



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Jaclyn M. Parson	Project Number S0829
Project Title Agriculture and CO(2) Emissions: An Approach to Reduce Global Warming	
Abstract Objectives/Goals To use various soil treatments with Humates as the key component in treating soil for maximum crop production - the main purpose being to reduce the amount of CO2 generated and emitted. Methods/Materials <ul style="list-style-type: none">*12 Mason Jars with rubber septums that were installed in the lids*100g of soil*12Kg of water*12.6Kg of DYNAMEGA soil treatment*12.36Kg of Fulvex and Micronized Dairy Compost (MDC)*Syringe plus needle*Gas Chromatograph*HP Data Integrator Results <p>After completing my experiment and analyzing all of my data, the final calculations have contradicted my hypothesis completely. I predicted that the soil treated with Fulvex and Micronized Dairy Compost would generate and emit the least amount of CO2 while still benefiting the soil. After experimentation, the impact of the combination on the soil caused the CO2 generated to increase by 50.9% whereas the soil treated with DYNAMEGA decreased by -6.58%. Treating the soil with water caused the generated CO2 to increase by 20.42%</p> Conclusions/Discussion <p>What the results of my experiment have proven is that combining materials doesn't always have the most beneficial impact for soil treatments. The final outcome of my experiment proved that treatments with the main component being Humates are the most beneficial overall. Hopefully, with more expansive studies I will be able to provide growers with another powerful reason to use organic materials such as DYNAMEGA opposed to manure and urea. Growers do not realize the affect their choices have on society and the environment globally when treating soils. I was able to realize the full extent that soil treatment has in relationship to the Greenhouse Gas Effect which needs to be recognized and have attention drawn to it through continued research.</p> <p>I would greatly enjoy doing further research on this topic, while using crops grown in Monterey County to make the results more socially relevant. This, along with being approved by governing agencies and society as a whole will have a most positive impact for all to benefit.</p>	
Summary Statement To reduce the amount of CO2 flux (GREEN HOUSE GAS) that is emitted during soil treatment.	
Help Received UC Davis Extension Lab provided the Gas Chromatograph, and Dr. Husein A. Ajwa, Mona Othman, William Ntow	