

Energy in Crop Agriculture

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Energy in Crop Agriculture

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems	50%		0%	
402	Engineering Systems and Equipment	35%		0%	
404	Instrumentation and Control Systems	15%		0%	
Total		100%		0%	

V(C). Planned Program (Inputs)

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	10.0	0.0	0.0	0.0
Actual	10.0	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 280000	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching 420000	1890 Matching	1862 Matching	1890 Matching
	0	0	0
1862 All Other 0	1890 All Other	1862 All Other	1890 All Other
	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•Develop presentation materials and develop resource materials •Develop and plan workshops, demonstrations and meetings
 •Transcribe scientific research into useable resources •Continuing education demonstrations - fuel use, tillage and N use
 •Cooperate with NDSU Research Extension Centers - conduct rate N calibrations and tillage fuel use studies

2. Brief description of the target audience

•Extension staff •Crop consultants •Agricultural industry personnel •Agricultural finance people
 •Government workers •Growers

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1000	4500	0	0
2008	1400	5000	0	0

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

Patent Applications Submitted

Year Target

Plan: 0

2008: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	0	
2008	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

{No Data Entered}

Not reporting on this Output in this Annual Report

Year	Target	Actual
2008	{No Data Entered}	{No Data Entered}

V(G). State Defined Outcomes

O No.	Outcome Name
1	Number of farmers gaining knowledge on new tillage options
2	Number of farmers gaining knowledge of energy alternatives
3	Number of farmers gaining knowledge of energy potential and availability of different crops
4	Number of farmers that changed their tillage habits to no-till
5	Number of farmers that make greater use of soil testing for fertilizer needs
6	Number of acres under reduced tillage
7	Number of farmers using reduced energy technologies

Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
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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

Brief Explanation

Public policy, the economy and government regulations have lately spurred grower acceptance of energy programs, including reduced tillage, alternative fuels and reduced energy systems.

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

1. Evaluation Studies Planned

Retrospective (post program)

During (during program)

Evaluation Results

Evaluations from presentations and field days indicate a greater acceptance and adoption of all of the above programs, including soil testing, reduced energy systems, no-till and reduced tillage and alternative fuels.

Key Items of Evaluation

Adoption of these energy systems will continue as cost of energy and fertilizer continue to increase.