

V(A). Planned Program (Summary)

Program # 3

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
123	Management and Sustainability of Forest Resources			38%	
201	Plant Genome, Genetics, and Genetic Mechanisms			19%	
206	Basic Plant Biology			6%	
402	Engineering Systems and Equipment			25%	
605	Natural Resource and Environmental Economics			5%	
609	Economic Theory and Methods			7%	
	Total			100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	1.0	0.0
Actual Paid Professional	0.0	0.0	2.5	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
0	0	84429	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	110571	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	125676	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct scientific research projects. Publish peer-reviewed journal articles and other publications. Present findings at professional and public meetings and at other venues. Educate undergraduate and graduate students.

2. Brief description of the target audience

Maine forest resources industry, other scientists, Cooperative Extension staff, state and federal policymakers, regulators, and legislators, classroom teachers

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

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

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

Patent Applications Submitted

Year: 2012

Actual: {No Data Entered}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	1	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of other publications
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Number of research projects completed

Year	Actual
2012	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Develop in-process-line, real-time sensor components that incorporate NIRS information for process control and decision-making in woody biomass process stream
2	Development of products of value for use as bio-based fuel from the basic components of lignocellulosic materials
3	Novel wood adhesives containing the solid residues of biomass fermentation from biofuels/biochemical research that reduce or eliminate the use of petrochemical-based adhesive systems
4	Better understanding of synthetic photosynthesis as it relates to alternatives to biofuel production

Outcome #1

1. Outcome Measures

Develop in-process-line, real-time sensor components that incorporate NIRS information for process control and decision-making in woody biomass process stream

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Development of products of value for use as bio-based fuel from the basic components of lignocellulosic materials

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Novel wood adhesives containing the solid residues of biomass fermentation from biofuels/biochemical research that reduce or eliminate the use of petrochemical-based adhesive systems

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Better understanding of synthetic photosynthesis as it relates to alternatives to biofuel production

Not Reporting on this Outcome Measure

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

Brief Explanation

Faculty for four ongoing projects in this program area left the University of Maine for positions at other universities, and their projects were terminated. There is currently one active project in this program area, which just started this past fall so there are no results yet.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Nothing to report.

Key Items of Evaluation