



# CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

<b>Name(s)</b> <b>Taylor Y. Hurlock</b>	<b>Project Number</b> <b>J2011</b>
<b>Project Title</b> <b>Funky Fertilizer</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Most plant-growers believe that more fertilizer (plant food) is better for plant growth and crop production. This experiment determined the amount of fertilizer pellets needed for the best production of a crop of Brassica rapa seed. The objective of this study was to assist all farmers growing crucifers in the knowledge of the proper amount of fertilizer pellets to use for optimal production: the recommended amount-3 pellets, double the recommended amount-6 pellets, and triple the recommended amount-9 pellets. The hypothesis stated that the recommended amount (3 pellets) would increase the growth, development, and/or reproduction the most because over-application of slow- or fast-release fertilizers can kill plants by effectively burning them.</p> <p><b>Methods/Materials</b> 12 Brassica rapa seeds were used in this experiment, 4 seeds per trial. Three trials were conducted at the same time. During each trial, 3 plants had 3 different amounts of 14-14-14 fertilizer pellets added to them, 1 amount per plant. The other plant had no 14-14-14 fertilizer pellets added to it. At day 20 of the experiment, the growth rate (height in mm), development rate (number of leaves on the main stem, including cotyledons), and reproduction rate (number of flowers/flower buds) of the plants were measured by a ruler and by carefully counting, with close observation.</p> <p><b>Results</b> The results of this experiment stated that adding triple the recommended amount of fertilizer (9 pellets) increased the growth rate and reproduction rate of the plants the most. The results correlate with the purpose because the results told of the amount of 14-14-14 fertilizer pellets to use on Brassica rapa, a plant very similar to a crucifer, for optimal production.</p> <p><b>Conclusions/Discussion</b> The results did not support the hypothesis, so the hypothesis was proven wrong. Information from this project expands our knowledge about environmental science because it told of the amount of 14-14-14 fertilizer pellets to increase the growth and reproduction of crucifers the most.</p>	
<b>Summary Statement</b> This project was conducted in order to determine how much 14-14-14 fertilizer was best for the production of a crop of Brassica rapa seed.	
<b>Help Received</b> Mother helped take pictures of plants and helped put board together; Father answered questions about the computer; Mr. Ballard, teacher, gave instruction about how to conduct my experiment and how to create all parts of report and board.	