

2008 Kentucky State University and University of Kentucky Combined Research and Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

Condensing the 2008 accomplishments of Kentucky's Research and Extension efforts into a small package is a challenge, but it is an exercise that generates appreciation for the dedicated county and campus personnel who bring excellent programs to the doorstep and computer screen of millions of Kentuckians.

Some of our 2008 accomplishments include: □ Educational programs to help our growers recover from the 2007 drought qualifying them for KARE Resources (Kentucky Agricultural Relief Effort) - \$8 million in tobacco settlement monies □ The Science, Engineering, and Technology Initiative in 4-H. □ Putting legs (literally) on our health and wellness programs with the infectious success of Second Sunday, a day in October on which more than 70 Kentucky counties showed that communities can use infrastructure already in place to encourage exercise. □ The Kentucky Extension Homemakers Association reached the \$1 million mark in funds it has raised for ovarian cancer research □ and the Moneywise Web site at <http://ces.ca.uky.edu/moneywise/>, where Kentuckians can find our best resources for dealing with economic challenges.

In 2008 we also began to work through what can be called Re-Envisioning II an issues flow process through which leaders and agents talk about what is needed at the county level. We have been very careful to maintain the ideas generated across the state, building programming in response to what we have heard. Constant conversation, including this issues flow, is a dialogue made possible by our presence in 120 counties. It is powerful, and it enables Kentucky Cooperative Extension and Research Programs to stay relevant and of value to our stakeholders. It is our pledge to use this conversation to maintain programs that address the right issues so we can make a positive difference for Kentucky's farms, families, and communities.

Agricultural research through Kentucky's land grant programs has been providing new opportunities to farmers and residents for more than 130 years. With external grants and contracts now reaching over \$31,000,000 a year, agriculture researchers address problems of agribusiness, consumers, international trade, food processing, nutrition, community development, soil and water resources, and the environment with over 300 externally funded projects. The research continuum reaches from basic to applied science, with new fundamental knowledge as well as applied knowledge that has impacts on the lives of Kentuckians and people across the world.

As a result of interaction with councils and other stakeholders, the 2008 program year emphasis as defined by the number of contacts is as follows:

- 30% Competitive Agriculture
- 24% Life Skill Development
- 20% Diet, Nutrition and Healthy Lifestyles
- 14% Leadership and Volunteerism
- 6% Social and Economic Opportunity
- 6% Agricultural and Environmental Quality

Joint activities between the University of Kentucky and Kentucky State University are an expectation of faculty and staff. The two institutions are barely 40 miles apart, which is convenient in terms of faculty and specialist cooperation, but in many respects the institutions are co-located. Agents and program assistants are co-located in county offices, sharing not only office space but also budget, supervision and facility management responsibilities. This strong and somewhat unique bond has resulted in shared program efforts, many of which are reported in this document. Efforts include programming and research in:

Grapes and Wine	Environmental Education for Youth	Youth Entrepreneurship
Goats	Gardendata.org Horticulture web site	Small Business Development
Cattle Production	Tobacco Sector Farming Adjustments	Business Retention & Expansion
Pawpaws	U.S. Animal Identification Program	Family Financial Management
Small Farm Programs	Organic Ag and Vegetable Programs	E-commerce
Aquaculture	AgrAbility	Health & wellness
Sustainable Agriculture	Limited Resource Families	Home Horticulture
Kentucky Entrepreneurial Coaching Institute		and more...

Kentucky State University and the University of Kentucky share adjunct faculty with at least three positions in entomology, three positions in horticulture, three positions in animal science, and one position in agricultural economics.

