

Advancing Tennessee

Statewide Economic Assessment

FY 2013

UT Extension extends the knowledge and expertise of the University to the people of Tennessee through agents and specialists in all 95 counties of the state. Educational programs in 4-H youth development, agriculture and natural resources, family and consumer sciences, and community economic development produce substantial returns to the state. Using research, questionnaires, observations, and sales records, an economic impact was estimated at **more than \$487 million** from July 1, 2012 through June 30, 2013 for statewide educational programs.

Recurring Economic Impacts – over \$341 million – 6,836 jobs created or maintained

Recurring economic values (increased revenue, increased savings, and one-time capital purchases) for up to two years after program

Crop Variety Trials, Pest Control, Irrigation, Marketing, and Precision Agriculture

Tennessee farmers produce about 2.85 million acres of oilseed, grain and cotton crops. UT Extension crop variety testing data is used extensively by 80% of these farmers to select the seed that they use to plant their crops. Results from the variety testing program have helped farmers increase yields by identifying the varieties that will perform best in their farming operations. In 2013, the higher yields resulted in approximately \$196.8 million in additional income to Tennessee farmers. Farmers reported \$3.9 million in reduced pest control costs by following Extension recommendations for controlling insects, weeds, or plant diseases. Farmers increased the number of irrigated acres used for corn, cotton, and soybean production by 62,000 acres. Based on UT research, average yield increases from irrigation resulted in an additional \$18.3 million in farm income. Based on an average cost of \$900 per acre, Tennessee row crop producers invested more than \$59 million in their local economy by purchasing center pivot irrigation equipment. Row crop producers increased returns by \$3.6 million on 132,000 acres by using forward pricing market opportunities as compared to selling at harvest. Cotton producers earned an additional \$650,000 in farm income through the adoption of precision agricultural technologies.

Forage Systems

UT Extension educated farmers on the benefits of warm-season grasses, clover, and stockpiling tall fescue. Extension also demonstrated hay storage, feeding methods to reduce waste and spoilage, and broadleaf weed control. Tennessee farmers saved more than \$19 million from better forage production, including following fertilizer recommendations, storage, and feeding practices.

Turfgrass Weed Management

UT Extension's turfgrass education program focused on technical assistance and education to economically control weeds, and the estimated savings to Tennesseans managing golf courses, sod farms, and athletic fields was \$10 million.

Agritourism and Community Economic Development

Tennessee agritourism operators look to Extension for education regarding budgeting, safety, technical assistance, and more. A 2013 survey of 200 agritourism operators showed that as a result of Extension programs, sales increased by a combined \$7.5 million. Other Extension community economic development programs produced an estimated \$1.3 million in increased revenue and capital purchases; examples included assisting local charities to obtain grant funds and providing assistance to small businesses.

Saving Our Bees

More than 100 Tennesseans completed the UT Extension Beemaster program in 2013. These beekeepers learned how to save honeybee colonies from various catastrophes, including parasitic mites, with an estimated 10,500 bee colonies saved. The total value of the saved colonies, hive parts, and honey production is valued at \$5.7 million.

4-H Centers

UT Extension operates three 4-H Centers across the state, providing summer camping and year-round educational experiences. The 4-H Centers are funded by user fees and provide an economic impact to the communities where they are located by employing staff and purchasing equipment, food, and supplies with a local annual impact of more than \$2 million per location.

Urban Integrated Pest Management and Pesticide Safety Education Program

UT Extension taught more than 1,600 pest management professionals how to effectively manage pests found in and around structures, saving an estimated \$835,000 to the pest management industry. The Pesticide Safety Education Program had nearly 700 certifications and re-certifications; research has estimated annual benefits at \$4.7 million.

Optimizing Nursery, Fruit, and Vegetable Production

Tennessee nursery growers depend on UT Extension's educational programs and plant, pest and soil diagnostic services to produce and market healthy crops. Growers realized more than \$1 million in increased revenue or savings as a result of Extension recommendations. Tennessee's commercial fruit and vegetable growers realized more than \$427,000 in increased savings and revenue by following advice from Extension agents and specialists regarding variety selection, management, and marketing.

Optimizing Animal Production

Extension agents and specialists formulated 1,480 custom rations based on forage sample test results by the UT Soil, Plant and Pest Center. Past research has shown that each ration results in a mean savings of \$1,125 in reduced annual feed costs. Tennesseans realized \$1.6 million in reduced feed costs for cattle, sheep, goats, and horses. Tennessee horse owners depend on UT Extension's research-based programs for horse health and nutrition. UT Extension taught rotational grazing to increase forage production, vaccinations, dental care, and correct deworming practices. These practices helped 342 horse owners, owning more than 1,000 horses, to save a combined \$1.2 million.

One-Time Economic Impacts – over \$146 million

One-time non-recurring economic values

Nutrition Education

Family and Consumer Sciences nutrition education programs reach approximately two million Tennesseans annually through group meetings, worksite sessions, television, and radio programs. Nutrition education studies have found cost/benefit ratio of \$1.00/\$10.64. This translates to a return of over \$79.6 million for the investment in UT Extension's nutrition education programs for the state of Tennessee.

Health Literacy

Increasing health literacy and adopting healthy habits such as increasing exercise and participating in health screenings have shown to improve health and reduce the risk of many chronic diseases, such as diabetes and high blood pressure. For every dollar spent on UT Extension Family and Consumer Sciences health education programs, \$25 is saved on direct medical costs and indirect expenditures, resulting in a \$50.7 million benefit to Tennessee.

Tennessee Saves

The Tennessee Saves program teaches personal savings and financial management. 50% of participants increased their savings or investment, generating an annual estimated savings/investment of \$4.4 million. In addition, 33% reduced debt an average of \$208 per month, for a total estimated debt reduction of more than \$1.1 million annually.

Tennessee 4-H Scholarships

UT Extension's 4-H program is the largest youth development program in the state, serving more than 320,000 participants each year. Over 105 scholarships totaling \$81,550 were awarded for travel and post-secondary education.

Better Beef Marketing and Farm Financial Planning

Experts estimate farmers earned an average of \$8 per head more by managing cattle according to Extension's beef quality assurance program and \$25 per head by selecting bulls based on genetic potential. As a result of these programs, farmers realized \$3.4 million in additional sales revenue. UT Extension assisted farmers with preparing and implementing financial plans for their farms, increasing cash income by a combined \$1.8 million this year.

Volunteerism

UT Extension agents and specialists managed volunteers for various programs and services. Volunteers extended the education offered by paid staff, and contacted over 700,000 additional Tennesseans through their service. Using the Independent Sector's dollar value of a volunteer hour in Tennessee (\$19.21/hour), the value of these volunteer efforts (272,767 hours served) was \$5.2 million.

Cost-Benefit Analysis – \$1 to \$9.81

For every \$1 in public funds invested in UT Extension programs, an estimated \$9.81 is returned to the people of Tennessee.

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