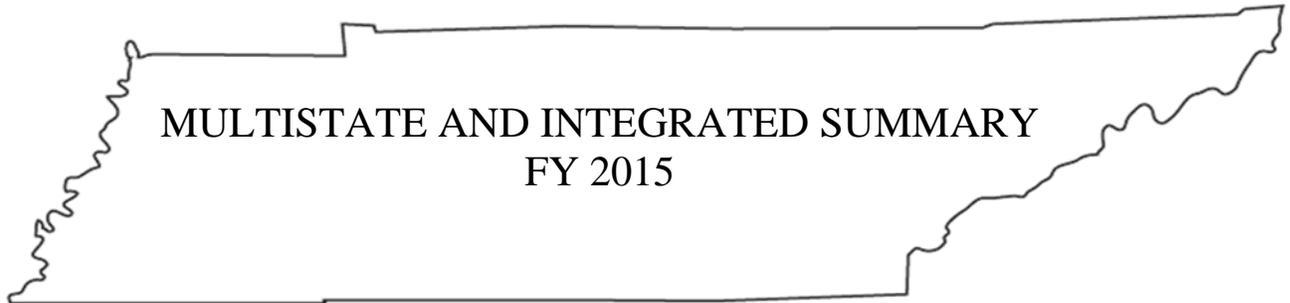


THE UNIVERSITY OF TENNESSEE EXTENSION



MULTISTATE AND INTEGRATED SUMMARY  
FY 2015

AREERA SECTIONS 105 and 204

SMITH-LEVER FUNDS

Submitted to:

United States Department of Agriculture

National Institute of Food and Agriculture

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## **I. Introduction**

In FY 2015, the University of Tennessee Extension met the multistate and integrated targets established for its Smith-Lever funds under Sections 105 and 204 of the Agricultural Research, Education and Extension Reform Act (AREERA) of 1998. The targets were recertified during FY 2008. This report is a summary of expenditures and specific program activities.

## **II. Multistate Extension Summary**

UT Extension programs that represented both multistate and integrated efforts have been listed only in the integrated programs section of this report.

### ***A. 4-H Positive Youth Development***

#### ***4-H Health Rocks (National)***

Tennessee Extension specialists conducted a webinar for 4-H Health Rocks state coordinators from 23 states. The content focused on effective ways to use evaluative data for program planning and accountability. Tennessee continues to have the largest Health Rocks program in the nation, and in the 2015 program year, more than 20,000 youth completed 10 hours of the Health Rocks curriculum.

#### ***National 4-H Congress (National)***

Tennessee Extension 4-H specialists worked cooperatively with Extension personnel from across the nation to implement the 2015 National 4-H Congress in Atlanta. Tennessee 4-H specialists provided leadership and operating support for this national event.

#### ***Southern Region 4-H Horse Championships (Regional)***

Tennessee Extension 4-H personnel assisted in conducting the Southern Region 4-H Horse Championships held in Raleigh, North Carolina. Youth demonstrated their hands-on equine management skills and gained knowledge in equine science.

#### ***4-H Volunteer Leader Conference of Southern States (Regional)***

Tennessee Extension 4-H specialists worked cooperatively with Extension personnel from across the Southern Region to plan and conduct the 2015 4-H Volunteer Leader Conference of Southern States in Eatonton, Georgia. The forum helped volunteer leaders to develop their skill set, cooperate with other volunteers from throughout the region, and strengthen 4-H programs in their local communities.

#### ***Southern Region 4-H Teen Leadership Conference (Regional)***

Tennessee Extension 4-H personnel worked collaboratively with State Extension Specialists in all Southern Region states in hosting a regional teen leadership conference at the Clyde M. York 4-H Camp in Crossville, Tennessee. This conference is jointly planned and conducted by the University of Tennessee, University of Kentucky, University of Georgia, and University of Florida. Extension professionals from these institutions work with an advisory group of 15 teens. More than 200 members, Extension personnel, and volunteers (a new attendance record) from across the region gained practical knowledge in implementing service-learning programs and supporting project groups in their communities.

## ***B. Agriculture and Natural Resources***

### ***Tri-State Beef Conference (North Carolina, Virginia)***

In 2015 beef producers began to experience a decline in what had been record prices for feeder cattle, cull breeding animals and finished cattle. Prices also continued to be volatile and sensitive to news both on the domestic and international fronts. Extension personnel from Tennessee, Virginia and North Carolina planned and conducted the fourth annual Tri-State Beef Conference in 2015. Regionally and nationally known speakers presented educational information on cattle health management, nutrition, respiratory disease management, and beef cattle outlook. The event was held in Abingdon, Virginia with 137 producers, 20 Extension personnel, and 46 agribusiness representatives. The producers were from eight states (Tennessee, Virginia, North Carolina, West Virginia, Kentucky, South Carolina, New York, and Ohio). All producers were surveyed at the end of the conference, and 100% indicated that they planned to adopt new practices. The economic impact of those new practices totaled \$211,600 in additional farm income.

