

# **SOLUTIONS** **for Tennessee**



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## **A. Introduction**

### ***Setting Priorities, Providing Solutions***

UT Extension pursued five data collections involving over 1,000 Tennesseans to formulate its 2006-2010 Strategic Plan:

1. An environmental scan was completed by 14 Extension professionals who considered trends, cycles, research and concerns affecting Tennessee.
2. All Extension personnel were surveyed, and asked to rate the issues of importance to their county. The issues were then summarized and submitted to the State Extension Advisory Council.
3. Council membership is composed of UT and TSU representatives and stakeholders. A modified nominal group technique was used to identify priorities.
4. In addition, 100 state leaders in business, government, agriculture, family and consumer sciences and youth development were surveyed as to which issues should be priorities for Extension from 2006-2010. Individuals surveyed included commissioners of state agencies, experts outside the land-grant university system, and leaders in business, industry and human services.
5. Next, the UT Human Dimensions Lab was employed to conduct phone interviews with all 665 members of the state's 95 County Agricultural Committees. An additional group of 200 minority leaders, identified by County Extension Directors, were included in the phone interview so that the sample was representative of the state's ethnic and racial diversity.

All stakeholders were asked which issues should be priorities given problems faced by Tennesseans and Extension's expertise in agriculture and natural resources, 4-H youth development, resource development and family and consumer sciences. The data was analyzed showing four strategic directions for Extension's Strategic Plan:

- Promoting healthy lifestyles
- Managing our food, environmental and agricultural resources
- Preparing youth for a diverse and demanding future
- Building and sustaining personal and family financial skills



### ***Economic Impact***

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 resource development produce substantial returns to the state. Using research, questionnaires, observations and sales records, an estimated economic impact is over **\$343 million** from July 1, 2007 through June 30, 2008 for statewide educational programs.

For every \$1 in public funds invested in UT Extension programs, an estimated \$5.10 is returned to the people of Tennessee in increased revenue, increased savings, and one-time capital purchases.



## **B. Preparing Youth for a Diverse and Demanding Future**

### ***Tennessee 4-H Workforce Preparation – Achieving Goals and Communicating***

**Issue:** According to data from the Business-Higher Education Forum and The Conference Board, Inc., employers are reporting young workers lack key skills and attributes necessary for success in today's workplace. This research also indicates companies are asking for young adults who have applied skills in communication, leadership, teamwork and problem solving. Due to the changing nature of the 21st century workplace, Tennessee youth need the skills, experience and confidence necessary to meet its demands and thrive in a high-performance economy characterized by high-skill, high-wage employment.

**What has been done:** UT and TSU Extension made 286,973 direct educational contacts to help youth gain new knowledge, acquire new skills and change aspirations regarding workforce preparation. Curriculum was selected and programs implemented to help youth attain basic work skills and personal attributes in two areas, achieving goals and communicating. 4-H workforce preparation programs were delivered through 7,803 group meetings including organized clubs, camps, project groups and school enrichment by Extension 4-H agents and volunteers. Educational programs were reinforced by 213 exhibits, 341 news articles, 146 radio programs and 13 television programs.

**Impact:** 14,586 youth were involved in programs in which an outcome evaluation was conducted of their practices toward achieving goals. Intact groups of 4-H youth were randomly selected for post-test only questionnaires. The questionnaires were valid and reliable instruments from the Tennessee 4-H Life Skills Evaluation System, an online tool to measure and evaluate the outcomes of statewide 4-H youth development programs. The questionnaires used a five part scale (never, rarely, sometimes, often and always) to determine achieving goals behaviors at the beginning, intermediate and advanced levels after the program. A typical questionnaire item would be phrased "*Because of my 4-H experiences, I work to achieve my goals.*"

10,619 youth were involved in programs focused on beginning skills and aspirations as they relate to achieving goals. Completed questionnaires were obtained from 2,451 youth (23% of the total program participants). The following beginning outcome indicator data was obtained.

*Because of their 4-H experiences,*

- 71% report they now work to achieve their goals.
- 64% report they now set high goals.



- 63% report they now know where they want to end up and plan how to get there.
- 57% report they now look at the steps needed to achieve a goal before setting it.
- 51% report they now break their goals down into steps so they can check their progress.

