

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Economic Infrastructure and Commerce

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
201	Plant Genome, Genetics, and Genetic Mechanisms	0%	0%	5%	
202	Plant Genetic Resources	0%	0%	3%	
315	Animal Welfare/Well-Being and Protection	0%	0%	9%	
601	Economics of Agricultural Production and Farm Management	30%	30%	20%	
602	Business Management, Finance, and Taxation	5%	5%	0%	
603	Market Economics	5%	5%	5%	
604	Marketing and Distribution Practices	30%	30%	5%	
605	Natural Resource and Environmental Economics	0%	0%	12%	
606	International Trade and Development	5%	5%	2%	
607	Consumer Economics	10%	10%	0%	
608	Community Resource Planning and Development	15%	15%	28%	
610	Domestic Policy Analysis	0%	0%	2%	
901	Program and Project Design, and Statistics	0%	0%	9%	
	Total	100%	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	26.0	2.5	28.0	0.0
Actual Paid Professional	58.0	7.0	28.2	0.0
Actual Volunteer	20.0	2.2	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
1278755	364239	732224	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
4509905	364239	3123449	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
77000	0	135952	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Research analysis includes assessment of market potential, market feasibility studies for new agri-industry ventures, buyer and consumer preferences studies, market segmentation analysis and buyer profiling, analysis of new product acceptance, analysis of marketing alternatives, and analysis of valuation of product attributes. To evaluate the impacts of various policies, management strategies, or economic conditions on a farm's bottom line and financial strength, we are developing a set of representative farms that encompass major segments of agriculture in Tennessee. Methods for evaluating risk include risk-based econometric models, risk-based mathematical programming models, generalized stochastic dominance criteria, dynamic optimization, and subjective probability assessment criteria.

The Extension MANAGE program helps families analyze their total farming business so they can make informed decisions regarding their future. Extension staff trained in farm and financial management help families to:

- review their current financial situation
- capitalize on strengths and reduce weaknesses in the farm business
- develop individualized farm and financial plans
- explore alternatives both on and off the farm
- evaluate capital investment opportunities including land and/or machinery purchases
- analyze likely consequences of changing the scope of enterprises
- determine appropriate production practices

In addition to individualized farm and financial planning assistance, Extension is will offer hundreds of workshops to help farmers improve their financial situation. For example, workshops will be offered in improved marketing, goal-setting, and strategic planning.

Although the MANAGE program will not remove uncertainty of the future, it will provide farm families with a clear understanding of their current financial situation and help them evaluate their alternatives for the future. Making informed decisions today may be the best way to prepare for tomorrow's opportunities. The educational program is offered at no cost to participating farm families in all 95 Tennessee counties.

Land is a great source of wealth in the African-American community. In addition to providing economic stability, land ownership is highly correlated to one's social and economic well-being. Many urban residents who desire to return to the land of their origin find themselves confronted by various obstacles in terms of retaining rightful land ownership. In addition to problems they face of landownership retention are efforts to engage in profitable land use development, and operate viable farming enterprises.

Production inputs have changed over the past two decades. As a result of this, there was a reduction in the number of crops produced. In-service training on "Small Farm Outlook" will continue to be conducted to make landowners aware of resources that are available to them for land retention and crop production. The training will provide information on ways to keep land through estate planning, lessening

their property, and legal issues for seniors (the aging population).

Effective community leadership is critical for the developing and sustaining healthy communities. It helps develop important networks, establish communication and provides community direction. Researchers have found evidence that leadership programs can financially benefit communities beyond the participants who formally participate in the leadership training program. A recent study found that for every \$1 invested in a community leadership program, there is a net return of almost \$3 to the same community.

2. Brief description of the target audience

- Limited-resource and small farmers
- Farmers transitioning from tobacco to other crops
- Policy-makers at the state, federal, and municipal level
- Businesses looking to expand or relocate to Tennessee

3. How was eXtension used?

Tennessee is represented by 108 eXtension members in 42 of the 59 approved Communities of Practice (CoP). Tennessee Extension personnel have addressed over 800 Frequently Asked Questions through eXtension. This Economic Infrastructure and Commerce Planned Program was enhanced through the service of:

- 10 Tennessee Extension personnel on the "Entrepreneurs and Their Communities" CoP, and
- four Tennessee Extension personnel on the "Network Literacy" CoP.

