



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Madeleine J.B. Pardini</b>	<b>Project Number</b> <b>J2316</b>
<b>Project Title</b> <b>The Effect of the Herbicide Roundup on Red Worms</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of my science project was to determine if the commonly used herbicide, Roundup, is toxic to red worms, a beneficial soil organism. <b>Methods/Materials</b> Two samples of 50 red worms ( <i>Eisenia fetida</i> ) each were collected from a compost pile. Each group was weighed and recorded, then put into a container with a mixture of dirt and shredded newspaper. Compost foods (watermelon, banana and used tea leaves) were divided into two groups and one group was sprayed with Roundup. The compost foods were added to the containers, creating one as a control (no Roundup) and the other as the Roundup treated container. The worms were observed over a 12-day period and were counted and weighed at the end of the observation period. <b>Results</b> The control container contained 49 red worms and weighed 23 grams whereas the Roundup treated container contained only 40 worms and weighed 19 grams. There was a 20% decrease in the worm population in the Roundup treated container as opposed to only a 2% decrease in the control container. <b>Conclusions/Discussion</b> My conclusion is that Roundup is toxic to red worms, however its effect may be more significant on smaller or weaker red worms as there was no significant weight change in the Roundup treated container.	
<b>Summary Statement</b> My project is about the possible toxic effect of the herbicide, Roundup on red worms, a beneficial soil organism.	
<b>Help Received</b> My father sprayed the herbicide Roundup on the compost foods for the treated sample.	