



# CALIFORNIA STATE SCIENCE FAIR 2014 PROJECT SUMMARY

<b>Name(s)</b> <b>Kendyl M. Lassley</b>	<b>Project Number</b>  <p style="text-align: right;">34192</p>
<b>Project Title</b> <b>A Comparative Study of Strawberries Grown in Soil vs. Hydroponics to Optimize Vitamin C Levels</b>	
<div style="display: flex; justify-content: space-between;"> <div data-bbox="82 632 698 1621"> <p><b>Objectives/Goals</b></p> <p>The purpose of this science project is to determine which growing method, soil or hydroponics will allow strawberries to maintain the most Vitamin C. Strawberries are a healthy nutritious snack; loaded with 149% of daily vitamin C. Through research and experiment the goal is finding the most productive means of farming big beautiful strawberries, full of vitamins available to eat. Hydroponic gardening is an excellent way to maintain a garden year round. It also ensures that produce grown will not be subjected to pesticides.</p> <p><b>Methods/Materials</b></p> <p>I will be growing strawberries in soil and hydroponically to determine if growing strawberries in water will provide as much vitamin C as in soil. I will start by developing a hydroponics system and plant strawberry starters, then I will sterilize soil to make sure that soil does not contain any additives and then I will plant strawberry starters. I will water both with the same nutrients and record plant growing data. Then I will harvest fruit to test for Vitamin C content by using a titration solution. In the control group I will grow strawberries in soil and hydroponically using plain water. I will start by developing a hydroponics system and plant strawberry starters, then I will sterilize soil to make sure that soil does not contain any additives and then I will plant strawberry starters. I will not be adding any nutrients to this part of the experiment. I will observe and take notes on plant growth. Then I will harvest fruit to test for Vitamin C content by using a titration solution.</p> <p><b>Results</b></p> <p>The results of this investigation to determine the difference of growing strawberries in soil verses hydroponics while providing the most vitamin c show that all of the strawberries grown contained vitamin c, however the best growing method used was the hydroponic growing system with added nutrients.</p> <p><b>Conclusions/Discussion</b></p> <p>In conclusion, I have learned that all the methods I used to grow strawberries were effective at maintaining Vitamin C and producing fruit. However the Hydroponic growing system was the best method of growing and producing large healthy plants with more fruit at a more rapid rate. Hydroponics is an effective way of growing produce with limited land use and in all types of climates</p> </div> <div data-bbox="698 611 1537 1621" style="text-align: center;"> <p><b>Abstract</b></p> </div> </div>	
<b>Summary Statement</b> Observing the growth of strawberries in a hydroponic system and in soil to optimize Vitamin C levels, with nutrients and without.	
<b>Help Received</b> mother helped with photos	