50,221 Tennessee youth were involved in programs in which an outcome evaluation was conducted of their knowledge, attitudes and skills in communicating. Intact groups of 4-H youth were randomly selected for post-test only questionnaires from the Tennessee Lifeskills Evaluation System (described above). The questionnaires used a five-part scale (I can do it, I need a lot of help, don't know, I need a little help and I can do it by myself) to obtain the following outcome indicator data at the beginning, intermediate and advanced levels. The following impacts represent "I need a little help" and "I can do it myself" answers.

34,819 youth were involved in programs focused on developing beginning skills and aspirations in communicating. Completed questionnaires were obtained from 7,659 youth (22% of the total program participants). The following beginning outcome indicator data was obtained.

*Because of their 4-H experiences,*

- 77% report they can now select a topic for a speech or presentation.
- 75% report they can now explain an idea to others.
- 71% report they can now speak loudly enough to be heard when giving a speech or talk.
- 69% report they can now deal with their nervousness when giving a speech or talk.
- 62% report they can now name at least five jobs in which communication skills are important.

11,906 youth were involved in programs focused on developing intermediate skills in communicating. Completed questionnaires were obtained from 2,919 youth (25% of the total program participants). The following intermediate outcome indicator data was obtained.

*Because of their 4-H experiences,*

- 77% report they now know how to organize the parts of a speech or presentation.
- 73% report they are now able to give a 2-3 minute speech or presentation.
- 72% report they now have the confidence to speak in front of groups.
- 56% report they are now a better listener.
- 54% report they have now learned to use a camera better.
- 40% report they have explored careers in communication.



- 40% report they can now keep records.

3,496 youth were involved in programs focused on developing advanced skills in communicating. Completed questionnaires were obtained from 695 youth (20% of the total program participants). The following advanced outcome indicator data was obtained.

*Because of their 4-H experiences,*

- 53% report they can communicate through a website.
- 46% report it is now easier to express their opinions to someone with a different view than their own.
- 27% report they have knowledge about careers in communications.

## ***Responsible Citizenship***

**Issue:** Youth have always been a powerful resource for their community. When supported and encouraged, youth will emerge as productive, responsible, and engaged citizens. Whether “community” is defined as a club meeting or holds a more global concept, civic engagement helps youth develop a sense of civic and social responsibility, while connecting to their community. Encouraging 4-H members to be engaged citizens provides opportunities for them to become positive contributors to their community.

**What has been done:** Extension personnel and volunteers made 70,357 youth contacts through club meetings and demonstrations. Direct and e-mail, as well as personal telephone calls, also indicates that 9,698 persons were contacted directly. On site visits to the farm, home or workplace also indicated that our programs are directly reaching 1,973 youth. An estimated 1 million indirect contacts were made via newspaper and radio to promote responsible citizenship.

**Impact:** Not only are Tennessee 4-H members impacting their community thru helping others, they are making an economic impact. The Independent Sector estimates the dollar value of volunteer time as \$17.29/per hour. This places a monetary value of over \$1.7 million for service by Tennessee 4-H All Stars in 2008.

A total of 12,772 youth were involved in programs focused on beginning skills and aspirations as they relate to citizenship. Completed questionnaires were obtained from 3,252 youth (25% of the total program participants). The following beginning outcome indicator data were obtained.

*Because of their 4-H experiences:*

- 72% believe citizens should be active in the community.
- 80% think they can make a difference in my community by helping others.
- 63% agree that people working together can help others less fortunate.
- 58% noted that they learned about important leaders who contributed to the nation.



- 71% reported that they know how community leaders are elected.

A total of 4,222 youth were involved in programs focused on intermediate skills in citizenship. Completed questionnaires were obtained from 1,122 youth (27% of the total program participants). The following intermediate outcome indicator data were obtained.

*Because of their 4-H experiences:*

- 75% reported a sense of pride about their school and community.
- 77% reported feeling a sense of responsibility to their community or school.
- 68% noted that they would assist with or participate in elections, voting and campaigns.
- 87% believed that they treated all people fairly.
- 81% expressed concern about problems in my community.

A total of 2,200 youth were involved in programs focused on advanced skills development in citizenship. Completed questionnaires were obtained from 618 youth (28% of the total program participants). The following advanced outcome indicator data were obtained.

*Because of their 4-H experiences:*

- 89% reported that they would register to vote when they are eligible.
- 71% encouraged others to appreciate diversity.
- 83% reported that they volunteer and will help others in the future.
- 76% noted that they learned about causes and issues by completing service projects.
- 75% reported that they now know more about the resources in their community.

