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Lend Me Your Ears!

The purpose of this project is to determine whether or not it takes more than one gallon of fossil fuels to produce one gallon of ethanol. This will benefit mankind because the outcome will determine which energy source is better for the environment, therefore helping out the Earth environmentally and perhaps allowing mankind to dwell longer on Earth. The procedure is to first, contact the Ladd family and ask them questions about producing corn and how much fossil fuel goes into growing it. Second, I contacted the Sterling ethanol plant and scheduled a time to visit. Third, I spent a day at the ethanol plant recording and collecting data on ethanol production. Finally, I put all of the collected data together to determine if ethanol or fossil fuels are better for the environment. In the data collected to grow a 50 acre crop of corn or 7,500 bushels of corn, it took 770 gallons of fossil fuels. To ship the corn to the ethanol plant, produce the ethanol using the wet milling process, and ship the ethanol to the gas station, it took an average of 13,700 gallons of fossil fuels and natural gas. It was also determined that one bushel of corn can produce 2.8 gallons of ethanol which for 7,500 bushels of corn would equal 21,000 gallons of ethanol. Ethanol comes out ahead by about 8,300 gallons when compared to fossil fuels. In conclusion, based on this data the researcher found that ethanol production has a positive net energy balance when compared to fossil fuels used in the production.