Total Actual Amount of professional FTEs/SYs for this State

Year:2008	Extension		Research	
	1862	1890	1862	1890
Plan	470.0	35.0	55.3	34.8
Actual	573.0	33.6	55.0	43.6

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Expert Peer Review
- Other (State Extension Advisory Committee)

2. Brief Explanation

The Kentucky Cooperative Extension has defined merit review as a process used to judge the degree to which a planned program (1) is relevant to needs expressed by stakeholder groups, (2) draws upon current research and knowledge, (3) is congruent with quality standards and best practice, and (4) is likely to produce anticipated outcomes. Merit review for research is similar in that it uses the criteria of (1) consideration for potential impact, (2) relevance to the needs of stakeholders, and (3) appropriateness within the mission and priorities of the experiment station, USDA, and the land-grant mission.

The Plan of Work has been built on program goals that the Cooperative Extension Service identified through extension advisory committees, developed through logic model program committees and reviewed through regional issues committees made up of extension agents, department chairs, and specialists. The program area assistant directors selected featured programs based on identified need in the greatest number of counties, current and planned research and educational resources, and our ability to effectively deal with the issues. Twenty-seven non-university individuals who comprise the State Extension Council representing all geographic regions of Kentucky as well as agriculture, youth, families, business, industry, and public education served as reviewers of the Plan of Work using the criteria identified above.

The University of Kentucky Agricultural Experiment Station focuses on scientific peer review and merit review on individual research projects. Scientific review is evaluation by other researchers who possess the expertise to conduct the same or similar research. Such review includes technical feasibility, originality and scientific/disciplinary significance of the research. Project proposals go through an initial anonymous peer review. If satisfactory expertise is not available within the department or on campus, external reviews are solicited. After multiple reviews (usually three) a project committee recommends approval, rejection or revision. Only approved projects move forward for review at the college level. The college review committee conducts further scientific peer review by highly qualified individuals as well as a designated statistician and other appropriate faculty. Outside expertise, including researchers around the nation and stakeholder review, are also used.

Kentucky State University requires all project-based proposals to be peer-reviewed based on scientific merit and relevance to state, national and regional USDA priorities and the KSU mission. All Evans - Allen supported proposals are first sent for external peer-review by at least two scientists outside KSU to ensure the relevance and quality of the science. University of Kentucky faculty are often included on the proposal review panels. reviews in addition to peer and reviews via, regional, national, and professional association colleagues.

Extension and Educational Outreach conduct internal

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey specifically with non-traditional groups
- Other (Training stakeholders in expectations relative to program needs)

Brief Explanation

The Kentucky Extension Advisory Council System has served as a primary mechanism for gaining input into program direction and development. For programs to meet the needs of the audiences they intend to serve, county level councils are to be diverse enough to represent the various constituencies within the counties including underserved and underrepresented audiences. Their purpose on the council is to express their own needs as well as to gain additional resident perspectives through traditional and non-traditional means in order to provide input into development of local extension programs. These representatives of the various audiences are not only involved in planning but also implementation and evaluation of those programs. In addition to a county extension council, each county also has an agricultural advisory council, homemaker's council, home economics advisory council, and 4-H council. They communicate research and resource needs to the universities. Through an Issues Gathering Process, topics of greatest importance are brought forward through district and state meetings attended by leaders, extension agents, extension program coordinators, and district directors. The issues identified are then presented to state program leaders, extension specialists, and department chairs for response.

As full partners, the Cooperative Extension Service and Kentucky Agricultural Experiment Station set priorities for research activities with information from the county extension councils, regional issues and program committees, and the University of Kentucky Council for Agricultural Research, Extension and Teaching (UK-CARET). UK-CARET functions as an advisory and advocacy group for the College of Agriculture. Members have an opportunity to advise in the development of college priorities and assist in generating public support for those priorities at state and national levels. UK-CARET is representative of the full scope of the land-grant mission: extension, research, instruction, and service. Membership is composed of active and progressive leaders in agricultural and natural resource enterprises. UK-CARET provides a direct link to the national CARET organization. Two members of UK-CARET are designated as national CARET representatives.

