

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Sustainable Energy

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
605	Natural Resource and Environmental Economics	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	2.0	0.0
Actual Paid Professional	3.9	0.0	1.4	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
36530	0	51508	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
476444	0	356546	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
6235	0	150	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Perform experiments to investigate renewable energy production.

- Develop methodologies and scientifically sound alternatives to fossil fuels
- Educate homeowners, business owners, farmers and agri-related businesses, youth and families about conservation and efficiency practices related to energy use.
 - Provide education and training to enhance bio energy related job development and careers.

2. Brief description of the target audience

- University faculty, staff and students
- School aged youth
- Families
- Homeowners
- Farmers
- Agri-businesses
- State agencies and organizations
- Industry partners
- Small businesses
- Entrepreneurs
- Policy and decision makers

3. How was eXtension used?

Farm Energy CoP
 Faculty developed collaborative educational products.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	305	304	0	0

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	5	10	15

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- -Scientific publications and patents produced -Participants reach through direct and indirect education -New methodologies and technologies developed

Year	Actual
2012	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Short Term - Increase knowledge, energy efficiency technologies and conservation practices related to energy use. Explore research strategies to replace fossil fuel consumption.
2	Medium Term - Participants in direct and indirect educational methods will adopt practices to conserve energy use and reliance on fossil fuels. Business owners will create and maintain green jobs/careers as a result of bioenergy development. Newly developed plants and technologies will be adopted to enhance energy independence.
3	Long Term - Fossil fuel consumption will be replaced with biofuels. Economic development will be enhanced through an increase of jobs and careers as a result of bioenergy development. Environment quality enhanced as a result of sustainable biofuel production and utilization.

Outcome #1

1. Outcome Measures

Short Term - Increase knowledge, energy efficiency technologies and conservation practices related to energy use. Explore research strategies to replace fossil fuel consumption.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #2

1. Outcome Measures

Medium Term - Participants in direct and indirect educational methods will adopt practices to conserve energy use and reliance on fossil fuels. Business owners will create and maintain green jobs/careers as a result of bioenergy development. Newly developed plants and technologies will be adopted to enhance energy independence.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Renewable Energy Education and Technical Assistance

Farmers and other involved in agriculture throughout New Jersey rely on substantial energy inputs to operate their businesses. With rising energy prices conservation and new economical sources of energy are needed.

What has been done

The program goal was to enhance New Jersey National Resources Concentration Service (NRCS) staff and their clientele awareness and knowledge of agriculture energy conservation and alternatives through the development and dissemination of two workshops, 10 fact sheets and a demonstration video.

Results

USDA-NRCS staff in New Jersey increased their awareness and knowledge of energy conservation and renewable alternatives. They will now be increasing their efforts in conducting/sponsoring Farm Energy Audits and implementing programs on individual farms to reduce fossil fuel energy consumption.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Long Term - Fossil fuel consumption will be replaced with biofuels. Economic development will be enhanced through an increase of jobs and careers as a result of bioenergy development. Environment quality enhanced as a result of sustainable biofuel production and utilization.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Other (Consumption Practices)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

See Qualitative Outcomes

Key Items of Evaluation

See Qualitative Outcomes