### ***4-H Builds Generation to Lead the Nation***

**Issue:** While the Millennial generation brings a sense of confidence, hopefulness, goal- and achievement-orientation, civic-mindedness and inclusion to the workplace, there are elements of their work ethic that still need development according to Generations at Work in order to transition in to a work environment of Baby Boomers and Generation X'ers. Additional research, from the Appalachian Regional Commission indicates a need for leadership training to ensure young people are prepared to participate in political and civic life.

**What has been done:** Tennessee 4-H leadership programs made over 66,000 contacts to youth members through club meetings and demonstrations. In addition, over 14,000 contacts were made through direct and e-mail, as well as personal telephone calls. Over 6,000 on-site visits to the farm, home or workplace and client office visits also indicated that our programs are directly reaching youth. Leadership programs reached an estimated 1.3 million indirect contacts; showing that newspaper articles, radio programs and publications were the most effective way to reach a broad audience without direct contact.



**Impact:** A total of 6,070 youth were involved in programs focused on beginning skills as they relate to leadership. Completed questionnaires were obtained from 1,450 youth (28% of the total program participants). The following beginning outcome indicator data were obtained.

*Because of their 4-H experiences:*

- 76% (1,106) reported that as a member of a committee, they take their job seriously.
- 79% (1,147) reported that they help to ensure that everyone gets an opportunity to say what they think.
- 78% (1,129) believed that they could cooperate and work in a group.
- 75% (1,091) believed that when in charge of a group, they treat everyone fairly and equally.
- 72% (1,039) indicated that they know how to set goals and use them when leading a group.

A total of 1,728 youth were involved in programs focused on intermediate skills in leadership. Completed questionnaires were obtained from 698 youth (40% of the total program participants). The following intermediate outcome indicator data were obtained.

*Because of their 4-H experiences:*

- 80% (559) noted that they like to work with others and help them reach their goals.
- 76% (530) reported using enthusiasm to get a group working.
- 75% (523) indicated that they felt comfortable being a group leader.
- 77% (538) reported that they could run a meeting.
- 81% (563) said that they give clear directions.

A total of 242 youth were involved in programs focused on advanced skills development in leadership. Completed questionnaires were obtained from 220 youth (91% of the total program participants). The following advanced outcome indicator data were obtained.

*Because of their 4-H experiences:*

- 78% (171) reported that they seek out other people who can help them become a better leader.
- 77% (169) said that they are able to break tough problems down into smaller, simpler task.
- 77% (169) indicated that they felt comfortable being responsible for a group.
- 88% (193) indicated that they were sensitive to the feelings of others when discussing and solving problems.
- 78% (172) reported that they are able to resolve problems without losing control of their emotions.



## ***Camp Reinforces Healthy Lifestyles***

**Issue:** Healthy lifestyles and ethical decision-making are life skills identified in the Tennessee 4-H youth development program. Every day youth must navigate our complex media world and make thoughtful decisions about nutrition and physical activity.

**What has been done:** A survey of life skill adoption was conducted during the 2008 Summer Junior 4-H Camp. Approximately 1,354 respondents were selected out of 5,885 campers in the fourth, fifth, and sixth grades. Youth were asked to respond to statements on a five-point Likert-type scale. The possible responses range from “Never” or “Definitely False” (assigned a score of 1) to “Always” or “Definitely True” (assigned a score of 5).

**Impact:** The majority of the statements have a mean score of 4.00 or higher. They are:

*Because of my 4-H experiences...*

I know that being physically active helps me control my weight	4.63
I think that everyone on the team is important	4.45
I am willing to try new things	4.42
I can tell the difference between right and wrong	4.37
I know how good hygiene is important for good health	4.36
I believe that a team can accomplish more than an individual	4.34
I try to do the right thing	4.31
I would avoid substances that could cause harm my body	4.28
I know the difference between things I want and things I need	4.26
I think that water is the best fluid replacement drink	4.24
I understand that other ideas may be just as important as my own	4.19
I can make a decision	4.14
I have learned that some choices are better than others	4.08
I like to accomplish things on my own	4.03

The results indicate that 4-H programs are successfully helping young people develop the “healthy lifestyles” and “ethical decision-making” life skills.