In addition, the experiment station meets formally with other entities: quarterly with the Kentucky Tobacco Research Board to set priorities for research by the Kentucky Tobacco Development Center to assist in the transition from the tobacco-based economy; quarterly with the Equine Initiative interim advisory committee; quarterly with the Livestock Disease Diagnostic Center Advisory committee; bi-annually with the board of the Gluck Equine Research Center to discuss priorities for the equine industry; and regularly with the Tracy Farmer Center for the Environment on conservation-based research. Input is also received through the Community Farm Alliance, the Sierra Club, and other environmental groups through the UK Biotechnology Research and Education Initiative.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Open Listening Sessions
- Use Surveys

Brief Explanation

The Kentucky Cooperative Extension program development process is based on a grassroots, six-stage model that begins with the engagement of local advisory councils for agriculture, 4-H, Family and Consumer Sciences and Extension Homemakers. All program committees used a variety of methods for capturing input, including council dialogue and discussion, surveys, program evaluations, and working with other local agencies and organizations. Information from program committees was then shared with the total county extension councils. Membership on these councils includes a broad cross-section of the people in the county representing all demographic and economic segments as well as government, business, education, and community organizations in addition to those identified as under-represented and underserved audiences in extension programs. Through an analysis of data and facilitated dialogue, councils identified program opportunities through which extension and local community organizations could effectively bring about positive change. County extension councils then established program priorities for which county program plans and outcome goals were written. In all, 11,862 people were involved in the process of establishing local program priorities. Most counties utilize a process for examining their council makeup and utilize membership committees and a rotation system to insure new blood and continued broad based support.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting specifically with non-traditional individuals
- Other (Serving on advisory groups/councils for organizations)

Brief Explanation

Even when Extension advisory councils appear to be broadly representative of the local population, it is possible that established program priorities fail to target important issues. Agents count heavily on their council members to identify program needs but recognize it is a mistake to think that the personal experiences of 15-40 individuals serving on the local Extension council can adequately identify the needs of the total population. Agents are trained to combat that problem by involving members of the council in conducting a 'situation analysis.'*

Councils use three major sources of information useful in conducting a situation analysis. (1) The first is data that have been collected by someone else. This is typically called secondary or existing data. (2) The second is resident perspectives about issues, problems, resources and opportunities. (3) The third information source is current research and knowledge which may have implications for county programming.

Extension Councils began the program development process by collecting situational data from these three sources. Council members and Extension staff together or independently pulled this information together. Additional meetings of councils are held to review the data and discuss the implications of the findings. The product of this discussion is a list of program opportunities which may merit Extension's involvement.

While existing data and current research and knowledge are as close as a computer and the internet, the council delegates themselves must be diligent in capturing local resident perspectives through one of more of several methods. Agents and local leaders were trained in the following methods:

Community Forums – Community forums are public meetings in which individuals are invited to share and discuss their perspectives on issues facing the community.

Focus Group Interviews – A focus group interview is a structured discussion with a small group of eight to twelve individuals on a clearly defined topic.

Key Informant Interviews – In any community, there is a number of individuals who, because of their unique position within the community, can provide important information about local issues and needs.

Surveys – Surveys are a cost effective way of gathering data from a large number of people.

Media Scan – A systematic review of the content of news articles and editorials appearing in local newspapers and on local radio and television stations provides more information about the community.

*(In FY'08, FCS established an initiative to strengthen local advisory committees, established a process to better focus information received, and improve information transfer to the state level, resulting in Program Initiatives)

3. A statement of how the input was considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities

Brief Explanation

We pride ourselves on being locally driven, grassroots organizations. Information from stakeholders drives research and extension agendas including our pursuit of resources to conduct research and educational programs. In addition, stakeholder input has been utilized across the board for hiring, budget development, resource acquisition, program implementation, and evaluation. Our stakeholders have also served as tremendous advocates in communicating the successes of the organization to campus administrators as well as to outside and nontraditional groups and decision makers.

