

THE UNIVERSITY OF TENNESSEE EXTENSION



MULTISTATE AND INTEGRATED SUMMARY
FY 2010

AREERA SECTIONS 105 and 204

SMITH-LEVER FUNDS

Submitted to:

United States Department of Agriculture

National Institute of Food and Agriculture

April 1, 2011

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I. Introduction

In FY 2010, 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 Partner States (Maryland and North Carolina)

One of the big problems Tennessee faces is the number of youth who believe that “using drugs just once is not a big deal”. In a recent study of Tennessee 4-H Health Rocks participants, 1 in 4 youth held that belief before participating in the program. After the 4-H Health Rocks program, 12% of these youth had changed their minds. They now believe that using drugs – even once – is a big deal. Overall, an average of 9% more youth demonstrated the skills in dealing with peer pressure and stress and in making good decisions, including saying “no” to cigarettes.

Tennessee Extension specialists and administrators provided technical assistance and instruction to Extension specialists and administrators from Maryland and North Carolina. Both states made site visits to learn best practices from Tennessee’s highly-successful Health Rocks program. For several years, Tennessee has had the largest Health Rocks program in the nation, and in 2010, over 8,000 Tennessee youth completed 10 hours of the Health Rocks curriculum. The site visits focused on best practices for implementation, curriculum, fund development, accounting, accountability, and evaluation.

4-H Science Program Evaluation (Oregon)

The Science Process Skills Inventory, developed by researchers at Oregon State University (OSU), was adapted and validated for use in Tennessee 4-H Science programs. Researchers at both UT and OSU shared information to understand how to best measure the science process skills gained by 4-H youth participants. These instruments have helped to improve 4-H Science programs and communicate the program’s value to stakeholders. Prior to this collaboration, UT Extension did not have a standard tool to evaluate the 8,300 participants in 4-H Science outreach programs at Tennessee 4-H Camps.

2010 Southern Region 4-H Specialists Biennial Conference (Regional)

This conference, hosted by North Carolina State University, was held in Columbia, North Carolina. The entire conference program was a multi-state collaboration. Tennessee Extension specialists provided seminars in program evaluation and the Credit College 4-H program.

National 4-H Congress (National)

Tennessee Extension 4-H specialists worked cooperatively with Extension personnel from across the nation to implement the 2010 National 4-H Congress in Atlanta. Tennessee Extension personnel provided leadership and operating support for this national event.

Southern Region 4-H Leader Forum (Regional)

Tennessee Extension 4-H specialists worked cooperatively with Extension personnel from across the Southern Region to plan and conduct the 2010 Regional 4-H Leader Forum in Eatonton, Georgia. The forum helps 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 Center in Crossville, Tennessee. More than 100 teens, Extension personnel and volunteers from across the region gained practical skills and knowledge in leadership and civic engagement.

B. Agriculture and Natural Resources

Agritourism in Action Tour (Kentucky and Ohio)

UT Extension specialists collaborated with their colleagues in Kentucky and Ohio to provide a tour of successful agritourism operations. This tour targeted individuals who were interested in studying the feasibility of an agritourism operation in their own community. The three-day tour included eight agritourism enterprises in Tennessee, Kentucky and Ohio. Participants gained a new understanding of the risks and demands of operating an agritourism enterprise.

Support for Agriculture and Natural Resources in eXtension (National)

Tennessee has at least 15 Extension specialists that are active members of six eXtension Communities of Practice (CoP) leadership teams, including Imported Fire Ants, Horsequest, and Wildlife Damage Control.

Beltwide Cotton Conference (Regional)

At the 2010 Beltwide Cotton Conference in New Orleans, UT Extension Specialists presented a number of seminars regarding current research for enhanced production. Ongoing, multistate education for producers and professionals has been a key to effectively supporting the region's cotton industry.

Disaster Readiness and Recovery Curriculum (National)

In May 2010, severe storms, flooding, straight-line winds, and tornadoes affected most of Tennessee. Two-day rain totals in some areas were greater than 19 inches. The Cumberland River crested at 51.86 feet in Nashville, a level not seen since 1937, which was before the U.S. Army Corps of Engineers flood control measures were in place. All-time record crests were observed on the Cumberland River, and major flooding resulted in more than \$2 billion in damages and major disaster declarations by the Federal Emergency Management Agency (FEMA) for 47 Tennessee counties. Significant damages were experienced to infrastructure, housing, businesses, crops and the general economy. Communities were impacted by flooded roadways and power and communications outages, making it difficult to assess and report damages. Numerous businesses and residences were damaged by the floods, creating enormous direct and indirect losses for communities.

