Poop to Power! Constructing Biogas Generators for Household Use

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The purpose of this experiment was to investigate which homemade biogas generator was the best one for daily use in a household. Five different designs of biogas generators were built based on industrial biogas generator designs such as the Complete Mix Digester, Two-Stage Digester and Covered Storage Generator. Then run tests to find the price of each design, volume of the entire system, amount of leakage, steady temperature and weight. Use of this criteria and a design matrix determined the best design. Digester 5, composed of a wine bottle, accumulated the most amount of points on the decision matrix. Although it held the least amount of material, it was the best at sustaining a high temperature and containing the gas. This result suggests that this biogas generator would be the best design to implement within a household setting because it would be both efficient and practical.

Awards Won: