



**CALIFORNIA STATE SCIENCE FAIR  
2013 PROJECT SUMMARY**

<b>Name(s)</b> <b>Kevin E. Viers</b>	<b>Project Number</b> <b>J1922</b>
<b>Project Title</b> <b>Fertilizer Faceoff</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> I wanted to see which was more beneficial to plants-commercial or homemade fertilizer</p> <p><b>Methods/Materials</b> Materials: 15 butter lettuce plants Unfertilized soil 15 pots Miracle-gro fertilizer homemade plant fertilizer (12 eggshells, 3 banana peels, 3 tablespoons of coffee grounds, # cup of milk) water Procedure: 1. Plant all plants in unfertilized soil. 2. Water all plants at the same time with the same amount of water, enough to wet soil but not rise above soil level. 3. Put all materials for the homemade fertilizer in a food processor and blend until it looks like a smoothie. 4. Make commercial fertilizer according to box directions. 5. Use fertilizer on homemade and commercial every 2 weeks. When applying fertilizer, apply 1c. commercial, ¼ c. homemade + 1c. water, and the control with 1c. regular water.</p> <p><b>Results</b> In my experiment, the commercial was far and away more beneficial than the control or the homemade. Surprisingly, the homemade was only slightly more beneficial than the control, which had no fertilizer at all.</p> <p><b>Conclusions/Discussion</b> The commercial fertilizer was more beneficial because the commercial fertilizer only has nutrients, has the right amount of each element, and dissolves into the water, so it gets more evenly dispersed than the homemade. The homemade fertilizer just sat on top of the soil and slowly went slightly more and more into the soil as the plants got watered. The control did the worst, as predicted, because it didn't have access to many of the required nutrients. For most people, commercial is the best fertilizer for many reasons. Some are that it is inexpensive, easy to use, effective, and readily available. The only reason that a person would use the homemade fertilizer would be because they are allergic to the chemicals in commercial fertilizer, they have #little people# that might ingest the chemicals, or if they wanted to attract flies (it was very good at that).</p>	
<b>Summary Statement</b> I am determining whether commercial or homemade fertilizer is more beneficial to lettuce plants.	
<b>Help Received</b> My mom helped me create my display board.	