## C. Managing Our Food, Environmental and Agricultural Resources

### *Forage Programs Produce Economic Impact*

**Issue:** More efficient forage production contributes to improved profitability for Tennessee farmers.

**What has been done:** UT Extension conducted forage educational programs reaching almost 50,000 direct contacts during 2008. Proper hay storage and feeding, as well as adding clovers to grass pastures were primary educational topics covered. These were taught through 520 group meetings and over 1800 farm visits. These direct contacts were supported by 151 newspaper articles and over 100 radio and television programs.

**Impact:** On-farm interviews and surveys were used to evaluate forage programs. Impacts were:

- 433 beef producers built hay barns for a savings in hay loss of \$2.1 million.
- 2444 producers began using hay rings to decrease feeding losses for a savings of \$1.8 million.
- 48,226 acres were seeded with clover for a fertilizer savings estimated at \$1.9 million.

### *Improving Corn Profitability*

**Issue:** Improving profit margins for corn producers benefits the economy of Tennessee. Yield improvements may be obtained with proper variety selection, insect, disease and weed management, appropriate use of fertilizers and irrigation, and other best management practices.

**What has been done:** Tennessee produced over 550,000 acres of corn for grain in 2008. Many counties across the state had dry growing conditions during middle and late season which impacted corn yields. The statewide average as of December 31, 2008 was 115 bushels/acre.

**Impact:** Program impact from 18 counties includes:

- 1299 corn producers used data provided by UT publications or UT Internet resources and made changes in their production practices.
- 1519 corn producers reported harvesting higher corn yields or better quality crops using university trial results.
- Producers increased yield by 35,211 bushels by selecting top yielding varieties on 442,810 acres of corn, earning an extra \$10.6.
- 422 corn producers report \$862,024 reduction in pest control costs by following recommended control strategies for insects, weeds or plant diseases.



## ***Producing Higher Quality Milk***

**Issue:** Improving raw milk quality by reducing somatic cell counts and bacteria counts of bulk tank milk improves dairy farm profitability and sustainability in Tennessee. Mastitis is an inflammation of the udder, and when prevented, antibiotics are reduced and overall milk quality improves.

**What has been done:** UT Extension conducted milk quality educational programs reaching over 2,500 contacts. Prevention and solving on-farm problems that lead to reduced milk quality were emphasized. Contacts were made with industry personnel, government personnel and dairy producers through 44 group meetings and demonstrations.

**Impact:** Observations and participant surveys were used to evaluate the program. Because of this program:

- 245 dairy producers completed certification in Modules 1-3 of the Tennessee Quality Milk Producer Program, representing 45% of Tennessee's dairy farms.
- 63% of certified producers have adopted a mastitis control program.
- 87% of certified producers reported seeking professional advice from their herd veterinarian and industry representatives to improve on-farm milk quality issues.
- 69% of certified producers adopted at least one milking process for greater milk quality.

## ***Adopting Precision Agricultural Technologies***

**Issue:** Due the rising cost of fertilizers, chemicals, seed, fuel and labor, Tennessee producers are adopting precision agriculture technologies to increase production, reduce input costs, and manage farmland efficiently.

**What has been done:** Field days, county and multi-county meetings, on-farm demonstrations, applied research projects and personal contacts were used to promote the adoption of precision agriculture technologies. Nearly 500 producers attended field days and county meetings to improve their knowledge and skills of precision agriculture technologies related to row crop production.

**Impact:** UT Extension's educational effort to promote the adoption of precision agriculture technologies produced these results:

- 81,104 acres of row crops were planted using variable seeding rates or variable application rates of fertilizers.
- 238 producers representing 182,649 acres have adopted precision agriculture technologies such as yield mapping or grid/zone soil sampling for making management decisions.



- Tennessee producers sprayed variable rate applications of plant growth regulators, defoliant or pesticides on 115,740 acres of row crops.

### ***Agritourism Adds Value***

**Issue:** Agritourism is an opportunity for some Tennessee farmers and agri-entrepreneurs to add value to farm resources. Studies conducted by the University of Tennessee in 2003 and 2004 estimated that 335 identified agritourism operations had total projected sales of more than \$21 million per year.

