

United States Department of Agriculture Natural Resources Conservation Service



Delaware

**ENERGY MANAGEMENT (CSP Enhancements)
Delaware Enhancement Activity Job Sheet E-3**

January 2005

Name:

Renewable Energy Fuel

Payment = \$25.00 for every 100 gallons of the bio-based portion of renewable fuels.

Renewable Energy Fuel Uses – Renewable fuel is defined as “fuel grade ethanol and biodiesel.” USDA supports the conversion and use of biomass (plant-derived material) as an important energy resource for on-farm use to reduce dependence on petroleum-based fuels. At this time, biomass and its fuel derivatives represent the only renewable alternative for liquid transportation fuel. Using renewable energy fuels can eliminate the use of toxic fuel additives, such as MTBE (Methyl Tertiary Butyl Ether); reduce air and water pollution; and reduce greenhouse gas emissions.

- **Ethanol** – Ethanol is also known as ethyl alcohol or grain alcohol. Ethanol is used as an alternative fuel and as an octane-boosting additive to gasoline. The U.S. ethanol industry produced more than 2.81 billion gallons in 2003, up 32 percent from 2002’s annual production of 2.13 billion gallons¹. Although this number is small compared to fossil fuel use for transportation, ethanol consumption continues to increase dramatically.
- **Bioethanol technology** turns low-value plant material, such as corn stalks, sawdust, or waste paper into fuel ethanol.
- **Biodiesel** – Biodiesel is a clean burning alternative fuel produced from oils and fats derived from a variety of renewable resources, including oils derived from **canola seeds, corn seeds, sunflower seeds, flax seeds, and, most commonly, soybeans**. Raw biodiesel contains no petroleum, but it is usually blended with petroleum diesel to create a biodiesel blend. Biodiesel fuel is made from oils or fats – both hydrocarbons. The hydrocarbons are filtered, then mixed with an alcohol (typically methanol) and a catalyst (sodium or potassium hydroxide). The major products from this reaction are biodiesel fuel, which is an ester, and glycerol, which has commercial uses, such as in cosmetics, soap, and other products.

Biodiesel is simple to use, biodegradable, nontoxic, and essentially free of sulfur and aromatics. It can be used in compression-ignition (diesel) engines with little or no modification. Farm machinery is largely diesel powered.

Documentation Required: Receipts for purchases of renewable fuels, such as ethanol and biodiesel, must be maintained and provided as documentation for payment. Under CSP, payments will be made to qualifying producers for the **bio-based portion** of eligible blended fuels in 500-gallon increments. Attached Tables are to be used to assist with record keeping and converting fuel blends into components that may be eligible for payment as CSP enhancements. An example is provided to assist you.

Renewable Fuel Records

Date	Fuel Type	Amount (gallons)	Renewable Component (gallons)	Estimated Payment (\$\$)

Notes:

1. Renewable fuel (bioenergy, or biofuel) is defined as *biodiesel* and *fuel grade ethanol*.
2. Payments for renewable fuel under CSP are *limited to the bio-based portion* of eligible blended fuels in 500 gallon increments. For example, E-85 is 85% ethanol, therefore, for 589 gallons of ethanol, payment will be made only for the 500-gallon bio-based component.

Certification

I certify that I have installed/performed the enhancements listed in the Table above.

Name: _____ Date: _____

NRCS
 New Castle Agricultural Center
 2430 Old County Road
 Newark, Delaware 19702
 Phone: 302-832-3100

NRCS
 Kent County Agricultural Center
 800 Bay Road
 Suite #2
 Dover, Delaware 19901-4667
 Phone: 302-741-2600

NRCS
 Sussex County Agricultural Center
 408 North Dupont Highway
 Suite C
 Georgetown, Delaware 19947
 Phone: 302-856-3990

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