



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> <b>Danielle S. Ortiz</b>	<b>Project Number</b> <b>S1909</b>
<b>Project Title</b> <b>Aquaponics</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of this project is to investigate whether or not an aquaponics system can grow taller crops than those growing in fertilized soil. Aquaponics is a method for growing plants and aquatic life in a nearly self-sustainable environment where the crops absorb the excess nutrients in a fish tank and use it as fertilizer. The fish benefit from this system by living in an environment that is constantly being purified by plants. This method of farming is more environmentally conscious and arguably more efficient than traditional farming methods. <b>Methods/Materials</b> -Aquaponics system -5 8" goldfish -pea seeds -spinach seeds -20 small pots -dirt (control) -fertilized soil There are three mediums being tested: the aquaponics system, fertilized soil, and dirt that has not been enhanced in any way (control). <b>Results</b> After growing spinach and peas in the aquaponics system, fertilized soil, and dirt (control), the data and observations of both types of plants showed that the aquaponics system generated the tallest plants. <b>Conclusions/Discussion</b> The results of the experiment supported the hypothesis that aquaponics should generate taller plants in comparison to fertilized soil. This is impressive since, in spite of the fish tank being understocked for the ensured safety of the goldfish, the aquaponics plants still grew taller. The research conducted for this project strongly suggested that aquaponics is a better method for growing both plants and fish. To know for certain whether or not this is true, this experiment has to be run again, this time investigating the growth of fish. Overall, this experiment has answered some questions as to the efficiency of aquaponics, but it has also raised numerous questions that will be answered by further experimentation.	
<b>Summary Statement</b> In this project, a more efficient method of growing crops is sought in order to one day supply less privileged areas of the globe with much needed nourishment.	
<b>Help Received</b>	