**What has been done:** Efforts in agritourism included development and delivery of 27 educational programs for 1,692 participants and 91 consultations reaching 448 agritourism operators. A two-day conference, *Cultivating Farm Revenue* was held for 249 participants, and a three-day educational bus tour was held for 54 participants. In addition, mass media and exhibits reached more than 134,000 people. Partners included the Tennessee Department of Agriculture and the Tennessee Farm Bureau Federation

**Impact:** Of the 249 conference participants, 74% reported that the conference had increased their awareness of agritourism as an opportunity to add value to farm resources and foster rural economic development. One year after the *Cultivating Farm Revenue*:

- 11 respondents reported an increase in agritourism net income.
- Eight respondents estimated increases in net revenue totaling \$88,000.
- Four respondents indicated that they added 25 additional personnel to their enterprise.

### ***Beef Quality Assurance (BQA)***

**Issue:** Consumers are concerned about safe and wholesome beef; and beef producers remain concerned about the marketability and profitability of feeder calves.

**What has been done:** Beef Quality Assurance (BQA) was initiated in 2000, and continued to expand in 2008. UT Extension conducts the program in conjunction with the Tennessee Cattlemen's Association. During 2008, there were 3,671 producers that were certified or re-certified. Since 2000, 13,140 producers have been certified. Currently there are over 200 BQA trainers in Tennessee.

**Impact:** Impact from BQA certification can be placed at over \$12.2 million since producers must have certification to qualify for the Tennessee Agricultural Enhancement Cost Share Program being carried out by the state of Tennessee. Marketing agencies are reporting that buyers are increasingly requesting the BQA health papers be provided with cattle purchased. Sales continue to be conducted where Beef Quality Assurance Certification is required.



### ***Claiming Timber Casualty Loss Following Tornado Damage***

**Issue:** In February of 2008, tornados moved through Tennessee damaging 8,215 acres of forestland with an estimated timber loss at \$10.3 million. Landowners, foresters and tax accountants were at a loss on how to begin salvaging damaged timber and how to address income tax issues.

**What has been done:** UT Extension mobilized to deliver four regional educational programs to 185 landowners, foresters and tax accountants, addressing timber salvage and tax treatment for casualty loss. The work was funded, in part, by the Tennessee Forestry Association

**Impact:** A total of 185 participants increased knowledge regarding timber salvage and tax treatment for casualty loss following the tornado. The tax savings via claiming a casualty loss are estimated at \$2.5 million.



## D. Building Personal and Family Financial Skills

### ***Tennessee Saves Produces \$21.8 Million Impact***

**Issue:** Because they spend too much and save too little, many Tennesseans will not have enough money to live securely throughout life. Over the next 20 years, the percentage of retirement-age Tennesseans is expected to almost double; however, currently 52% of the U.S. workforce has no private pension coverage and 31% has no savings set aside specifically for retirement. The household debt load is also growing across the U.S., particularly among young people just starting out on their own and older people in early retirement.

**What has been done:** Tennessee Saves activities are conducted through bankruptcy education, homebuyer education, High School Financial Planning and teacher training, saving education for adults and youth, credit education, employee education and financial education simulations for youth. Counties across Tennessee reported 114,561 direct educational contacts, including 66,134 contacts via group meetings and financial education programs. Of the total educational contacts, approximately 50% were made through youth programs. An additional 5 million Tennesseans were reached with the message of the importance of savings and financial responsibility through media and exhibits. UT and state partners conducted Tennessee Saves Days at Legislative Plaza and the Governor proclaimed Tennessee Saves Week.

**Impact:** The annual economic impact through savings and debt reduction associated with the program was:

- Increased savings or investment – \$14,246,016
- Debt reduction – \$7,651,680
- Total – \$21,897,696

Post program surveys of participant in group educational sessions across all programs indicated that:

- 86% increased their financial management skills overall.
- 77% felt more confident that they could build wealth.
- 83% became more motivated to begin or increase contributions to savings or investment plans.
- 87% identified ways to increase savings.
- 85% identified ways to reduce debt.

Post program surveys of participant in employee financial education programs indicated that:

- 81% were better able to identify appropriate savings and investment options for different financial goals.
- 91% became more aware of the importance of starting to save and invest early in life.



- 84% better understood the difference between pre-tax and after-tax investments.

Post program surveys of participant in homebuyer education programs indicated that:

- 93% determined how much they could pay for a home.
- 89% gained a better understanding of the mortgage process.

