



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Manav Desai	Project Number J1806
Project Title How Does Vitamin D Affect Root Plant Growth?	
<p style="text-align: center;">Abstract</p> <p>Objectives The objective is to demonstrate the impact of root growth in radish plants when seed germination was supplemented with different concentration of Vitamin D.</p> <p>Methods Planting Box 1-yard x 1-yard, 36 radish seeds, Topsoil, Mineral soil, 12 blue cups, 12 green cups, 12 purple cups, ZAHLER Vitamin D3 droplets (1000IU), 36 Popsicle Sticks, Pencil/Pen/Marker, Beaker</p> <p>Results Radish Seeds that received 2000 IU of Vitamin D supplement every alternate day for 7 weeks showed an average 50% increase in root length in plants than the plants where seeds did not receive any Vitamin D supplement. Suggesting that the Vitamin D supplement may impact root growth.</p> <p>Conclusions These results can help farmers and vegetable growers to formulate fertilizers for plants. Plants which received Vitamin D supplement grew longer and stronger roots. This data can help root vegetable growers to determine if Vitamin D supplement will help them grow longer root vegetables while using the same amount of water they would normally use. In the long run, this data can help mankind reduce their water usage.</p>	
Summary Statement Through analyzation of my data, I found that the plants supplemented with 2 drops of Vitamin D droplets showed a 50% increase then the plant supplemented with no vitamin D	
Help Received The design and manufacturing process of the planting box was helped achieved by my dad. The statistical analysis and observations of data was done by me, and the formating of my poster was better made by my mother. My science teacher, Mrs. Gramajo gave me a lot of advice and helped me make sure that my	