



**CALIFORNIA STATE SCIENCE FAIR  
2016 PROJECT SUMMARY**

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| <b>Name(s)</b><br><b>Danika R. Flemming</b>  | <b>Project Number</b><br><b>S1806</b> |
| <b>Project Title</b><br><b>Investigating the Use of Agricultural Combustion Waste on Brassica Productivity</b>   |                                       |
| <b>Abstract</b><br><b>Objectives/Goals</b><br>The goal of this investigation was to determine if agricultural combustion waste has any affect on the productivity of brassica plants.<br><b>Methods/Materials</b><br>Apple wood combustion waste, cherry wood combustion waste, plain soil, distilled water, radish seeds, plastic cups, and an electronic balance. Measure the biomass of brassica plants after two weeks of being grown with the addition of different types and amounts of agricultural combustion waste.<br><b>Results</b><br>According to the data, there is no statistically significant effect on the productivity of Brassica when agricultural combustion waste is added to the soil up to 30% ratio infiltration. The standard errors range between 0.001 and 0.002 and display complete overlap in all graphs which means the data that was significantly different occurred by random chance rather than an actual effect caused by the agricultural combustion waste.<br><b>Conclusions/Discussion</b><br>During my investigation, I found that the addition of agricultural combustion waste to Brassica plants will not to statistically significantly affect the productivity of the plant. These results are important because they display that these two types of wood ash in 10%, 20%, and 30% increments do not alter the growth of Brassica plants. In agricultural, instead of disregarding the combustion waste created, it can be infiltrated into the soil without negative effects. Also, no extra measures need to be taken to prevent the plants from interfering with the waste. |                                       |
| <b>Summary Statement</b><br>I found that the addition of agricultural combustion waste has no statistically significant affect on Brassica productivity.   |                                       |
| <b>Help Received</b><br>I designed the project myself, but had help conducting it by my designated supervisor and my biology teacher.  |                                       |