Follow-up surveys of participants across all programs indicated that:

- 51% followed a spending plan.
- 51% kept a record of spending.
- 70% set financial or retirement goals.
- 77% of Tennessee Saves participants made a change in a financial practice to avoid being a victim of fraud or predatory practices.
- 42% of employee financial education programs made a change in their asset allocation to get better returns or reduce risk.
- 50% of youth in financial education simulations made a change in career or educational goals as a result of what they had learned.

Comments from Hamilton County youth participants:

- "I tried to look at how I can stretch out my money for a long period of time. Started putting \$20 out of my paycheck in the bank every 2 weeks- I didn't do that before."
- "I learned that the amount of schooling you have impacts where you begin in the world. If you want to succeed you have to work hard."
- "I stopped riding up so much gas. It's high!"
- "[I] started a bank account...got a better job...saved up \$1,000 and bought a car. Now I'm saving for the prom & cheerleading."

## ***Tax Services for Disadvantaged Families***

**Issue:** In Roane County, numerous individuals and families need assistance in tax filing. UT Extension personnel saw this need first-hand through various programs, including Cooking Schools.

**What has been done:** UT Extension and the United Way of Roane County collaborate to provide the Internal Revenue Service's Volunteer Income Tax Assistance (VITA) program to county residents. In 2008, the collaboration focused on households that met the criteria to receive the Earned Income Tax Credit, Child Care credits and especially those older adults normally who do not file, but were required to file to receive the tax stimulus payment. Of the clients served, 32% had adjusted gross incomes less than \$10,000 and 46% had adjusted gross incomes less than \$15,000. The VITA effort filed 240 traditional tax returns, a 19% increase over 2007. Also, 222 stimulus only tax returns were filed (100% increase over 2007). The total



combined tax returns of 462 represented a 136% increase over 2007. The number of clients receiving refunds was 195, a 15% increase over 2007.

**Impact:** The total economic impact of this tax assistance effort is reflected by the \$249,628 (cumulative refunds and stimulus-only dollars) that was returned to these families and returned back to the Roane County economy.

The biggest impact still cannot be shown in dollar values. Grant Palmer, UT Extension Agent in Roane County, described the program success this way:

“The biggest impact is the relationship we were able to build with people who brought their most personal information to the table, shared it with a stranger, and left after the experience feeling secure with their dealings and confident that they were assisted by someone who cared about helping them and not about getting paid for getting them a refund back.”



## **E. Promoting Healthy Lifestyles**

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

**Issue:** Obesity continues to be a leading health problem among Tennesseans. The impact of obesity effects not only quality of life issues but is a major factor in skyrocketing health care costs for both the individual and society.

**What has been done:** To reverse this trend, UT Extension made more than 700,000 contacts with children, youth and adults through 23,000 classes. An additional 1.7 million educational contacts to promote healthy eating and weight management messages were made through indirect methods that included exhibits, newspaper articles, publications, radio programs, television programs, and the program website. A total of 4,662 volunteer hours from 2,361 volunteers supported the Tennessee Shapes Up program and with an additional 653,488 educational contacts.

**Impact:** 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. Of the adults and youth surveyed after their participation in the program:

- 88% reported walking at least 30 minutes most days.
- 83% reported reduced consumption of sugar-sweetened foods and beverages.
- 78% reported increased consumption of fruits and vegetables.

All these behaviors have been shown to reduce obesity.

### ***Safe Food Handling Practices for Consumers***

**Issue:** Using recommended safe food handling practices at home can reduce the risk of foodborne illness.

**What Has Been Done:** Residents living in 35 Tennessee counties received UT Extension food safety education in 2008. Extension made 13,346 contacts with food safety education through client visits, mail, telephone calls, group meetings, and demonstrations. An estimated 895,365 contacts were made through indirect methods such as exhibits, newspaper articles, publications, radio programs, television, and Web sites.

**Impact:** Surveys were used to collect information on short and medium-term impacts of food safety education for consumers.

Short-term outcomes (knowledge and attitudes) included the following:



- 332 of 334 participants (99%) surveyed made a positive change in their attitude about keeping the temperature in the refrigerator at 40 degrees F or below.
- 295 of 334 participants surveyed (88%) made a positive change in their attitude about cooking food to a safe internal temperature.
- 272 of 334 participants surveyed (81%) made a positive change in their attitude about how they thaw food.
- 321 of 334 participants surveyed (96%) made a positive change in their attitude about cleaning surfaces, utensils, and equipment to prevent cross-contamination.
- 332 of 334 participants surveyed (99%) made a positive change in their attitude about eating/drinking foods from unsafe sources.