### ***Household and Structural Integrated Pest Management Program (National)***

The University of Tennessee Extension's Urban Integrated Pest Management program has developed successful management strategies for pests found in and around structures. This success has brought our program national recognition. In 2015, 45 bed bug presentations were given to more than 1410 housing managers, residents, public health professionals, entomologists, graduate students, and pest management professionals to share our research results, to help assuage concerns about bed bugs, and to inform them of their pest management role. Residents in three low-income public housing apartment buildings now use bed bug monitoring devices to help detect low levels of bed bugs.

### ***Apicultural Programs (National)***

Agriculture depends on healthy honey bees, maintained by beekeepers to pollinate numerous crops. The University of Tennessee is one of 17 institutions collaborating to reverse managed bee decline. As lead institution, the University of Tennessee formed, certified, and maintained the eXtension Bee Health Community of Practice with Extension professionals representing more than 35 states and 5,943 subscribers (a 25% increase in subscribers over 2014). In 2015, Bee Health had 1,323,351 video views which increased 480% over 273,179 video views in 2014. We estimate Tennessee beekeeping research and extension programs have aided beekeepers to reduce their losses of colonies to parasitic mites and other causes by 15%. The value of each lost colony is approximately \$700.00 for bees, hive parts, medications and honey production. We estimate that beekeepers following recommendations have saved 11,500 colonies of bees valued in excess of \$8 million annually.

## ***C. Family and Consumer Sciences***

### ***eXtension Involvement (National)***

Tennessee Extension personnel have addressed over 800 Frequently Asked Questions through eXtension. In 2015, highlights of Tennessee Extension's Family and Consumer Sciences eXtension involvement included the following:

- 12 Tennessee Extension personnel served on the Community of Practice for *Families, Food and Fitness*.
- 11 Tennessee Extension personnel served on the *Financial Security for All* Community of Practice.
- Four Tennessee Extension personnel served on the *Food Safety* Community of Practice, including the leader, a specialist in the UT Extension Department of Family and Consumer Sciences.
- Two Tennessee Extension personnel served on the on the Community of Practice for *A,B,C's of Omega 3's*.
- Five Tennessee Extension personnel were active on the *Family Caregiving* Community of Practice.

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

### **III. Integrated Research and Extension Summary**

In cases where UT Extension integrated programs are also multistate programs, the states have been delineated in parenthesis.

#### ***A. 4-H Positive Youth Development***

##### ***4-H Common Measures Advisory Team (National)***

One Tennessee Extension evaluation specialist served as one of six national advisors in the National 4-H Common Measures Revision Task Force that worked to propose improvements to 4-H program evaluation. *4-H Common Measures* is an online software that features a common set of evaluation tools used by the Cooperative Extension System to assess positive youth development outcomes. In 2015, a prototype was developed that is more user-friendly and at a more appropriate reading level for the diverse audiences served nationally by 4-H programs.

#### ***B. Agriculture and Natural Resources***

##### ***Organic and Sustainable Crop Production Program***

Organic and Sustainable Crop Production Program is an integrated research and Extension initiative composed of faculty from six departments and centers in the University of Tennessee Institute of Agriculture. The group manages a 90-acre farm dedicated to organic production, research, and education in conservation tillage techniques, variety trials, organic pest management, reducing soil-borne pathogens and managing weeds, and assessment and encouragement of native bees. In 2015, Extension and research faculty continued their work with the Tennessee Organic Production Network, a group representing growers, producer organizations, industry, government officials and agencies to encourage organic crop research and Extension programs.

##### ***Field Crops Plant Pathology (National)***

In 2015, the University of Tennessee Extension continued an integrated research and Extension program to curtail diseases affecting row crops. A UT Extension Specialist organized and hosted the North Central Extension and Research Activity working groups for Wheat Disease and Soybean Disease in Washington, D.C. UT Extension's evaluation of plant disease management tools and strategies included over 70 experiments including many cooperative, regional projects. Savings to row crops producers in Tennessee via reduced fungicide costs and yield loss in field crops due to their increased understand of disease management strategies are conservatively estimated at greater than \$3 million in 2015.

##### ***Solar Energy and Energy Sustainability***

The University of Tennessee Department of Biosystems Engineering and Soil Science continued its integrated research and Extension program to promote solar energy and sustainability. This initiative was started in 2013, and impacts for 2015 included:

- A Tennessee broiler farm completed installation of a biomass-fired 3.5 Million BTU/hr boiler/hydronic heating system in cooperation with a UT Extension and Natural Resources Conservation Service, Conservation Innovation Grant. Using this renewable energy

heating system enables this producer to offset approximately 40,000 of gallons of LP gas usage per year.

- A Tennessee poultry producer is converting from incandescent lighting to LED lighting in two poultry houses, with energy savings of approximately 22,000 kWh and \$2,200 per year, and reduced greenhouse gases by 15.2 metric tons per year. In addition, switching to LED lighting saves reduces bulb replacement costs and labor up to \$600 per year.

