



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

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<b>Project Title</b> <b>Salty Radishes: Does Salinity Affect the Germination of Radish Seeds?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My project was to see how the salinity of water affects the germination of radish seeds. I think that the higher the salinity, the harder it will be for the plants to extract water from the soil, causing them eventually to die. <b>Methods/Materials</b> Materials included twelve, 16.9 ounce bottles of pure water (each reduced to 16 ounces to make room for varying amounts of salt), salt, radish seeds, seed starting mix, and seedling trays for 72 plants in 12 groups of 6. Using a measuring cup, measuring spoon, and funnel I prepared 12 bottles of water with increasing degrees of salinity. I setup the soil and seeds into 72 seed cups split into 12 groups of 6, each group with its own water bottle. I watered the plants for 10 days using only the water bottle assigned to each group to water each of the 6 plants in each group. Then I counted the number of sprouts and measured the average sprout height and tallest sprout in each group. <b>Results</b> In group 1 I counted 72 sprouts. In group 2 there were 42 sprouts and there were 32 in group 3. I got 28 in group 4. In group 5 there were 39 sprouts and 28 in group 6. In group 7 there were 6 sprouts and there were 0 sprouts in all the rest of the trays. The plants could not grow using a solution of more than 2 tsp salt per pint of water. The plants were generally larger and healthier looking with less salt in the water used. <b>Conclusions/Discussion</b> The hypothesis was correct. The more salt in the water, the fewer and less healthy the plants were, to the point where the seeds would not germinate at all.	
<b>Summary Statement</b> This project is about how germination and early growth of radish seeds are affected by the salinity of the water used.	
<b>Help Received</b> My mother and father helped type and my father helped make the charts and graphs in the report.	