As the flooding event was developing, the Extension Disaster Education Network (EDEN) was already responding with information on the UT Extension website and with information on the EDEN national website. Some selected activities included:

- The Louisiana State University AgCenter made available a set of flood response and recovery fact sheets that were placed on the UT Extension website very quickly and disseminated throughout Tennessee.

- UT Extension crop and management specialists broadcasted information regarding replanting options and expected residual fertilizer and herbicide levels in flooded soils.
- An Internet-based Tennessee response notes form was created, modeled on the national EDEN response notes system, for county Extension agents to report the situation in their counties and request information and assistance. Summary reports were developed from the county reports and submitted to the national EDEN response notes, which were subsequently used by various USDA NIFA offices.
- The Tennessee response notes information was valuable to the FEMA Long-Term Recovery Task Force in assessing agricultural impacts because FEMA was unable to obtain damage assessments from any other entities in a timely manner. This reporting form can be used for any future event with only a minor adaptation.
- More than 200 wood moisture meters, purchased by UT Extension, were sent to local Extension Offices for training homeowners and contractors in determining when structures had been adequately dried to minimize risks of mold developing when homes were rehabilitated after the floods.
- A short video was produced to explain how various types of wood moisture meters function, and how to use the UT Extension meters.

On behalf of EDEN, UT Extension was awarded a USDA NIFA Special Needs project to develop curriculum materials for incidents that are catastrophic in scope. A multidisciplinary team of EDEN delegates is now developing curriculum materials for catastrophic incidents. Much of the curriculum, to be maintained and distributed via eXtension and EDEN, will be based on lessons learned during the Tennessee flooding

C. Family and Consumer Sciences

Program Evaluation Network (Regional)

In 2010, the UT Extension Specialist for program development and evaluation and the Associate Dean for family and consumer sciences provided a professional development seminar for all state-level family and consumer science programs leaders in the southern states. All 1890 and 1862 institutions were represented. The seminar focused on Tennessee's successful efforts in outcome-based evaluation, including the Program Evaluation Network (PEN) software. The Program Evaluation Network (PEN) is a custom-built software that contains valid and reliable questionnaires to measure the results of Extension programs. Since 2006, PEN has been used by Tennessee Extension Agents to survey more than 95,000 individuals in programs that served nearly 350,000 individuals. PEN has helped Extension professionals to improve their programs and to communicate program results to stakeholders. As a result of this seminar and follow-up webinars, Virginia Tech and Virginia State subscribed to the PEN software for the coming year.

Staff Development for Expanded Food Nutrition Education Program (EFNEP) Program Assistants (Georgia, South Carolina)

In 2010, a UT Extension Specialist coordinated a multistate training to implement a new training program for EFNEP paraprofessionals in Tennessee, Georgia, and South Carolina.

eXtension Food Safety Community of Practice (National)

In 2010, a UT Extension specialist served on the national leadership team to organize and provide content for the eXtension Food Safety Community of Practice. UT Extension developed 25 frequently asked questions and 25 content pages on food safety. A UT Extension specialist peer reviewed 25 additional frequently asked questions and 25 content pages and recruited content experts to join the community.

eXtension Food, Families and Fitness Community of Practice (National)

A UT Extension specialist coordinated 10 dietetic interns to write content pages for eXtension Food, Families and Fitness Community of Practice. Five content pages were peer reviewed and posted to eXtension.

21st Century Community Learning Centers (Kentucky, West Virginia, Ohio)

UT Extension is a participant in the U.S. Department of Education's 21st Century Community Learning Centers program. This federally funded grant program supports high-quality, research-based learning opportunities for students of greatest need. In 2010, UT Extension specialists taught Kentucky, West Virginia and Ohio Extension personnel as part of a 21st Century Quad-State Conference. The event focused on current issues and administration of youth programs conducted during out of school time.

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

National 4-H Science Study (National)

UT Extension's evaluation specialist served as one of two national evaluation liaisons for the National 4-H Science Study focused on youth engagement and knowledge. The liaison coordinated Institutional Review Board submissions and staff communications between and among California, Ohio, Texas, and Iowa Extension personnel and the study's principal investigators. This work was funded by Smith-Lever funds, Noyce Foundation and National 4-H Council.

