



CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

Name(s) Zachariah Budd; Nathan Patton	Project Number J1006
Project Title Aquaponics Engineering	
Objectives/Goals Our objective was to design and build an aquaponics C.H.O.P. (Constant height, one pump) system. We also wanted to use bell siphons to fill and drain the grow-beds. A bell siphon lets the water level of the grow-bed fill to a certain height, then suctions all of the water out of the grow-bed. One pump saves electricity.	
Abstract Methods/Materials We designed a multiple grow-bed aquaponics C.H.O.P. system. We used bell siphons to fill and drain the grow-beds. Tilapia was a very common choice for fish when it comes to aquaponics systems, so we used tilapia in our system.	
Results We were successful in designing and building an aquaponics C.H.O.P. system. The bell siphon and single-pump design operates well. We are growing lettuce, peppers, and herbs.	
Conclusions/Discussion We successfully designed and built a C.H.O.P. aquaponics system. It operates by itself. From this project, others can learn about how a bell siphon works or why not to leave the roots of plants in water 24/7.	
Summary Statement We designed and built a self-operating aquaponics system.	
Help Received Zach's dad gave us some ideas for building our aquaponics system; Mrs. Rodriguez gave us financial support; Zach's dad took us shopping.	