



# CALIFORNIA STATE SCIENCE FAIR 2005 PROJECT SUMMARY

<b>Name(s)</b> <b>Rachel A. Miller</b>	<b>Project Number</b> <b>J1424</b>
<b>Project Title</b> <b>Haboring a Lethal Companion: Parasites in Horses</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> This project is the result of trying to protect our family horses from the damaging effect of parasites. The purpose of the project was to determine which paste wormer was most effective in the control of parasites. The paste wormers, given orally, each contain specific chemicals needed to kill the parasites that live in the internal organs of the horse.</p> <p><b>Methods/Materials</b> Sixteen horses were selected to be used in this project. The parasite populations in the horse can be examined by using a PARACOUNT EPG KIT. This kit allows you to count the parasite eggs that are passed through the horse in its manure. Three different paste wormers were selected: Safeguard, Ivermectin, and Strongid. The project horses were divided into four groups. The control group was not wormed, and each test group was wormed with a different wormer. Prior to worming, the fecal material of each horse was examined and the EPG (Eggs Per Gram of Fecal Material) were documented. The horses were then wormed, and every fourteen days for twenty-eight days the fecal material was examined and the EPG counts were documented.</p> <p><b>Results</b> The project results showed that paste wormers are effective in the control of parasite populations in horses. All three wormers showed a definite decrease in the egg counts. Safeguard had a 46% decrease in the EPG. Ivermectin and Strongid showed a 43% decrease in the EPG. The control group had a 32% increase in the EPG. Veterinarians recommend that the parasite egg counts be kept below 200 EPG. The test horses started with counts much higher than this and even with the decreased egg counts remained higher than the recommended levels.</p> <p><b>Conclusions/Discussion</b> By basing a de-worming program on EPG counts, a more efficient program can be established. The primary objective of the control program should be to monitor and maintain EPG counts at low levels and to de-worm when appropriate to keep worm counts at a minimum. This project showed that all three paste wormers used were efficient, and that proper use of them by the horse owner will provide the protection needed from the damaging effect of parasites.</p>	
<b>Summary Statement</b> This project determines whether or not the paste wormers that are available to the horse owner are effective in controlling parasites in horses.	
<b>Help Received</b> My sister, Rebecca, helped me worm the horses. My sister, Jamie, helped me set up my data pages for the log. Our Veterinarian, Dr. Blair, loaned me a microscope and showed me how to use the Paracount EPG Kit. My Mother helped me shop for materials for the project board.	