Medium-term outcomes (behaviors) included the following:

- 5,230 of 5,642 participants surveyed (93%) refrigerated perishable foods promptly.
- 15,354 of 17,572 participants surveyed (87%) more often washed their hands with soap and warm running water before preparing food.
- 177 of 184 participants surveyed (96%) more often thoroughly washed their produce under running water before eating them.
- 84 of 115 participants surveyed (73%) more often washed the plate used to hold raw meat, poultry, or seafood with hot, soapy water before returning cooked food to the plate OR used a clean plate.
- 85 of 115 participants surveyed (74%) made a positive change in the way they stored perishable foods.
- 115 of 115 participants surveyed (100%) more often washed items that came in contact with raw meat, chicken or seafood with hot, soapy water before continuing to cook.
- 85 of 115 participants (74%) washed their hands with soap and warm running water after working with raw meat, chicken, or seafood.
- 84 of 115 participants surveyed (73%) 70 of 115 participants surveyed (61%) used a thermometer to check the internal temperature of food.
- 58 of 60 participants surveyed (97%) used a thermometer to check the temperature of their refrigerator.
- 98 of 115 participants surveyed (85%) consumed fewer foods from unsafe sources.

## ***Power U***

**Issue:** 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.

**What has been done:** 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 fourth graders.



The *Power U* program was implemented in 42 Tennessee counties. This included 87 schools for a total of 247 classrooms. There were a total of 942 group meetings with 20,587 educational contacts. There were an additional 13,694 educational contacts through exhibits, newspaper articles, TV and radio programs, and other promotional items. A total of 766 volunteers supported *Power U* reaching an additional 5,008 educational contacts.

**Impact:** Impact data was collected using a behavior checklist survey and through teacher and parent comments.

- 59% (6369) decreased their intake of high fat foods.
- 64% (3,364) decreased their intake of high sugar foods including sweetened beverages.
- 84% (3,754) increased the time they spent in physical activity.
- 74% (3,804) increased their intake of fruit and vegetables.

Exposure to a variety of fruits and vegetables at a young age increases their likelihood of the food's adoption.

### ***The Safe Side: Stranger and Internet Safety***

**Issue:** Most children do not have a clear idea of what represents a “stranger”. Furthermore, most “stranger danger” programs do a poor job at helping children understand the difference between adults they should feel safe with, adults who are acquaintances and adults who are true stranger. Also, the Internet has become an environment where many children and youth are vulnerable to adults who are predators.

**What has been done:** UT Extension implemented The Safe Side program for childcare educators and parents focusing on “stranger” issues and internet safety. Extension conducted these programs reaching over 2,770 direct educational contacts. Contacts were made with parents, childcare educators and professionals through 103 group and on-site meetings. The education provided face-to-face was reinforced by exhibits, newspaper articles, radio programs and publications reaching over 660,000 individuals.

**Impact:**

- 189 of 200 participants (based on pre/post tests) gained knowledge on the topic of stranger and/or internet safety.
- 169 of 200 participants report being more aware of what activities their children are involved in.
- 183 of 200 participants report giving out personal information less than before.



- 192 of 200 participants report that they have selected at least three Safe Side Adults with their children.
- 175 of 200 participants talk to their children on a periodic basis about what to do if that child gets lost in public.

### ***First Steps: A Pre-Service Training for Newly Hired Childcare Educators***

**Issue:** The state of Tennessee requires that all newly hired childcare Teachers and Directors receive two hours of pre-service training during their first 30 days of employment. Thus, providers are often scrambling to find the appropriate training to fulfill this mandate. Increased training hours mandated by the state for child care professionals has increased attendance and space issues where child care teachers receive their training. More innovative training similar to First Steps is needed to help with the problems of overflow and crowdedness at workshop venues. The Tennessee Department of Human Resources approached UT Extension Department of Family and Consumer Sciences to develop a training to help meet this need.

**What has been done:** The Extension Specialist developed a unique and cutting-edge video and cd-rom self-study program based on the latest research for the new hires. The videos and cd's were placed in every childcare center across the State. During 2008, over 10,000 childcare teachers participated in the program.

#### **Impact:**

*Knowledge Gained:* Pre- and post-test evaluations show participants had an average knowledge gain of 32% (n=1,000) in content areas of health, safety, guidance, and ages and stages of development.

