V(A). Planned Program (Summary)

Program # 16

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%		
131	Alternative Uses of Land	5%	0%		
211	Insects, Mites, and Other Arthropods Affecting Plants	10%	0%		
212	Pathogens and Nematodes Affecting Plants	10%	0%		
216	Integrated Pest Management Systems	10%	0%		
402	Engineering Systems and Equipment	15%	0%		
603	Market Economics	45%	0%		
	Total	100%	0%		

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Actual	1.0	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**
16944	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
26192	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
104055	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

1. Conducted feedstock disease control and insect control field test.
2. Conducted feedstock energy efficent irrigation demonstration.
3. Worked with Alabama municipalities to produce biodiesel from used cooking oil.
4. Updated "Alabama Home Energy Options" timely information sheet.
5. Produced two energy videos and Alabama Energy web page.

2. Brief description of the target audience

1. Feedstock producers.
2. Alabama municipal fleets.
3. Alabama homeowners.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA	{NO DATA	{NO DATA	{NO DATA
Actual	1398	27000	0	0

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

Patent Applications Submitted

Year: 2010
Plan:
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Total of the energy saved of the irrigation project was 9894 gallons of diesel fuel.

Year	Target	Actual
2010	{No Data Entered}	9894

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Over the projected 20 year life of the low pressure nozzles on the projects 809 acres, an estimated energy savings of 197,881 gallons of diesel fuel can be expected.

Outcome #1

1. Outcome Measures

Over the projected 20 year life of the low pressure nozzles on the projects 809 acres, an estimated energy savings of 197,881 gallons of diesel fuel can be expected.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	197881

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Six farmers in five North Alabama counties participated in this project with a total of 809 acres irrigated with low pressure nozzles. All the project farmers said they were satisfied with the energy savings and crop performance with the low pressure nozzles.

Over the projected 20 year life of the low pressure nozzles on the projects 809 acres, an estimated energy savings of 197,881 gallons of diesel fuel can be expected.

A presentation detailing this project was made at The Alabama Precision Agriculture Field Day and Tour, The Alabama Soybean and Corn Association Annual meeting and at The Alabama Precision Agriculture Conference.

A video was produced about the project that can be viewed online at http://farmenergy.blogspot.com.

What has been done
Six farmers in five North Alabama counties participated in this project with a total of 809 acres irrigated with low pressure nozzles. All the project farmers said they were satisfied with the energy savings and crop performance with the low pressure nozzles.

Results
Over the projected 20 year life of the low pressure nozzles on the projects 809 acres, an estimated energy savings of 197,881 gallons of diesel fuel can be expected.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources

402	Engineering Systems and Equipment
603	Market Economics

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes

Brief Explanation

Drough limited feedstock production.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Comparisons between program participants (individuals, group, organizations) and non-participants

Evaluation Results

Estimated Energy Savings

Six farmers in five North Alabama counties participated in this project with a total of 809 acres irrigated with low pressure nozzles. All the project farmers said they were satisfied with the energy savings and crop performance with the low pressure nozzles.

Total energy savings for 2010 of the project was 9894 gallons of diesel fuel.

Over the projected 20 year life of the low pressure nozzles on the projects 809 acres, an estimated energy savings of 197,881 gallons of diesel fuel can be expected.

A presentation detailing this project was made at The Alabama Precision Agriculture Field Day and Tour, The Alabama Soybean and Corn Association Annual meeting and The Alabama Precision Agriculture Conference.

A video was produced about the project that can be viewed online at http://farmenergy.blogspot.com.

Key Items of Evaluation

Estimated Energy Savings

Over the projected 20 year life of the low pressure nozzles on the projects 809 acres, an estimated energy savings of 197,881 gallons of diesel fuel can be expected.