experiment demonstrates the alcohol tolerance, eating habits, and the effects of diverse potencies of alcohol on the lifespans of fruit flies on two different types of fruit flies.	
Help Received Our parents helped us acquired the materials necessary for the project. Marian's parents also graciously allowed us to use their home for the experiment.	