



# CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

<b>Name(s)</b> <b>Antonio Maldonado</b>	<b>Project Number</b> <b>J1122</b>
<b>Project Title</b> <b>The Effect of Compost Type on Blocking Water Run-Off</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> The purpose of my science experiment is to determine the effect of compost type on blocking water run-off. My hypothesis was that the cow manure compost will block the most water run-off due to the consistency of the compost allowing it to clump better thereby retaining more water. This is important because farmers need effective solutions to reduce water run-off while still maintaining or increasing their crop production in an environment that is still recovering from drier drought conditions and restrictive water regulations.</p> <p><b>Methods</b> For my experiment, I placed soil and compost in pans, placed pan slanted to allow water to run-off, placed an empty pan at the bottom to catch run-off water, poured 1,000 milliliters of water evenly over the compost, after water was poured I waited one (1) minute, poured run-off water from bottom pan into measuring cup, and then wrote down results. I repeated this 30 times for the bare soil, the green waste compost, and the cow manure compost. My manipulated variable is the type of compost; the responding variable is the amount of water run-off; the variable held constant is the amount of compost, soil, and water used; and the instrument of measurement is the measuring cup.</p> <p><b>Results</b> I found that the cow manure compost had a lower amount of water run-off with an average of 409 milliliters; while the bare soil had an average of 484 milliliters of water run-off, and the green waste had an average of 573 milliliters of water run-off.</p> <p><b>Conclusions</b> After concluding my experiment, my results showed that the cow manure compost had the least amount of water run-off thereby providing farmers a possible solution to decreasing their water run-off while simultaneously helping our State's recurring water shortage. This shortage despite the notion going around, that we are out of the drought and no longer in a water shortage, is still a serious problem due to the fact that most of this rain water is not being collected; and we will possibly see this problem again in the near future.</p>	
<b>Summary Statement</b> The purpose of my science experiment is to determine the effect of compost type on blocking water run-off.	
<b>Help Received</b> Mrs. Martin assisted me in deciding on the project idea and direction. My parents helped me throughout the entirety of the project.	