

Renewable Energy Fuel Use

Conservation Activity Job Sheet

(NJEnergy05)

Participant _____

Crop Year _____

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.



Under CSP, payments will be made to qualifying producers for the *bio-based portion* of eligible blended fuels in 500-gallon increments. The attached “Energy Management Worksheet” can be used to assist with record keeping and includes conversion charts to calculate the actual bio-based portion of fuel blends. Only the actual bio-based amount of fuel used is eligible for payment as CSP enhancements.

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.

¹ Renewable Fuels Association Ethanol Industry Outlook, 2004

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 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 documenting the annual purchases of renewable fuels, such as ethanol and biodiesel.

I certify that I used ethanol and/or biodiesel for farm use as specified on this job sheet.

Signature

Date

Conversion Charts (Renewable Fuel Portion of Blended Fuels)

Look-up tables are provided for converting the most commonly-used renewable fuel blends to their eligible renewable components. An example of a calculated method for E85 is provided in Line 1 of the Energy Management Worksheet.

B20 (Biodiesel) ¹	
Gallons of Blended Fuel	Equivalent Gallons of BioFuel
500	100
1,000	200
1,500	300
2,000	400
2,500	500
3,000	600
3,500	700
4,000	800
4,500	900
5,000	1,000
5,500	1,100
6,000	1,200
6,500	1,300
7,000	1,400
7,500	1,500
8,000	1,600
8,500	1,700
9,000	1,800
9,500	1,900
10,000	2,000
20,000	4,000
30,000	6,000
40,000	8,000
50,000	10,000
60,000	12,000
70,000	14,000
80,000	16,000
90,000	18,000
100,000	20,000

B10 (Biodiesel) ²	
Gallons of Blended Fuel	Equivalent Gallons of BioFuel
1,000	100
2,000	200
3,000	300
4,000	400
5,000	500
6,000	600
7,000	700
8,000	800
9,000	900
10,000	1,000
20,000	2,000
30,000	3,000
40,000	4,000
50,000	5,000
60,000	6,000
70,000	7,000
80,000	8,000
90,000	9,000
100,000	10,000
200,000	20,000
300,000	30,000
400,000	40,000
500,000	50,000

B05 (Biodiesel) ³	
Gallons of Blended Fuel	Equivalent Gallons of BioFuel
2,000	100
4,000	200
6,000	300
8,000	400
10,000	500
12,000	600
14,000	700
16,000	800
18,000	900
20,000	1,000
40,000	2,000
60,000	3,000
80,000	4,000
100,000	5,000
120,000	6,000
140,000	7,000
160,000	8,000
180,000	9,000
200,000	10,000
400,000	20,000
600,000	30,000
800,000	40,000
1,000,000	50,000

E85 (Ethanol 85) ⁴	
Gallons of Blended Fuel	Equivalent Gallons of BioFuel
100	85
118	100
200	170
300	255
400	340
500	425
600	510
700	595
800	680
900	765
1,000	850
2,000	1,700
3,000	2,550
4,000	3,400
5,000	4,250
6,000	5,100
7,000	5,950
8,000	6,800
9,000	7,650
10,000	8,500
20,000	17,000
30,000	25,500
40,000	34,000
50,000	42,500
60,000	51,000
70,000	59,500
80,000	68,000
90,000	76,500
100,000	85,000

E10 (Ethanol 10) ⁵	
Gallons of Blended Fuel	Equivalent Gallons of BioFuel
1,000	100
2,000	200
3,000	300
4,000	400
5,000	500
6,000	600
7,000	700
8,000	800
9,000	900
10,000	1,000
20,000	2,000
30,000	3,000
40,000	4,000
50,000	5,000
60,000	6,000
70,000	7,000
80,000	8,000
90,000	9,000
100,000	10,000
200,000	20,000
300,000	30,000
400,000	40,000
500,000	50,000

1. 20% of fuel is soybean oil as biofuel component
2. 10% of fuel is soybean oil as biofuel component
3. 5% of fuel is soybean oil as biofuel component
4. 85% of fuel is ethanol as the biofuel component
5. 10% of fuel is ethanol as the biofuel component

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