Brief Explanation of what you learned from your Stakeholders

Some of the issues that were identified and/or were under discussion in FY08 include:

- Financial Management- A website has been created called Moneywise that has educational resources related to financial decision-making for the home, youth, farm, health, family, credit, energy, food, travel, garden and business.
- Environmental Issues- A See Blue Go Green website has been developed with educational resources for clientele on environmental stewardship related to the home, farm, woodlands, travel, garden, youth and work.
- Latchkey children- A curriculum has been developed to use with children and parents on issues related to well-being of children who are left at home alone without adult supervision.
- Family Communications- A website has been developed with the most current information on family communication for all ages, stages and situations in the family.
- Weight Management – a website was developed to include all available resources and the expansion of programs related to exercise and health including the updated Weight the Reality Series (Body Image).
- Leadership has identified the need to enhance ways of delivering educational materials via the Internet. A workgroup focusing on social networking and its use by Extension groups was developed. One of the outcomes of this group is a set of CES Guidelines for Use of Social Networking sites by Extension-sponsored groups.
- Teen Programs including Middle School In response to Middle School Youth being Underserved in Extension Programs, a workgroup focusing on social networking and its use by Extension groups was developed. One of the outcomes of this group is a set of CES Guidelines for Use of Social Networking sites by Extension-sponsored groups. KSU conducted a series of in-service trainings to meet this need and has branded a web-based curricula that was developed by the University of Nebraska and is now available for use by KY Extension Agents as they work with entrepreneurs.
- E Commerce a need to bring new markets to Kentucky producers and businesses has resulted in programs such as MarketMaker - a web based system that connects Kentucky businesses and farmers with markets.
- Concerns over costs of travel and distance - resulted in the acquisition of a Distance Learning Technology Grant to enhance communications and educational efforts through network of videoconferencing sites in key Kentucky counties, saving clientele and personnel time and travel expense and expediting issue response time.
- Information Flow from County to State Extension Council members are now involved in implementing a new "issues flow" process which strengthens leader involvement in both issues identification in the educational resources needed to conduct the programs. Stakeholders were also more directly involved in deciding budget priorities and resource acquisition including levels for county contributions for supporting Extension programs.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
8276628	2654648	5206072	2869794

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	7936870	2654648	7497061	2842438
Actual Matching	65596042	2654648	27791273	325873
Actual All Other	0	0	0	0
Total Actual Expended	73532912	5309296	35288334	3168311

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous years				
Carryover	0	0	0	0

V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Life Skill Development
2	Leadership and Volunteerism
3	Diet, Nutrition and Healthy Lifestyles
4	Social and Economic Opportunity
5	Competitive Agriculture
6	Agricultural and Environmental Quality

Program #1

V(A). Planned Program (Summary)

1. Name of the Planned Program

Life Skill Development

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	6%	40%	0%	33%
802	Human Development and Family Well-Being	94%	15%	33%	33%
803	Sociological and Technological Change Affecting Individuals, Families and Communities	0%	5%	34%	0%
805	Community Institutions, Health, and Social Services	0%	5%	33%	0%
806	Youth Development	0%	35%	0%	34%
Total		100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	98.0	2.0	0.3	0.0
Actual	114.1	8.1	1.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1579437	549901	224912	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
13053612	641859	833738	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Through extension specialists and agents, Cooperative Extension has partnered with schools, businesses and local agencies to present programs designed to build life skill opportunities and improve quality of life in adults and youth. Examples of efforts :

