



# CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

<b>Name(s)</b> <b>Trysten H. Slack</b>	<b>Project Number</b>  <b>35780</b>
<b>Project Title</b> <b>Turbo Soil: A Comparison of Soil Brands</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this experiment is to determine which brand of soil produces the best and healthiest plant growth. Three brands were compared: Miracle-Gro Potting Mix, Garden Time Square Foot Gardening, and Kellogg Patio Plus. I predict that the most expensive brand of soil will yield the healthiest plants.</p> <p><b>Methods/Materials</b> 3 pots, radish seeds, ruler, water, sunlight, 3 different brands of soil Pot 1 (Miracle-Gro) \$.31/qt, Pot 2 (Garden Time) \$.28/qt, Pot 3 (Kellogg) \$.26/qt</p> <ol style="list-style-type: none"><li>1. Fill pots with soil.</li><li>2. Plant 4 seeds at same depth.</li><li>3. Place all pots by window sill.</li><li>4. Water all pots thoroughly when needed.</li><li>5. Measure height of growing sprouts (daily).</li></ol> <p><b>Results</b> The height is measured in cm and was measured for 19 days after growth from the base of the plant (soil level) to the cotyledon leaves (first leaves to grow).</p> <p>Pot 1: all four seeds grew, tallest plant measured 9.5 cm, primary leaves grew on all four plants measuring about 1 cm.</p> <p>Pot 2: 3 seeds grew, tallest plant measured 14.3 cm, primary leaves grew on all plants and are significantly bigger, measuring about 5 cm.</p> <p>Pot 3: 3 seeds grew, tallest plant measured 10.4 cm, primary leaves measured about 1 cm and only grew on two sprouts.</p> <p><b>Conclusions/Discussion</b> Does the most expensive brand of potting soil make the plant grow better? No. Even though Miracle-Gro potting soil is the most expensive per quart of the three brands, Garden Time soil yielded the tallest and best sprouts with the biggest leaves and looked the healthiest. I believe it's because Garden Time has the natural ingredients that the radish plants need. Miracle-Gro has synthetic fertilizers and may cost more because they market their product on television. Kellogg has organic ingredients but maybe did not provide the nutrients for the radish seeds.</p>	
<b>Summary Statement</b> My project compares three different brands of soil by their sale price to determine how well plants grow in them.	
<b>Help Received</b> My Mom helped purchase supplies, called Gro-Well to ask about the soil analysis for their product, and helped in mounting different parts of my board. A Gro-Well representative helped me conclude why Garden Time SFG worked the best for growing plants.	