



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

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Project Title Organic vs. Traditional Pest Control	
Abstract Objectives/Goals The usage of pesticides in the United States has surfaced as a problem. It has been proven that pesticides harm our water sources and wildlife. Therefore this experiment was conducted to determine the most effective pest control method, and what method produces the best tasting lettuce. The hypothesis is that the isopropyl alcohol mixed with water would be the most effective method. Methods/Materials This experiment tested three different variables or methods to control pests. Diazinon (a toxic pesticide), ladybugs (a natural predator), and isopropyl alcohol mixed with water. The milkweed bug was the pest that was used. At the start of the experiment, the plants were established in an artificial environment. Second the milkweed bug was introduced. Finally the method of protection was instituted. Lastly, the plants were moved outside to determine if warm temperatures would have affected the lettuce's poor growth, or if the milkweed bugs had caused the majority of the damage. Results The results showed that all of the methods did very poorly. But it was concluded that the alcohol mixed with water did the best. However, the alcohol mixed with water did have a faint alcohol aftertaste. The ladybugs did the worst at protecting the plants. Conclusions/Discussion Many things were learned in the experiment. The milkweed bug proved to be a deadly predator to lettuce. This project also came up with some ideas for future experimentation. Due to taste, I recommend that growers could use a different alcohol to water ratio and spray at different intervals. In addition, other nontoxic mixtures might also work well, and should be tried. I hope my project will contribute to the safety of our environment and food.	
Summary Statement This project tests the effectiveness of organic pest control versus traditional pesticides on lettuce.	
Help Received County Extension Specialist advised on project; Dad supervised use of Diazinon; Science teacher obtained some of the insects	