

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Sustainable Energy

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	5%	0%		
102	Soil, Plant, Water, Nutrient Relationships	5%	0%		
216	Integrated Pest Management Systems	40%	0%		
402	Engineering Systems and Equipment	10%	0%		
403	Waste Disposal, Recycling, and Reuse	20%	0%		
603	Market Economics	20%	0%		
	Total	100%	0%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	0.0	0.0
Actual Paid Professional	0.2	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2931	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
6975	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
19837	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The project consist of programs and demonstrations that 1) increased production of energy feedstocks (corn, soybeans, rapseed, cottonseed, peanuts, wheat and biomass); 2) worked with municipalities, counties and other public organizations to produce biodiesel from used cooking oil; 3) worked with entrepreneurs to develop renewable energy manufacturing plants; 4) worked with farmers and the general public to increase usage of renewable fuels.

2. Brief description of the target audience

The activities of the sustainable Energy Program target the following groups of stakeholders 1) feedstock producers and their representative groups that include, but are not limited to, the Alabama Soybean Producers, the Alabama Wheat and Feed Grains Producers, the Alabama Soybean and Corn Association and the Alabama Forestry Association; 2) fleet managers; 3) energy entrepreneurs; 4) municipalities, county governments and other public organizations; 5) feedstock production advisors including ACES agents and specialist, public and private agronomy advisors; 6) public policy makers requesting energy information; 7) governmental agency personnel including ADECA, DOE, USDA and NRCS; and 8) homeowners and others interested in energy conservation.

All educational programming efforts will target audiences without exclusion or discrimination, as specifically defined by ACES policy guidelines.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	920	47000	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
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Actual	3	0	3
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V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Participants reached

Year	Actual
2011	47900

Output #2

Output Measure

- video produced

Year	Actual
2011	3

Output #3

Output Measure

- web pages developed

Year	Actual
2011	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Knowledge gained
2	recomendations addopted
3	Energy saved and produced

Outcome #1

1. Outcome Measures

Knowledge gained

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Renewable fuels and lubricants decrease our reliance on imported oil.

What has been done

Conducted renewable energy workshop for Alabama Fleet Managers.

Conducted and publicised sustainable energy feedstock production demonstrations.

Results

Increased renewable fuel and lubricant useage.

Increased sustainable energy feedstock production.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
216	Integrated Pest Management Systems
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
603	Market Economics

Outcome #2

1. Outcome Measures

recomendations addopted

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Sustainable energy reduces our dependence on imported oil.

What has been done

Conducted renewable energy workshop for Alabama Fleet Managers.

Conducted research to increase sustainable energy feedstock production.

Results

Increased use of renewable energy and lubercants.

Increase yield of sustainable energy feedstock.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
216	Integrated Pest Management Systems
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
603	Market Economics

Outcome #3

1. Outcome Measures

Energy saved and produced

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Domestic sustainable energy decreases our use of imported oil.

What has been done

Conducted renewable energy workshop for Alabama Fleet Managers.

Conducted sustainable energy feedstock production research.

Results

Increased use of renewable fuels and lubricants.

Increased per acre yield of energy feedstocks.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
216	Integrated Pest Management Systems
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
603	Market Economics

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The Alabama Fleet managers gave the workshop a positive rating. When contacted they said they had increased biodiesel useage 2%.

The sustainable energy feedstock research increased crop yield as follows: ethanol feedstock 11.74 bushels per acre by controlling the south west corn borer and 14.08 bushels per acre by disease control and biodiesel feedstock yields increased 10.22 bushels per acre by applying chicken litter.

Key Items of Evaluation

Fleet managers and increased yield.