Tennessee Extension personnel shared implementation strategies, outcome measurement, and evaluation protocols with their CoP colleagues.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	147270	5103528	10835	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	33	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of exhibits displayed to promote program awareness and participation.

Year	Actual
2012	14489

Output #2

Output Measure

- Number of research-based publications distributed as part of this program.

Year	Actual
2012	1915

Output #3

Output Measure

- Organized an economic policy center that has developed working relationships with other policy centers, USDA, DOE, EPA, ORNL, TVA, EPRI, the Howard G. Buffett Foundation, the Pew Initiatives, other US universities, and academics and farm leaders internationally. (Ray)

Year	Actual
2012	0

Output #4

Output Measure

- In a simulation study using a statistical model, long-run employment growth of rural counties with highways funded by the Appalachian Regional Commission appears to be higher than peer counties that do not have access to this system. (Lambert)

Year	Actual
2012	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Land Ownership Information Program: Number of African-American landowners who increased their knowledge of property rights and responsibilities.
2	Land Ownership Information Program: Number of African-American landowners who developed farm management plans.
3	Land Ownership Information Program: Number of African-American landowners who developed estate plans to reduce the financial and legal risks farm family businesses face as they transition between generations.
4	Farm Financial Analysis and Planning: Number of farm families and rural business operators who implemented partial budgeting decisions (examples include sell calves now or later and evaluating equitable leasing arrangements)
5	Farm Financial Analysis and Planning: Number of farm families and rural business operators implementing improved record systems.
6	Farm Financial Analysis and Planning: Number of farm families who developed whole farm plans to improve their farm financial performance.
7	Tennessee Extension Leadership Development: Small businesses or non-profits developed by limited resource leaders.
8	Soil, Climate, and Tillage Effects on Yields (Larson)
9	Setting a Realistic Path to a Bioenergy Economy (De La Torre Ugarte)

Outcome #1

1. Outcome Measures

Land Ownership Information Program: Number of African-American landowners who increased their knowledge of property rights and responsibilities.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	204

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
607	Consumer Economics

Outcome #2

1. Outcome Measures

Land Ownership Information Program: Number of African-American landowners who developed farm management plans.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	62

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
607	Consumer Economics

Outcome #3

1. Outcome Measures

Land Ownership Information Program: Number of African-American landowners who developed estate plans to reduce the financial and legal risks farm family businesses face as they transition between generations.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	26

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
607	Consumer Economics

Outcome #4

1. Outcome Measures

Farm Financial Analysis and Planning: Number of farm families and rural business operators who implemented partial budgeting decisions (examples include sell calves now or later and evaluating equitable leasing arrangements)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1460

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #5

1. Outcome Measures

Farm Financial Analysis and Planning: Number of farm families and rural business operators implementing improved record systems.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	672

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #6

1. Outcome Measures

Farm Financial Analysis and Planning: Number of farm families who developed whole farm plans to improve their farm financial performance.

2. Associated Institution Types

- 1862 Extension

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)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #7

1. Outcome Measures

Tennessee Extension Leadership Development: Small businesses or non-profits developed by limited resource leaders.

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Soil, Climate, and Tillage Effects on Yields (Larson)

2. Associated Institution Types

- 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)

Soils and climate may be important factors influencing risk and expected return and the adoption of no-till by farmers.

What has been done

Our research found that whether no-tillage results in higher yields than tillage depend on soil texture, crop grown, rainfall, and geographic region.

Results

No-tillage performs better than tillage in the warmer and more humid climate of the southeastern United States; using no-tillage in the southeast also reduced the risk of having decreased yields. A sandy soil generally resulted in lower no-tillage yields. Larger precipitation was found to increase the risk of having lower no-tillage yields compared to tillage.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #9

1. Outcome Measures

Setting a Realistic Path to a Bioenergy Economy (De La Torre Ugarte)

2. Associated Institution Types

- 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)

DOE and USDA need data and analysis of feedstock production.

What has been done

In collaboration with the Energy Information Administration, the integration of POLYSYS into the National Energy Modeling System was completed.

