



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

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<b>Project Title</b> To Pee or Not to Pee?	
<b>Abstract</b> <b>Objectives/Goals</b> The experiment was constructed to determine whether the concentration of urine used to treat grass affected the healthiness, in terms of height and color, of grass. <b>Methods/Materials</b> Sections of grass were treated daily with undiluted urine, a 1/4 dilution of urine, a 1/8 dilution of urine, a 1/16 dilution of urine, a 1/32 dilution of urine, or tap water. The height and color of the grass was measured once a week for four weeks. <b>Results</b> After three weeks, grass treated with a 1/8, 1/16, or 1/32 dilution of urine was the healthiest, being the tallest and the deepest shade of green. Grass treated with tap water was less healthy than grass treated with a 1/8, 1/16, or 1/32 dilution of urine, but it was not dead. Grass treated with undiluted urine or a 1/4 dilution of urine died after two and three weeks respectively. <b>Conclusions/Discussion</b> Treating grass with diluted urine will produce healthier grass than treating it with undiluted urine or tap water. These results show that human urine can be used as an effective fertilizer, which is increasingly useful given that California is in the midst of a devastating drought.	
<b>Summary Statement</b> I tested the effects of different concentrations urine on the height and color of grass.	
<b>Help Received</b> Father showed me how to use Excel and digital color meter; Parents proofread poster.	