- Child care/ babysitting training for Estate and Financial Planning for Life program Kentucky Master Logger Program Small Steps to Health and Wellness Program
- KSU's Sky Families program provides in-home parenting education classes
- Keys to Great Parenting Program
- KSU provides hands-on workshops and labs in animal sciences and veterinary medicine for youth in the AgDISCOVERY program.
- Supporting Families in Times of Crisis program
- KSU maintains a retirement and estate planning web site for farm families
- Operation Military Kids in collaboration with the U.S. Army Step Up to Leadership curriculum conducted in 76 counties emphasizing public speaking and communication, decision making, leadership and teamwork
- 4-H Science, Engineering and Technology which includes Aerospace/rocketry; biotechnology; Electronics/electricity; energy; Geospatial Science (GPS/GIS); and Robotics
- KSU's Family Resource Management program informed low-income families of the Earned Income Credit program
- High school students are exposed to career opportunities through the Summer Transportation Institute.
- Over 7,000 youth attended summer 4-H camp
- 4-H Reality Store taught teens financial management and the importance of getting a good education
- LEAP for Health Curriculum (Literacy, Eating and Activity for Preschool) uses storybooks to teach children about staying healthy, being physically active and eating more fruits and vegetables.
- Classes emphasizing technology are offered on digital photography, starting a business on line, marketing through online livestock markets, MarketMaker and eBay, banking, and social networking
- Entrepreneurship is taught to 23 high school youth at the KSU YEP Camp each summer.
- UK researchers are exploring ways to increase life skills and developmental assets among 6th and 7th graders.
- Child development for staff of childcare centers, in-home day cares, licensed day care organizations and Family Resource Youth Service Centers

2. Brief description of the target audience

Agents, community collaborators, and adults interested in financial management and retirement

Adults with low financial literacy

Parents with children and grandparents

Youth from age 9 through high school

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	150000	0	1100000	0
2008	591857	230349	1073349	149138

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	6	
2008	3	2	5

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Published research journal articles

Year	Target	Actual
2008	6	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Number of individuals demonstrating informed and effective decision making.
2	Number of youth participating in Extension 4-H Youth Development Programs
3	Dependent care providers (adult or child) report changes in knowledge, skills, opinions or aspirations as a result of programs conducted by Extension.
4	Number of youth or adults who demonstrate increased practical living skills.
5	Number of individuals reporting changes in knowledge, skills, opinions or aspirations related to parenting or personal relationships.
6	Number of parents reuniting with their children Number of parents successfully completing the training course
7	Reported interest in science career Successful Completion of the Program

Outcome #1

1. Outcome Measures

Number of individuals demonstrating informed and effective decision making.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	75000	79531

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Most residents of this country fail to create the necessary estate plans and documents. Seventy percent of all probated estates are estates without a will, in other words, intestate. In order to pass on hard earned assets and reduce taxes and expenses in settling estates, it is important for families to be aware of what is involved in estate planning, gain knowledge about the proper documents for their situation and take action to put them in place. The information is so vast, that participants cannot absorb everything in one meeting.

What has been done

During the past three years, Estate and Financial Planning has been a featured program for the Kentucky Cooperative Extension Service. In FY08, Extension offered the three-week series on Estate and Financial Planning for Life program in 25 Kentucky counties with 1194 clientele participating. The program focuses on estates, estate planning, attorney roles in planning, records and record keeping systems and the purpose and value of a health directive.

Results

In the few months following the FY08 Estate and Financial Planning for Life programs, evaluations revealed 755 of the 1194 in attendance have implemented a record keeping system to improve their knowledge of their financial status. 566 of the 1200 have moved forward with their estate planning by obtaining a will, durable power of attorney or a health directive, and 394 of the 1200 have reported increasing their net worth as a result of actions taken in financial security that were recommended in the training.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
801	Individual and Family Resource Management

Outcome #2

1. Outcome Measures

Number of youth participating in Extension 4-H Youth Development Programs

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	195000	233423

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

America faces a significant challenge. Young people are not prepared with the necessary science, engineering and technology workforce skills to compete in the 21st century. According to the National Assessment of Educational Progress only 18 percent of high school seniors are considered proficient in science. A mere 5 percent of college undergraduates earn degrees in science and engineering. 4-H is uniquely positioned to foster discovery of and passion for science, engineering and technology through non-formal experientially-based delivery methods that address science abilities (process) and science anchors (content) in a hands-on way under guidance of a trained 4-H volunteer.

