



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Madeleine J.B. Pardini	Project Number J1527
Project Title The Effect of Parasitic Worming Medication in Horse Manure on Red Worms in a Compost Setting	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project was to determine if horse manure containing parasitic worming medication would kill red worms in a compost setting.</p> <p>Methods/Materials Three samples of horse manure were collected from Frazier, a 20 yr. old Quarterhorse gelding. The first sample was collected approximately 8 to 10 weeks after his last dose of worming medication, the second sample was collected 24 hrs after administration of Athelcide EQ Paste (oxibendazole) and the third sample was collected 72 hrs after administration. Three compost settings were made, one containing the pre-worming manure, the second with the 24 hr post worming manure and the third with a mixture of the post 24 hr and post 72 hr manure. To each of these was added 100 red worms (<i>Eisenia fetida</i>), a small amount of dirt and shredded newspaper. The worms were observed over a two-week period and were counted at the end of the observation period.</p> <p>Results The pre-worming compost setting contained 90 live worms, whereas the 24 hr post-worming sample contained only 4 live worms and the 24 hr/72hr post-worming sample contained 5 live worms.</p> <p>Conclusions/Discussion My conclusion is that worming medication found in horse manure does kill red worms in a compost setting. This result should be considered when using horse manure in composting or as fertilizer in vegetable gardens or animal pastures. Can these medications harm other beneficial organisms in the soil and what other types of medications can be found in animal manures used as fertilizers or in composting? Could these medications find their way into our food through plants and animals?</p>	
Summary Statement My project is about the effect of parasitic worming medication found in horse manure on red worms in a compost setting.	
Help Received My father helped me gather the 300 red worms from our compost bin and prepare the three compost settings. My mother helped type various parts of my research paper and advised me on the layout of my display board.	