Results

This integration will provide the outlook estimates for the agricultural and biomass sectors of Annual Energy Outlook.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
603	Market Economics
605	Natural Resource and Environmental Economics
610	Domestic Policy Analysis

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

In FY 2012, state appropriations in Tennessee were reduced across the board for all public agencies. For UT Extension, this was a \$2.5 million reduction from FY 2011 to FY 2012 in operating expenditures. Both UT and TSU Extension made programmatic changes to accommodate reductions. These changes included limiting postage, travel and printing.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

6th National Small Farm conference

Investigators: Bullock, F. D.

Performing Department: College of Agriculture, Human and Natural Sciences -- 3517

Start Date: 09/01/2011 **Termination Date:** 08/31/2012

Reporting period: 09/01/2011 to 08/31/2012

Outputs:

6th NATIONAL SMALL FARM CONFERENCE REPORT The 6th National Small Farm Conference was held September 18th - 20th, 2012, in Memphis, Tennessee. Dr. Sonny Ramaswamy, Director of the USDA's National Institute of Food and Agriculture (NIFA), gave the keynote address on creating and sustaining small farms. USDA Administrative officials, academia and non profit brought remarks at the opening general session. This conference's theme, "Promoting Successes for Small Farmers and Ranchers," brought together 725 participants representing small farmers, land-grant universities, community-based organizations, agricultural foundations, and other public and private sector organizations. A diverse panel of farmers discussed the opportunities and challenges facing small farmers, and scientists and educators shared research, extension, and education ideas to enhance small farm enterprises as well as improve the quality of life in farming communities. The preconference short courses included workshops on Food Safety for Small Farmers, Using New and Emerging Technologies, Evaluation Strategies, Whole Farm Planning and Grant Writing. Approximately 60 posters, 44 exhibits and 20 success stories were featured at the conference. With over 200 oral presentations and 65 break-out sessions, this train-the-trainer conference aims to strengthen partnerships and build capacity in the following areas: marketing opportunities, outreach for underserved communities, research and extension priorities, program planning and implementation, and alternative and traditional enterprises. Five educational tours were conducted covering Biodemensions/Solar farming systems, Organic Farms, Wineries, Farmers Markets and varied farming systems that were featured at the Ames Plantation. The overall goal of this conference is to promote the successes of small farmers and ranchers with a long term projection of ensuring that small farmers and ranchers enhance their capacity to earn higher income and improve the quality of life within their local communities. Additional conference details are provided at the conference website at www.tnstate.edu/smallfarmconference. The conference was co-hosted by NIFA, Tennessee State University, and the University of Tennessee. Conference proceedings will be posted on the conference website in the near future. Please direct any questions pertaining to this conference to Dr. Fitzroy Bullock, State Specialist, Integrated Pest Management and Small Farms, Cooperative Extension Program, Tennessee State University at fbullock@tnstate.edu or 615-963-5449.

Publications:

(None)

Outcomes/Impacts:

ANTICIPATED OUTCOMES OUTPUTS: These include sharing of practices learned at the conference; improve the already established national network system with peers from land grant universities with similar clientele needs and challenges; acquaint participants from across the nation with the numerous types of agricultural pursuits practiced in the area where farm tours will be held during the conference; Outcomes: Increased understanding of stakeholder participation; collaboration with stakeholders in developing tools which can be utilized to increase knowledge; conduct training that will allow for easy adoption and use of

new methods and improved technology; developing strategies that will enable small farmers to compete in the marketplace. **ANTICIPATED IMPACTS:** Improved quality of life; enhanced farm income and productivity; increased market opportunities; sustained productivity and success in replacing the growing number of retiring farmers and ranchers; increased number of new and beginning farmers; increased farm management skills; increased production and labor efficiency

Participants:

