



CALIFORNIA STATE SCIENCE FAIR 2011 PROJECT SUMMARY

Name(s) Sanjana K. Krishnan	Project Number 31642
Project Title Seed to Sprout: Mung, Where Have You Bean?	
Objectives/Goals The objective of my project was to identify how the rinse temperature affected the sprouting of Mung beans. If there was a relationship, I also wanted to find the best temperature that would result in the longest sprouts. Methods/Materials The method I used was to measure the length of Mung bean sprouts subjected to four different rinse temperatures. The measurements were recorded each day for four days after the initial set up of the experiment. A total of 40 measurements were used for each temperature set, each day. I started with 16 identical, aerated glass jars. I labeled and separated the jars into 4 temperature groups (40, 70, 100 and 140 degree Fahrenheit) and put about 50 Mung beans in each of them. Each day, the Mung beans in each jar was rinsed with water at the temperature marked on the jar. The next day, I measured with a ruler, the lengths of 10 randomly selected beans from each jar and recorded the results. Results The following results were observed: 1. The average sprout length for the 70oF rinse temperature set exceeded that of the other sets at the end of the experiment after 4 days 2. The average sprout length for the 70oF set was the highest on 3 out of 4 days of the experiment 3. Temperatures below and above 70oF resulted in shorter sprout lengths, with the 40oF doing better than the 100oF and 140oF sets. 4. The longest sprout length measured came from the 70oF set. 5. The sprouts in all the jars marked with 70oF appeared longer and healthier when compared to sprouts in the other jars. On the other hand, the 140oF jars appeared to have the shortest sprouts. Conclusions/Discussion The results from my project seem to show that 70oF is the best rinse temperature among the four temperatures I used for sprouting Mung beans. This was different from what I had expected before I performed the experiment. My original hypothesis was that higher rinse temperatures would result in longer sprouts. I thought so because during my research, I had read that some beans responded to heat-shocking. My conclusion is that Mung beans sprout better when rinsed with water around 70oF, when compared to rinse temperatures, which are either too cold or too hot.	
Summary Statement How does the rinse temperature affect the sprouting of Mung beans?	
Help Received Dad helped with Excel Add-in tools for plotting data	