What has been done

In FY08, 4-H Science, Engineering and Technology activities reach 24,141 youth through Aerospace/rocketry; biotechnology; Electronics/electricity; energy; Geospatial Science (GPS/GIS); and Robotics with hands-on learning experiences through 4-H clubs, after-school, in-school and camp programs and trained 242 volunteer leaders and agents through in-service trainings. 4-H has received several grants of money and equipment and established collaborations with the UK College of Engineering, Kentucky Arts Council, Challenger Learning Centers, Tennessee Valley Authority and others in support of this program.

Results

- Although it is early to begin to determine outcomes of the SET Program, long term impacts will result in:
- Improved literacy and interest in science, engineering and technology (SET) among youth and improved related knowledge, skills and abilities for use in their lives and future careers;
 - Increased number of youth taking courses during and beyond high school in science, technology and engineering; and
 - Increased number of young adults pursuing careers in these fields.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #3

1. Outcome Measures

Dependent care providers (adult or child) report changes in knowledge, skills, opinions or aspirations as a result of programs conducted by Extension.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	5000	4231

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

According to the 2002 U.S. Census Bureau Survey of Income and Program Participation (SIPP), 63 percent of all children under age five are in some type of regular childcare arrangement. One quarter of these children are cared for in organized facilities, with day care centers (13 percent) being more commonly used than nursery or preschools (6 percent). To ensure that child care providers in these facilities are knowledgeable about proper childcare methods and developmentally appropriate practices, all workers are state mandated to engage in twelve hours of training conducted by a certified provider.

What has been done

Cooperative Extension FCS agents are partnering with state and local agencies to provide little or no cost trainings to personnel from childcare organizations including in home day cares, licensed day care organizations and Family Resource Youth Service Centers. Trainings focus on organizational skills, child abuse prevention, communication with parents, nutrition in the center, working with children with disabilities, implementing literacy and activities, child development and assessment, teaching self control and approaching discipline.

Results

- Sample evaluations from local programs reveal:
- 90% gained new knowledge of child assessments.
- 80% engaged in learning activities focusing on modifying toys and activities for children with disabilities
- 65% learned new approaches to dealing with conflict between childcare staff and parents
- 75% were able to implement literacy strategies in other daily activities, and
- 50% acquired new knowledge on the 2005 dietary guidelines and were able to implement nutrition and physical activity into their centers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #4

1. Outcome Measures

Number of youth or adults who demonstrate increased practical living skills.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	85000	90582

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #5

1. Outcome Measures

Number of individuals reporting changes in knowledge, skills, opinions or aspirations related to parenting or personal relationships.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	18000	29977

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research tells us that children need high quality care for optimal development. When older youth learn the skills needed to provide high quality child care, they build personal assets for successful lives. Research also shows that when young care givers possess a high number of assets they are less likely to engage in risk behaviors such as early sexual behaviors. Through child care experiences they gain insight into the challenges parenting brings.

What has been done

Thirty-six Kentucky counties offered 6 or more hours of child care/ babysitting training. This program offers youth the opportunity to learn to apply research based first aid and CPR procedures, to put babies to sleep on their backs, to avoid potential safety hazards, to clean up messes, to prepare nutritious meals, and to plan active play, quiet times a rest. These are essential parenting life skills as entrepreneurial skills needed to earn an income using child care skills.

