



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<b>Your Name</b> (List all student names if multiple authors.) <b>Janelle A Williams</b>	<b>Science Fair Use Only</b>  <h1 style="margin: 0;">S1616</h1>
<b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>If it rains, will it grow? A three year study on presoaking cotton seed.</b>	<b>Division</b> _ Junior (6-8) <u>X</u> Senior (9-12)
<b>Preferred Category</b> (See page 5 for descriptions.) <b>16 - Plant Biology</b>	
<p><b>Abstract</b> (Include Objective, Methods, Results, Conclusion. See samples on page 14.)          Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.</p> <p>My project is titled, "If it rains, Will it grow? A three-year study in presoaking cottonseed before planting". This year's project builds on the results from last year. In 2000 I learned that by presoaking cottonseed I could decrease germination time and increase cotton yield. The process of presoaking the cottonseed washes off a portion of the cottonseed treatment. This treatment is fungicides that are added to the seed to protect the seed from seedling diseases in wet weather. Numerous cotton growers questioned my results should the weather turn wet at germination time. Therefore:</p> <p><b>OBJECTIVE:</b> The objective is to determine if in a wet environment presoaking cottonseed will result in higher end of year cotton yield.</p> <p><b>MATERIALS &amp; METHODS:</b> Obtain one cotton growers cooperation in supplying field, cottonseed, planter and in season cultural practices in growing the cotton. Three five gallon buckets, water, marking flags, meter stick, marking pen, watering pail, measuring cup, scale and bags for collecting cotton. I soaked the cottonseed needed for 1/2 mile long planting in enough water to cover the seed for the designated time. Cottonseed was then drained and dried before planting. I marked six random replications in the field. At seven days and nine days after planting I sprinkled one inch of water across all treatments. Plant counts were taken at 5 days, 7 days, 9 days, 12 days and 15 days. Final cotton lint was picked, weighed and recorded.</p> <p><b>RESULTS:</b> "Raining" on the cotton did in fact induce disease and decrease plant populations. Cotton lint weight was in fact higher in the 10 &amp; 15 minute soaked treatments. Statistical analysis showed an 85% confidence level for the trial.</p> <p><b>DISCUSSION:</b> The results was as expected. By "raining" on the cotton I was able to induce seedling diseases and lower the plant populations. However end of season yields showed more cotton lint at time of harvest with a slightly lower plant population. The results show that by presoaking cottonseed and washing off some of the seed treatment, even in a wet year, the end of season yields will be higher than the grower practice now.</p>	
<b>Summary Statement</b> (In one sentence, state what your project is about.) I planted presoaked cotton seed, in a wet envoriment to see if germination and yield would increase.	
<b>Help Received in Doing Project</b> (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Tim Sherill helped with arranging the planting field and for a cotton seed planter	