



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Corlin L. Palmer	Project Number 31126
Project Title The Utilization of Palm Waste for the Production of Charcoal	
Abstract Objectives/Goals Hundreds of tons of palm leaves are sent to our overfilled landfills every day, while forests are being depleted to produce charcoal. The purpose of this project is to solve both of those problems. Based on my research on charcoal, I believe that commercial and homemade production methods can be adapted in order to efficiently make charcoal out of palm waste. Methods/Materials To do this, I will gather palm waste, chop it up into small bits, and burn them in a barbecue. While burning, I will cut off the oxygen supply to the burning charcoal and let them smolder and turn into char. I will then blend the charred palm into a fine powder and mix it with starch and water to hold the briquette together. After drying the briquettes in an oven, they will be ready to burn in a barbecue. Results After some trial and error, I was able to make nicely sized briquettes out of palm charcoal. In the comparison of my charcoal to the Kingsford brand charcoal, the palm charcoal outperformed its competitor in a few tests, but was undeniably a bit worse than its commercial rival. Conclusions/Discussion I believe with the right machinery and enough time to perfect its creation, the palm charcoal could ultimately be superior to current commercial charcoal, being produced at a lower cost while saving the environment at the same time.	
Summary Statement By making charcoal out of palm waste, many environmental problems could be solved.	
Help Received Mother helped with arranging and gluing the board.	