



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Alan M. Joyce	Project Number J1418
Project Title The Effectiveness of Commercial Products vs. Home Remedies on Whitefly	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals This experiment sought to determine which was more effective, commercial products or home remedies for the prevention of whitefly on hibiscus plants. These solutions were compared to each other and to a treatment of water alone. A second goal was to compare cost effectiveness.</p> <p>Methods/Materials This experiment required five spray bottles and one bottle each of Spectracide Triazicide, Spectracide Immunox and Garden Safe Insecticidal Soap. It also required shampoo and cooking oil as ingredients in the home remedy solutions. The spray bottles were filled with their respective treatments the Insecticidal Soap stayed in the spray bottle it was manufactured in. While wearing a mask, the various treatments were applied to hibiscus plants every other day for a fourteen-day period and a thirty-day period. Pictures were taken of the leaves every day during the first testing period and every five days during the second trial. When the testing periods were over, the pictures were analyzed and the cost effectiveness of each treatment was calculated.</p> <p>Results After averaging the results of the two testing periods, the most effective sprays were the homemade sprays, which averaged 60% less whitefly than they began with. The Insecticidal Soap was approximately as effective, but cost seven times more than the homemade solutions and contained more hazardous substances. Spectracide Immunox was approximately 10% less effective than the homemade solutions and cost nearly three times as much. The Spectracide Triazicide was quite inexpensive, but also quite ineffective. It worked only slightly better than plain water.</p> <p>Conclusions/Discussion The homemade products were as effective or more effective than the commercial products. They were also much more cost efficient than the commercial products and did not contain hazardous substances.</p>	
Summary Statement This project compares the effectiveness and cost efficiency of homemade remedies versus commercial products in reducing whitefly numbers on hibiscus plants.	
Help Received Neighbors allowed me to use their hibiscus plants; Father helped proofread report; Mother helped create display	