ATTENDANCE: Agricultural professionals, including Extension, small farm advisers, USDA agencies to include NIFA, NRCS, FSR, Rural Development, ARS, land grant university state specialists, county educators, community-based organizations, researchers, state agency personnel from TFBF, TDA, farmers, limited resource farmers, socially disadvantaged farmers and ranchers, beginning farmers, under represented farmers, unserved farmers, students and others with vested interests in small farm programs The 6th National Small Farm Conference - "Promoting the Successes of Small Farmers and Ranchers"--was held September 18-20, 2012, at the Memphis Convention Center in Memphis, Tennessee. Successes in small farm activities will be shared as well as innovative ideas in research, extension and outreach to strengthen collaboration and partnership among state specialists who work to ensure that small farmers and ranchers not only survive, but thrive in today's economy. This Conference will also serve as a forum to discuss the results of research geared towards addressing challenges facing small farmers and ranchers. Strengthening partnerships created at the five previous National Small Farm Conferences will continue to be a priority for the Memphis meeting. This conference will consist of short courses, oral presentations, exhibits, poster paper presentations and educational tours within Tennessee and Arkansas. **PROJECT JUSTIFICATION - CRITICAL NEEDS:** Small farmers face many challenges such as facing an agricultural economy where success is dependent on excelling in all areas of management. For many producers, marketing is the most challenging management area that needs to be addressed. Market planning and training programs will be developed that can be delivered nationally as a means of producing alternative enterprises, improving marketability such as developing and establishing cooperatives for niche crops with the ultimate goal of enhancing profitability.

Target Audiences:

According to USDA statistics, nearly 40% of the value of farm products in the US is still generated by small farms. The share may be declining, but we still depend upon small farms for a significant portion of our food. The loss of farms-and farm families-has had an impact on the fabric of rural and small-town life throughout the region. School populations have declined, forcing many rural communities to close or consolidate their schools, resulting in long and costly bus rides for the remaining students. Businesses in small towns suffer many pressures, but declining agricultural populations have accelerated their decline, and today many rural towns have more boarded-up windows than functioning stores. Our agricultural system is producing enough food for now, but at what cost? Current production relies heavily on unsustainable consumption of fossil fuels and water from aquifers built up over thousands of years. Pesticides and nutrients wind up in drinking water supplies and contribute to ecological and economic problems close to home and thousands of miles away. Small and moderate-sized farms tend to be more diversified than large farms, and in particular, they are more likely to integrate crop and livestock production, allowing for better nutrient cycling than highly specialized farms. They are better able to rely on ecological management rather than primarily on chemical inputs to manage fertility, pests, and diseases. They are less likely to engage in exploitative labor practices than large farms. And they tend to be innovators in sustainable food and fiber production. Not all small farms are diverse, sustainable, innovative, and good employers. Some large farms are all of those things. But it is often easier and more likely for small farms to have those attributes. In

part, it is a question of time. On small farms, there is more likely to be enough time to visit and observe each field. In part it is a question of complexity. The challenge of managing many fields and employees and a lot of area leaves less time and energy for the challenge of managing many different crops and experimenting with new techniques. In part it is also a question of capital. When you have invested in the specialized equipment needed to work a large farm it is financially inefficient to let it stand idle. As a result of these and other issues and concerns, agencies, universities and organizations have developed programs and activities to support small farms. The 6th National Small Farm Conference will provide an opportunity for educators, agency personnel, researchers, non-profits and farmers to share examples of unique and innovative programs that will help them to better understand and act on these challenging issues as well as promote successes of small farmers and ranchers.

Project Modifications:

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Key Items of Evaluation

6th NATIONAL SMALL FARM CONFERENCE REPORT:

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conference to Dr. Fitzroy Bullock, State Specialist, Integrated Pest Management and Small Farms, Cooperative Extension Program, Tennessee State University at fbullock@tnstate.edu or 615-963-5449.

COMMUNITY LEADERSHIP REPORT:

WHAT HAS BEEN DONE: Agents in 91 counties in reported 35,071 contacts through group meetings. 16,740 contacts were made through direct mail, telephone and email. Agents also made 4,285 contacts through client office visits and on-site visits.

IMPACT: The economic impact of Extension leadership programs was \$1,312,257 in increased revenue, one-time capital improvements and secured resources across the state of Tennessee. 2,468 of 2,663 participants reported increased involvement in community activities. 5,382 of 5,446 participants increased their awareness of economic, social, and environmental issues that impact their local communities. 3,811 out of 3,904 participants said that their knowledge of community assets, development opportunities and/or programs in their community increased.