



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Trysten H. Slack	Project Number J1921
Project Title Turbo Soil: A Comparison of Soil Brands	
<div><div>Objectives/Goals 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.</div><div>Methods/Materials 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) \$.20/qt<ol style="list-style-type: none">1. Fill pots with soil.2. Plant 4 seeds at same depth.3. Place all pots by window sill.4. Water all pots thoroughly when needed.5. Measure height of growing sprouts (daily).</div><div>Results 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). Pot 1: all four seeds grew, tallest plant measured 9.5 cm, primary leaves grew on all four plants measuring about 1 cm. 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. Pot 3: 3 seeds grew, tallest plant measured 10.4 cm, primary leaves measured about 1 cm and only grew on two sprouts.</div><div>Conclusions/Discussion 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.</div></div>	
Summary Statement My project compares three different brands of soil by their sale price to determine how well plants grow in them.	
Help Received 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.	