



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

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Project Title Rad Radish Forest	
<p align="center">Abstract</p> <p>Objectives/Goals This experiment was conducted, to discover if one specific nutrient was more important for a seeds growth than another. The expected results were, that the Potassium solution would produce the most successful growth. This was expected because, Potassium is the most abundant cation in plant cells, therefore supplying the increased amount will help stimulate plant growth.</p> <p>Methods/Materials 100 radish seeds were planted into 25 different containers filled with 50 mL of hydroponics, (4 seeds per container), 3 cm below the surface of the hydroponics. 65 mL of each nutrient solution was mixed with 2625 mL of water in separate containers. Each day for 21 days, every container was watered with 25 mL of that container's specific nutrient solution. Every three days, the sprouts were observed upon and measured.</p> <p>Results The seeds watered with the Calcium grew the tallest averaging at 3.44 centimeters. The plants that grew the shortest stems, were the plants watered with the Potassium averaging at 1.6 centimeters. The roots that grew the longest were the ones watered by the Magnesium averaging at 3.56 centimeters. The shallowest roots were the ones watered with Potassium, once again, averaging at 1.2 centimeters.</p> <p>Conclusions/Discussion The results of this experiment didn't support the hypothesis, however, they answered the objective. The expected results were that the Potassium solution would create the most successful plants, however, there was split results between the root depth and stem height. The results did clearly show us what nutrient solution is best for plants growth.</p>	
Summary Statement Using the nutrient solutions of plain water, Iron, Calcium, Potassium, and Magnesium, we discovered which nutrients are best for radish stem growth and radish root depth.	
Help Received My Mother drove us where we needed to go; Henry's mother found and bought our materials; Mrs. Hoffman supported all of our little issues we had; Mrs. Bellinghiere was extremely supportive of all the decisions we made; Mrs. Williams helped us with all of the scientific processes; Everyone at the Los	