### ***Quality Deer Management (National)***

In 2015, we continued our integrated research and Extension program in Quality Deer Management, and we taught 923 landowners from 31 states. Participants reported that they learned science-based strategies for managing white-tailed deer. The management of more than 700,000 acres across 31 states were impacted by this integrated research and Extension program.

### ***Agronomic Variety Testing Program (Kentucky)***

Agronomic crop producers in Tennessee and Kentucky need unbiased variety performance data on which to base their purchasing decisions. Replicated variety tests were conducted on corn, soybeans, wheat, and some specialty crops at seven of UT's Research and Education Centers. County Standardized Variety Trials were conducted on corn, soybeans, and wheat in large strip-trials on producer's farms in 28 Tennessee counties and five Kentucky counties. Data from all of these crop trials were compiled and published together on the variety trial website and printed copies were distributed to farmers, seed industry representatives, consultants and other interested clientele. Based on surveys conducted by extension agents with grain producers in northwest Tennessee, over 90% of the producers reported that they base their variety buying decisions on data provided in UT variety test publications. In 2015, the increased income per year to those grain producers was over \$100 million.

### ***Native Grasslands Management (National)***

Native grasslands were once abundant in the region and today can play a vital role in agricultural systems (forages, biofuels production) and conservation of imperiled ecosystems in Tennessee and across the eastern United States. An integrated, multi-disciplinary research and extension program has been established to develop and disseminate information about native grassland management strategies that are profitable and practical for Tennessee producers. During 2015, nine field days were conducted and active demonstration projects were maintained on seven Research and Education Centers in Tennessee, one site in Georgia, and three sites in Alabama. UT continued its work with the National Bobwhite Conservation Initiative, a group representing experts and stakeholders from 25 states. In 2015, UT established a new National Bobwhite Conservation program focused on shortleaf pine restoration.

## ***C. Family and Consumer Sciences***

### ***Community, Local, and Regional Food Systems (Kentucky, Mississippi, North Carolina, Virginia)***

A multi-state working group of 20 Extension and research specialists from five institutions (University of Kentucky, North Carolina State University, Mississippi State University, Virginia Tech, and the University of Tennessee) worked throughout 2015 to strengthen the region's local food systems. This group implemented common measures to document the impact of Extension's efforts in community, local, and regional food system initiatives. The group also applied for more than \$300,000 in funding opportunities.

### ***UT Obesity Research Center***

In 2015, seventeen UT Extension specialists from Family and Consumer Sciences, Animal Science, Plant Sciences, and Food Science and Technology continued their service on the UT Obesity Research Center, a multi-disciplinary team formed to study and take action in obesity prevention and treatment. This effort is collaboratively funded by the UT Office of Research, UT Extension, Tennessee Agricultural Experiment Station and the College of Education, Health and Human Sciences. Integrated programs continue to explore such issues as access to affordable food and increasing physical activity.

### ***Tennessee Shapes Up***

UT Extension Family and Consumer Sciences faculty implemented an integrated research and Extension program called *Tennessee Shapes Up* in 57 Tennessee counties in an effort to reverse the obesity trend in Tennessee. Impact data was collected using a behavior checklist survey. A select number of participants were surveyed to determine program impact. The behaviors measured are the healthy lifestyle practices essential in achieving and maintaining healthy weight and preventing chronic disease. Various program evaluations reached 2173 participants and demonstrated these results:

- 73% reported eating more grains.
- 85% reported decreased consumption of high-sugar foods.
- 83% reported engaging in physical activity for 30 minutes or more on 5 or more days per week.
- 43% reported improvements in blood pressure.
- 33% reported improvements in blood sugar.
- 80% reported using labels to make healthier choices.
- 60% reported losing weight. A total of 6,236 pounds were lost with average weight loss per participant of 6.16 pounds.

# IV. Summary of Multistate and Integrated Expenditures with Smith-Lever Funds

U.S. Department of Agriculture  
 Cooperative State Research, Education, and Extension Service  
 Supplement to the Annual Report of Accomplishments and Results  
 Actual Expenditures of Federal Funding for Multistate Extension and Integrated Activities

Fiscal Year: 2015

Select One:             Interim         Final  
 Institution:           University of Tennessee Extension  
 State:                    Tennessee

	Integrated Activities  (Hatch)	Multistate Extension Activities (Smith- Lever)	Integrated Activities (Smith- Lever)
<i>Established Target %</i>		7.4%	9.4%
<i>This FY Allocation (from 1088)</i>		\$8,921,886	\$8,921,886
<i>This FY Target Amount</i>		\$660,219	\$838,657
<b>Title of Planned Program Activity</b>			
A. 4-H Positive Youth Development		\$181,899	\$2,104,163
B. Agriculture and Natural Resources		\$970,130	\$2,688,653
C. Family and Consumer Sciences		\$60,633	\$1,052,081
<b>Total</b>		\$1,212,662	\$5,844,897
<b>Carryover</b>		-0-	-0-

**Certification:** I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays represented here accurately reflect allowable expenditures of Federal funds only in satisfying AREERA requirements.

  
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 Tim L. Cross, Dean, UT Extension

April 1, 2016  
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## **V. Contact Information**

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