



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Aubrey R. Lechuga	Project Number J1916
Project Title What Is the Difference in Quality between a Confined Chicken's Egg and a Backyard Chicken's Egg?	
Objectives/Goals My project was to determine if the quality of a commercial chicken's egg was better or worse than a backyard chicken's egg. I think that a backyard chicken's egg will have a better quality.	
Abstract Methods/Materials I used 10 backyard chickens'eggs where the chickens were fed kitchen scraps, lay mash, scratch & weeds. I used 30 commercial chickens'eggs where the chickens were fed a commercial lay mash. All eggs were stored in the same refrigerator, the same type of container, & at the same temp. for a period of 1 week. After the week was over, I compared the eggs for shape, egg wt. & shell score. I cracked open the eggs & compared them for egg yolk color, thick albumen height, Haugh Unit & shell thickness. I used a Micrometer, a Roche Yolk Color Fan & an Ames Thickness Measurer.	
Results The backyard chickens' eggs were better in quality by having a darker yolk color & they appeared fresher because of the thickness of their albumen. The commercial chickens' eggs had lighter colored yolks & did not appear as fresh but they had a better shell thickness & the eggs were heavier.	
Conclusions/Discussion My conclusion is that a backyard chicken's egg is better than a confined chicken's egg & that the food that they eat had a lot to do with the quality of the egg.	
Summary Statement My project is to determine the differences between a backyard chicken's egg & a confined chicken's egg.	
Help Received Mr. Doug Kuney, Poultry Advisor @ UC Davis, graded the shape of the egg and taught me how to use a Micrometer and a Roche Yolk Color Fan. Mr. Don Bell, Well known Poultry Specialist, graded the egg shell. My mom drove me to UC Riverside each day for a week and proofread my reports.	