B. Agriculture and Natural Resources

Wastewater Infrastructure (National)

A UT extension specialist served as leader for a multi-state team that researched the cost of decentralized wastewater treatment unit processes. Collaborators included Extension personnel and researchers from North Carolina, New Mexico, Missouri, and Minnesota. This integrated research and Extension project produced 21 peer-reviewed factsheets and a spreadsheet-based economic model. The factsheets and model were written for leaders and planners of small communities who now have tools for learning the economics of building their first wastewater infrastructure. To reach the widest possible audience, a webinar was conducted for 72 participants across the country and the materials are posted to the Water Environment Research Foundation website. This work was funded by Smith-Lever funds, and a grant from the Water Environment Research Foundation.

Precision Agricultural Technologies

An integrated, multi-disciplinary research, education, and outreach program has been established to develop and disseminate information about precision agriculture management strategies that are profitable and practical for Tennessee producers. Field days, county and multi-county meetings, on-farm demonstrations, news articles, publications, personal contacts and information gained from applied research projects were used to promote the adoption of precision agriculture technologies. In 2010, 575,479 acres were planted and managed using precision agriculture technologies such as variable rate applications of fertilizer and lime, plant growth regulators, defoliant and or pesticides. This work was funded through Smith-Lever funds and grants from Cotton, Inc.

Reducing Risks in Fruit and Vegetable Production (National)

Cucurbit downy mildew causes sudden, unexpected losses to cucurbit crops. UT Extension participated in a national monitoring and forecasting system for cucurbit downy mildew aimed at prudent use of the downy mildew fungicides. Sentinel plots that included susceptible varieties of cucurbit crops were established at three locations, to serve as warnings to growers that the disease had arrived. In both 2009 and 2010, these plots were the first cucurbits in the state to contract the disease, and growers were warned of its presence through radio programs, newsletters and group meetings. Avoidance of disease losses resulted in substantial savings to growers.

C. Family and Consumer Sciences

CYFAR Strengthening Communities Project Research (National)

Children raised in environments that do not support their social/emotional and literacy development during their first five years of life are less likely to be “ready for school” and are less likely to graduate high school. UT Extension specialists theorized that involving parents in weekly home visits and weekly parent support groups while also educating the child’s teacher through regular workshops would increase the likelihood that children would succeed in school. Of the 102 children enrolled in the program, UT Extension screened 45 enrollees for literacy proficiency in August, 2009. The enrollees were two and three year olds. Results showed that 60% of these children are below the proficient level. Similarly, self-reports by parents and teachers show that 28% of enrollees are below the proficient level in their social/emotional development. In May of 2010 we collected data on the 45 enrollees to assess their social/emotional and literacy development over the past “school year”. The percentage of children showing literacy skills below the proficient level decreased from 60% to 50%; similarly social/emotional skills at the “below proficient level” decreased from 72% to 65%. This work was funded by Smith-Lever funds and the U.S. Department of Education.

Healthy Steps for Tennessee’s Young Children (Maryland)

Too many young children are gaining unhealthy amounts of weight leading to chronic disease at increasingly younger ages. Healthy Steps, a nutrition and physical activity curriculum was implemented in 22 Tennessee counties in 2010. Extension made 7,135 direct contacts in Voluntary Pre-K, Head Start and center-based classrooms; 43,742 indirect contacts were made through exhibits, newspaper articles, publications and television. Approximately 958 contact hours were recorded by teachers and volunteers working with Healthy Steps. At the end of the program, 459 teachers completed surveys to document these outcomes:

- 434 of 459 (94%) of teachers surveyed reported preschool children in their classes were more actively engaged in physical activity.
- 478 of 492 (97%) of teachers reported preschool children in their classes were more willing to taste fruit.
- 461 of 492 (94%) of teachers reported preschool children in their classes were more willing to taste vegetables.
- 431 of 442 (98%) of teachers reported preschool children in their classes were more willing to taste whole-grain foods.
- 307 of 373 (82%) of teachers reported using physical activities from Healthy Steps at least three times per week.

In 2010, a UT Extension specialist also taught the Healthy Steps research and curriculum to University of Maryland Cooperative Extension faculty and staff.

UT Obesity Research Center

In 2010, six UT Extension specialists from Family and Consumer Sciences, Animal Science, 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. The Associate Dean for Extension Family and Consumer Sciences serves on the steering committee for the Center, and it is collaboratively funded by the UT Office of Research, UT Extension,

Tennessee Agricultural Experiment Station and the College of Education, Health and Human Sciences.

