

V(A). Planned Program (Summary)

Program # 19

1. Name of the Planned Program

Climate Change

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
132	Weather and Climate	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	5.0	0.0	1.5	0.0
Actual Paid Professional	6.6	0.0	1.3	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
85372	0	118170	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
85372	0	100623	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
730487	0	274556	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

Developed and conducted educational programs utilizing direct and indirect educational methods to

increase knowledge of and support adoption of management practices capable of mitigating the effect of weather and climate change.

AgriLife Research

The research response to this pressing issue is to generate reliable, verifiable data regarding carbon sequestration, carbon cycling, and interrelationships of cropping systems, livestock production and climate change. An example of this effort is using carbon dioxide from coal fired power generation as a feedstock for algae production. Research is also ongoing to develop and add value to co-products from algae production.

2. Brief description of the target audience

Research products and educational programs focusing on the issue of weather and climate change address target audiences including but not limited to producers, corporate businesses, landscape managers, water resource managers, decision makers, and others who identify themselves with this issue.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	11139	240077	393	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	0	9	9

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of educational programs conducted.

Year	Actual
2012	349

Output #2

Output Measure

- # of research related projects.

Year	Actual
2012	3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of people reporting knowledge gained through participation in educational activities.
2	# of people reporting a willingness to adopt practices through participation in educational programs.

Outcome #1

1. Outcome Measures

of people reporting knowledge gained through participation in educational activities.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	92

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Beyond the Drought was one of many programs conducted by Extension to educate ranchers on proper management of forage resources in drought. It was conducted in eight East Texas counties and focused on providing information on drought recovery of East Texas pastures and hay meadows. Practical suggestions, research results, and the knowledge needed to effectively manage pastures and hay meadows following a drought were provided. The program included discussions on the importance of soil fertility, the need for conservative stocking rates, and the need for time to allow pastures/meadows to rebuild their root systems after beneficial rainfall before restocking.

What has been done

Producers have taken the knowledge gained from this program back to their individual operations. To recover from a drought of the magnitude and intensity of that experienced in 2011, it requires rainfall, a period of rest for pasture recovery and an assessment of the forage base before restocking. The area impacted was in drought again for much of 2012, but producers have used knowledge gained to stop ill advised restocking before pastures recovered.

Results

Extension programming on the drought provided decision support for destocking and restocking pastures. It is estimated that Texas ranchers sold or moved out of state about 22% of the cow herd over a period of two years. Removing cattle helped preserve the forage base and reduce damage to natural resources. The results of education on management after the drought will not provide immediate results, as much of the state is still in drought and the impact of these practices will not be measured until after the drought.

Results include:

- * Attendees increased knowledge on drought recovery by 92%.
- * The survey indicated a high percentage of participants had intentions to adopt drought management practices (76.3%).
- * Participants anticipated a total economic benefit of \$9.30 per acre due to knowledge gained from this program.
- * This program was given at 6 locations throughout East Texas (including a total of 8 counties)

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

Outcome #2

1. Outcome Measures

of people reporting a willingness to adopt practices through participation in educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	76

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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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
- Other (changing programming areas)

Brief Explanation

The factors listed above could have either positive or negative effects on the educational programs and research activities. The issue of climate change requires an inter-disciplinary response to development of practices and sharing of information. External factors affecting individual disciplinary fields can impact the ability to develop and deliver information on weather and climate change.

Our regional climatic dynamics can have an extremely adverse effect on our applied systems research. Economic, appropriations, and policy changes will determine our ability to address focus areas. Government regulations will direct our focus as landowners and end-users seek our knowledge to address plant and environmental systems needs.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Participants in selected programming activities will be administered a Retrospective-Post Test immediately after an educational activity. The issue-based questions will record the knowledge/awareness of the participants before and after the activity. Case studies will be implemented to evaluate the effectiveness of specific educational programs at reaching their target audience.

Methods to address data collection will include sampling of research outcomes based on observation and portfolio reviews. Care will be given to maintain confidentiality within the project framework while allowing outcomes to be clearly recorded based upon level of importance to stakeholders.

Key Items of Evaluation

No additional findings to report.