



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

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Project Title Cow Patties: How Much CO(2) Do They Really Give Off?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Which foods (feed grain/hay or silage/hay) when excreted by two different calves give off the most amount of Carbon Dioxide through their wastes.</p> <p>Methods/Materials Each day our group would test each calf's waste by placing the samples in containers and measured to within +/- 5 grams. Using the Carbon Dioxide tester, we would test each sample for 30 minutes at 2 minute intervals and record the results. Calf A was fed a diet of feed/grain and hay for 5 days and calf B was fed silage and hay for this same 5 day period. For the next 2 days, the calves will switch diets and testing will not be recorded for these days allowing the calves to clear out their previous diet. Testing will begin after the second day and continue for the next 5 days. Calf A will be fed silage and hay, while calf B receives a diet of feed/grain hay. At the end of our project we determined which calf gave off the most carbon dioxide by using the overall average reading of carbon dioxide for each calf.</p> <p>Results The measurements in our experiment show that the diet of silage and hay when given to both calf A and calf B gave off the most amount of carbon dioxide.</p> <p>Conclusions/Discussion As stated in our hypothesis we believed that the diet of silage and hay would produce more carbon dioxide when excreted through calf wastes than grain/feed and hay would when excreted through calf wastes. Our hypothesis was correct for the overall average of each diet proves that the silage and hay diet produces more carbon dioxide when excreted through calf wastes than the feed/grain and hay diet.</p>	
Summary Statement "Cow Patties" of calves fed silage and hay release more carbon dioxide than calves fed feed/grain and hay.	
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