UT Extension's involvement in the Obesity Research Center is primarily in two critical research and Extension areas: population research and clinical interventions. Integrated programs explore such issues as access to affordable food, creating a more walk-able community, and building inter-agency partnerships. In 2010, UT Extension faculty continued a research project of the "Destination ImagiNation" participants, about 8,500 youth who attend an annual conference at the University of Tennessee, Knoxville campus. This long-term study is examining environmental and behavior patterns affecting obesity. The youth are part of a problem-solving and creative thinking competition, and the UT research team hypothesizes that participation in such activities produces positive health behaviors and outcomes.

Power U

Tennessee youth are among the most obese in the nation. This has serious health consequences and may impact their ability to be productive members of society. The *Power U* program was implemented in 37 Tennessee Counties. This included 443 classrooms implementing Power U. There were a total of 723 group meetings with 15,304 educational contacts. There were an additional 88,912 educational contacts through exhibits, newspaper articles, TV and radio programs, and other promotional items. A total of 673 volunteers hours were reported to support Power U.

Power U is an interactive curriculum that makes learning fun for both the student and teacher. Fourth graders learn how to make healthy choices and fun activities for increasing physical activity. Through tasting parties, students are exposed to a variety of new fruits and vegetables. The foods are presented in ways that are pleasing to 4th graders. Impact data was collected using a behavior checklist survey and through teacher and parent comments.

- 65% (n= 7281) decreased their intake of high-sugar foods including beverages.
- 82% (n=7,207) increased the time they spent in physical activity.
- 72% (n=7377) increased intake of dairy foods.

Increasing intake of dairy foods and decreasing intake of high-sugar foods increases their likelihood of the food's adoption and is important for healthy prevention of obesity. Increasing physical activity and decreasing intake of sugar helps maintain caloric balance essential for healthy weight. This integrated project has demonstrates that exposure to a variety of fruits and vegetables at a young age increases their likelihood of the food's adoption and is important for healthy prevention of obesity. Increasing physical activity and decreasing intake of sugar helps maintain caloric balance essential for healthy weight.

Tennessee Shapes Up

The rate of obesity in Tennessee is 32.9 percent compared to the national average of 27.1 percent. UT Extension Family and Consumer Sciences faculty has developed programs across the life span to help reverse the obesity trend in Tennessee. While our program participants report healthier lifestyles and some report losing weight or report that they were previously gaining weight and had prevented further weight gain, the problem shows no sign of improvement among the general population.

In 2010, there were 4,286,969 educational contacts through exhibits, newspaper articles, radio and TV programs and other indirect methods. In addition, there were participants reached 53,735 in 2,605 group meetings and demonstrations.

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. The number surveyed is indicated by (parentheses). These numbers represent individual participants rather than educational contacts.

- 72% (n= 5955) reported they increased consumption of whole grains.
- 73% (n=5387) reported they decreased intake of sugar-sweetened foods.
- 61% (n=1143) reported they improved their blood pressure.
- 51% (n= 1246) reported they improved their blood sugar.
- 70% (n= 5669) engaged in physical activity for at least 30 minutes five or more days during most weeks.
- 26% (n=4493) reported they lost an average of 5.3 pounds. This was a total of 9814 total pounds lost.

Increasing whole grain intake and reducing intake of sugar sweetened foods helps control appetite control blood sugar and leads to decrease intake of high-caloric, low-nutrient density foods. It also helps control blood pressure and blood sugar level. Engaging in at least 30 minutes of physical activity five or more days a week will prevent or delay diabetes. Physical activity is also important in controlling blood pressure, blood sugar and preventing heart disease. This integrated research and Extension program was made possible through Smith-Lever funds.

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: 2010

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>		10%	15%
<i>This FY Allocation (from 1088)</i>		\$8,583,627	\$8,583,627
<i>This FY Target Amount</i>		\$858,363	\$1,287,544
Title of Planned Program Activity			
A. 4-H Positive Youth Development		\$350,023	\$226,118
B. Agriculture and Natural Resources		\$816,719	\$1,808,941
C. Family and Consumer Sciences		\$129,637	\$791,412
Total		\$1,296,379	\$2,826,471
Carryover		-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.


 Tim L. Cross, Dean, UT Extension

March 31, 2011

V. Contact Information

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