

Manure to Energy

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This science fair project is about energy in different types of livestock manure. Each manure will be burned with wood chips and the temperature will be taken. The types of manure that will be used are horse, cow, goat, sheep, chicken, pig, and rabbit manure. Place 15g of wood chips in a pile with 30g of horse manure. Put 100g of water in a tin can. Place the thermometer in the can without the thermometer touching the bottom or the sides. Place the can above the pile and start the pile on fire. Start the timer and take the temperature every minute. Once the fire has gone out properly dispose of the ashes. Repeat steps 1-5 with the remaining types of manure. Rabbit - 5 minutes, 125 degrees fahrenheit. Goat - 5 minutes, 120 degrees fahrenheit. Horse - 7 minutes, 125 degrees fahrenheit. Chicken - 6 minutes, 105 degrees fahrenheit. Cow - 6 minutes, 110 degrees fahrenheit. Sheep - 5 minutes, 115 degrees fahrenheit. Pig - 6 minutes, 110 degrees fahrenheit. In this experiment, the horse manure and the rabbit manure burned the hottest. Those types of manure both got to the temperature of 125 degrees fahrenheit. However the horse manure burned longer than the rabbit manure. The horse manure burned for 7 minutes and the rabbit manure only burned for 5 minutes. The manure that had the least amount of energy was the chicken manure. It burned for 6 minutes but only got to a temperature of 105 degrees fahrenheit. My hypothesis was wrong because I thought that the cow manure would burn the hottest and the longest. The cow manure and the pig manure both burned for 6 minutes reached a temperature of 110 degrees fahrenheit.