



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jacob C. Birks</b>	<b>Project Number</b>  31491
<b>Project Title</b> <b>Will Hydrating Cotton Seeds Have an Effect on How Fast the Seed Germinates?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of this experiment was to determine if the temperature of water used for hydrating a cotton seed will have an affect on how fast the seed will germinate as compared to a non-hydrated cotton seed. <b>Methods/Materials</b> The experiment started by placing cotton seeds soaked in different temperatures (including room temperature) of water for various times into Styrofoam containers with pre-soaked napkins. The containers were then placed in plastic bags and set on the counter for a period of 10 days. A control group was also established with a group of non-hydrated seeds. All sets of seeds were checked daily and data was recorded as to the number of seeds sprouted on each day as well as the length of growth from the seeds that had germinated. <b>Results</b> The hypothesis was proven true that hydrating the cotton seeds for a warmer temperature resulted in that group of seeds germinating earlier than the non-hydrated seeds and the cold water seeds. The resulting sprout growth of the hydrated seeds was on the average longer than the non-hydrated seeds. <b>Conclusions/Discussion</b> Hydrating seeds in warmer water does indeed affect the germination time and sprout growth as compared to non-hydrated seeds. The seeds were able to soak up water and were fooled into thinking they had already been planted, which encouraged the early germination.	
<b>Summary Statement</b> This experiment is to determine if the temperature of water used for hydrating a cotton seed will have an affect on how fast the seed will germinate as compared to a non-hydrated cotton seed.	
<b>Help Received</b> The cotton seeds were received from a local cotton farmer.	