



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Robert E. Norton</b>	<b>Project Number</b> <b>S1421</b>
<b>Project Title</b> <b>Auxins That Kill</b>	
<b>Objectives/Goals</b> The objective is to find the effect of different solutions of auxin on three species of monocots and three species of dicots. Specifically, I will be observing seedlings.	
<b>Abstract</b> I tested the dicots fava, carrot, and radish, and the monocots corn, wheatgrass, and rye. Each species has their own tray, each tray with 4 sections, and each section has 10 seeds. Each of the 3 sections are sprayed with different solutions of auxin in; 1:100, 1:1000; 1:10,000, and the fourth is sprayed with tap water as the control. Section one of all the plants was sprayed with the 1:100 solution, section two of all the plants was sprayed with the 1:1,000 solution, section three was sprayed with the 1:10,000, section four was the control sprayed with water.	
<b>Methods/Materials</b> I tested the dicots fava, carrot, and radish, and the monocots corn, wheatgrass, and rye. Each species has their own tray, each tray with 4 sections, and each section has 10 seeds. Each of the 3 sections are sprayed with different solutions of auxin in; 1:100, 1:1000; 1:10,000, and the fourth is sprayed with tap water as the control. Section one of all the plants was sprayed with the 1:100 solution, section two of all the plants was sprayed with the 1:1,000 solution, section three was sprayed with the 1:10,000, section four was the control sprayed with water.	
<b>Results</b> All species eac had a different response to the auxin, 1:100 solution hurt that fava beans while the 1:1,000 and 1:10,000 concentrations stayed relatively equal to the control. The auxin solution 1:100 and 1:1,000 damaged the carrot seeds while solution 1:10,000 growth was almost parallel to the control. None of the radish seeds responded severely negatively to the auxin solution however solution 1:10,000 did help elongate the seeds while solution 1:100 and 1:1,000 were relatively the same. The auxin did not severely effect the monocots in either experiment.	
<b>Conclusions/Discussion</b> Auxins are usually used to grow seedless fruit and act as herbicides on dicots in monocot crops. Some of the auxin solutions did act as a herbicide toward the dicots however some also did elongate the dicots species. This may potently mean that some auxin solutions could be used to help dicots and are not appropriate to be used as herbicides on dicots.	
<b>Summary Statement</b> I observed the growth rate and effect of auxins on monocots and dicots.	
<b>Help Received</b> Sunny LeMoine helped me edit my project	