*Skills Enhanced:* 92% or more agreed or strongly agreed they felt more confident when handling aggression issues between children, asked open-ended questions of children more often when interacting with children to help them "think", were more likely to facilitate developmentally appropriate activities and reported reading more to children (n=200). This information is based on a 6-month follow-up survey.

### ***Helping At-Risk Families Succeed***

**Issue:** Inadequate parenting and interpersonal skills are associated with family instability which negatively affects child well-being and results in increased costs to individuals, communities, and governments.

- Court-ordered parents: Many courts are requiring parents whose children have been removed to state custody to complete a parent education program. In addition, some



agencies will refer parents to classes who are at-risk for having their children removed. Juvenile courts are requiring some parents whose children are in trouble with the law to attend parenting classes as well.

- **Relative caregivers:** Relative caregivers face not only ambiguous legal status in caring for these children, but they face difficulties in transitioning from their roles as grandparents or other relatives to the role of parent. Children enter these relationships having experienced loss or rejection and often other types of trauma. Relatives may feel overwhelmed by the new responsibilities and fear that they will not be adequate for the task. Providing education and support for these surrogate parents can help ease their stress and provide a refresher or initial training in parenting for those who have never parented or who parented several years ago.
- **Teen parents:** Fewer than 8% of unwed teen mothers marry the baby's father within one year of giving birth. Teen mothers have a reduced chance of ever marrying and an increased risk of divorce if they do marry. Unmarried mothers have lower levels of education, lower incomes, and are more likely to receive public assistance than married mothers. Children of unmarried mothers are more likely to have low educational attainment, early sexual activity, and problem behaviors than children of married mothers, and they have lower levels of father involvement in their lives.
- **Incarcerated parents:** Children of incarcerated parents are at great risk for negative outcomes as adults and face many hardships during their parents' incarceration. Incarcerated parents often lack the skills and self-confidence to maintain a relationship with their children during incarceration which may result in a break in the parent-child relationship.

**What has been done:** Agents received training and curricula to work with different types of at-risk families. Based on annual reports:

- Agents reported 1427 direct contacts with court-ordered parents through 170 group meetings and 124 in-office or on-site visits.
- Agents reported 376 face-to-face contacts with incarcerated parents through 21 group meetings and 8 on-site visits.
- Agents reported 365 face-to-face contacts with relative caregivers of children through 22 group meetings and 28 in-office or on-site visits.
- Agents reported 3,021 face-to-face contacts with teen parents through 176 group meetings, and 326 in-office or on-site visits.

**Impact:** In self-report surveys of class participants, the following outcomes were noted:

*Court-ordered parents*

- 88 of 101 (87%) parents/caregivers report an increase in use of appropriate child guidance techniques.
- 112 of 101 (entry error) parents/caregivers report an increase in use of positive communication techniques with their children.
- 59 of 67 (88%) parents/caregivers report feeling better about their abilities as parents.
- 52 of 67 (78%) parents/caregivers report feeling less stressed as parents.



- 135 parents/caregivers learned age and situation appropriate child guidance strategies.
- 136 parents/caregivers learned effective communication techniques to use with their children.
- 136 parents/caregivers learned stages of child development.
- 130 parents/caregivers learned strategies for dealing with parenting stress.

*Incarcerated parents*

- 60 inmates acquired knowledge about the importance of effective communication required to build parent/child relationships.
- 14 inmates demonstrated their knowledge of positive parent/child relationships.

*Relative caregivers (10 were surveyed)*

- 100% of caregivers feel prepared to cope with the stresses of being a kinship caregiver.
- 100% of caregivers improved knowledge of child development.
- 100% of caregivers increased confidence in their ability to find and access community resources.

*Teen parents*

- 14 of 41 (34%) teen parents report an increase in use of appropriate child guidance strategies.
- 26 of 41 (63%) teen parents report an increase in use of positive communication techniques with their children.
- 23 of 40 (58%) teen parents report feeling better about their abilities as parents.
- 26 of 37 (70%) teen parents report feeling less stressed as parents.
- 76 teen parents learned age and situation appropriate child guidance strategies.
- 78 teen parents learned effective communication techniques to use with their children.
- 76 teen parents learned stages of child development.
- 74 teen parents learned strategies for dealing with parenting stress.