



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Ryan T. Shimizu	Project Number S1915
Project Title Colonization of Three Species of Aphid on Two Types of Locally Grown Lettuce	
Abstract Objectives/Goals To observe the colonization of three aphid species on a lettuce head. Thus determining, if possible, an effective eradication treatment. Methods/Materials Materials: Eighteen, two-month old lettuce plants (9-iceberg, 9-romaine) Eighteen seclusion cages (Glass-panel/canvas) 180 Aphids (60-species A, 60-species B, 60 species C) Method: Three plant groups (3-iceberg, 3-romaine) were infected by a separate aphid species and each individual plant placed in a seclusion cage. Colonization pattern was observed once per week over a three week period. Results Two species of aphids (<i>Nasonovia-ribis-nigri</i> , <i>Acyrothosiphon-lactucae</i>) preferred to colonize in or very near the center or core of the lettuce leaves. Only <i>Myzus-persicae</i> preferred the outer leaves. Conclusions/Discussion My conclusion is that because both <i>Nasonovia ribis-nigri</i> and <i>Acyrthosiphon lactucae</i> prefer the inner leaves of lettuce plants, eradication with insecticides won't be effective, however <i>Myzus persicae</i> is still vulnerable to and can be killed with insecticide.	
Summary Statement My project's purpose was to find where three separate types of aphids colonize on locally grown lettuce.	
Help Received Used lab equipment at the USDA ag. center under supervision of Dr. Jim McCreight and Patty Fashing; Received help in organizing my project ideas from Dr. Jim McCreight and Patty Fashing.	