



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Janelle A. Williams</b>	<b>Project Number</b> <b>S1618</b>
<b>Project Title</b> <b>Does the Prehydration of Cottonseed in Plant Growth Regulators Outyield the Prehydration in Water?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this years experiment is to build on the previous four years work on presoaking of cottonseed before planting. This years project is to see if presoaking cottonseed in plant growth regulators has the same positive results as the presoaking of cottonseed in water only.</p> <p><b>Methods/Materials</b> Soak the cottonseed in separate buckets needed for 40 feet long planting in enough water, and the advised amont of plant growth regulators concentrate (Dip N Grow, ProGibb 4) to cover the seed for the designated time. Cottonseed was then drained, dried, and 120 seeds counted for each treatments five times before planting. Mark five random replications in the field. Plant counts were taken at 5 days, 7 days, 10 days, 12 days, 14 days, 17 days, 19 days, 21 days, and 24 days. Plant map the field mid season. Pick final cotton lint, weight and record at picking season.</p> <p><b>Results</b> The results show that presoaking of cottonseed in simple water out yield presoaking of plant growth regulators. It also showed that more plants emerged from presoaking in water and not the plant growth regulators.</p> <p><b>Conclusions/Discussion</b> The results from this years trial again showed that presoaking cottonseed for 10 minutes in water only, before planting gave the greatest yield in cotton lint. This result was greater than the plant growth regulators used instead of simple water. The treatments with plant growth regulators caused seed emergence problems. Germination of treated seeds was non-typical. This leads to the conclusion that the ratio of treatments to water was to strong, leading to lower plant stands, thus lower yields.</p>	
<b>Summary Statement</b> A five-year study on presoaking cotton seed, this year testing presoaking of water to plant and root growth regulators.	
<b>Help Received</b> Field provided by the Shafter Reseach and Extension Center. Planter, tractor, manual labor, randomization, and research provided by Dr. Brian Marsh.	