



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Miranda K. Patrick	Project Number J1915
Project Title Eggcellent Mass	
Abstract Objectives/Goals According to research, the size and mass of eggs can be affected by the amount of fat and protein in a laying hen's diet. Eggs produced from ten Rhode Island Red laying hens were examined in this investigation. It was hypothesized that increasing the amount of peanuts in a laying hen's diet would increase the size and mass of its egg. Methods/Materials This study was conducted over a 10 week period. The hens were fed commercially formulated lay crumbles with 0%, 5%, 10%, 15%, and 0% peanuts in 2 week intervals. The eggs collected in the 2nd week of each feed trial were measured. A digital caliper was used to measure the height and width of each egg and a gram scale was used to measure mass. Results Overall, 0% (initial zero peanut group) had the greatest average height (55.82 mm) and width (43.03 mm). While 5% had the greatest mass (56.82 g) and number of eggs produced (48). However, there wasn't any one trial that showed significant increase in size and mass. Conclusions/Discussion The results of this experiment did not support the hypothesis and could have been affected by the time of year it was conducted. Factors such as environmental temperature and length of day were decreasing, which could have resulted in the hens putting more energy towards body heat rather than egg production.	
Summary Statement This project studied the effects on the size and mass of eggs produced by laying hens, when peanuts were added to commercially formulated lay crumbles.	
Help Received Father helped get hens and hang individual cages; Mother helped shell peanuts and purchased feed.	