Results

During 2008, 1368 young people in 36 counties completed at least 6 hours of training in child care. Participants reported increased knowledge in the areas of safe practices for babysitting, new games to play with kids, quick nutritious snacks. Follow up surveys revealed 4 Hers felt more comfortable in performing practices such as selecting age-appropriate activities and diapering infants. They reported that they felt better prepared to use babysitting as a means of generating income. Of those completing the training, 686 youth reported using a safety practice which they did not use prior to the training. Evaluations also revealed that 710 youth reported that they created flyers or business cards, kept financial records, or engaged in other workforce preparation or entrepreneurial experiences. Overall, the babysitting workshops help youth be better prepared to provide child care services and helped them prepare life skills which they could use as adults.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
801	Individual and Family Resource Management

Outcome #6

1. Outcome Measures

Number of parents reuniting with their children Number of parents successfully completing the training course

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Data from the 2000 Census show African American children representing 14% of the overall population in Fayette County (KY). When looking at figures from the Child Welfare System, African American children make up 46% of the total amount of children in out-of-home-care (OOHC). This illustrates that African American children in Fayette County are over-represented in out-of-home care at a rate of 3.4 times. A Fayette County Family Court Judge was concerned about barriers that families of color may perceive which could cause them to be unsuccessful in meeting goals designed for family reunification.

What has been done

The SKY Families Program offers a culturally strategic approach to parenting education for court referred parents. The SKY Families program is managed by a KSU Agent for Family and Consumer Science and collaborates with a faith-based organization, Imani Family Life Center, Inc., which serves as the fiscal agent for funding from Prevent Child Abuse Kentucky to help support parenting education sessions with some presenter stipends, child care and meals.

Results

During the period of October 1, 2007 through September 30, 2008, a total of thirty-four (34) parenting classes were presented. There was a total duplicated count of 322 participants (99 children, 190 mothers and 33 fathers). Follow-up and tracking of families will be conducted to determine their success in reuniting with their children as a result of their participation in this intensive parent education program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
801	Individual and Family Resource Management

Outcome #7

1. Outcome Measures

Reported interest in science career Successful Completion of the Program

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

African-American students are under-represented in science and technology fields. In order to increase number of students interested in careers in animal science and veterinary medicine Kentucky State University's Land Grant Program partnered with the Animal Plant and Health Inspection Service and the National Civil Rights Leadership to offer the AgDiscovery program.

What has been done

KSU hosted a 2-weeks residential program to designed to expose sixteen participants to the skills and techniques related to various careers in animal science and veterinary medicine. APHIS has funded the program with the intention of highlighting the careers currently and projected to be available within the agency as part of a nationwide effort to draw future scientistS to APHIS. To ensure the successful completion of the program goals, the curriculum of the program is intended to give the participants a literal representation of careers within Animal Science and Veterinary Medicine. The participants are also presented with opportunities for personal development and cultural enrichment. The students experience cultural enrichment along with academic sessions were to increase each students awareness of their individual strengths and talents and to develop an additional appreciation for the uniqueness of cultures and their contributions to society.

Results

The AgDISCOVERY program provides educational and personal development opportunities of immense value. One example, a program participant, 12-year old female, began as a shy and timid girl. While she had a strong interest in becoming a veterinarian, this was her first time being away from home. From the beginning she was very uncomfortable. She kept to herself; she did not interact with the staff or other participants of the program. On occasion, she would ask how long our activities were going to last; she wanted to go to the dorm and call-home. To address her needs we provided encouragement and special attention during meals and free time. After three days this young girl exhibited marked changes in physical and social behavior. She was able to develop academically, socially and personally. After overcoming her initial challenges, she was able to focus more of her attention on the educational components of the program. Now she is closer to reaching her career goal of being a Veterinarian.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- During (during program)

Evaluation Results

Key Items of Evaluation

Program #2

V(A). Planned Program (Summary)

1. Name of the Planned Program

Leadership and Volunteerism

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	0%	15%	50%	33%
803	Sociological and Technological Change Affecting Individuals, Families and Communities	60%	75%	50%	34%
903	Communication, Education, and Information Delivery	40%	10%	0%	33%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	77.0	1.6	0.0	0.0
Actual	78.3	0.1	1.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1087351	13748	224912	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
8986658	11702	833738	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Community leadership development programs have been conducted for the general public, as well as training for those serving in leadership roles in extension councils, district boards, extension homemaker organizations and 4-H programs.

- 4-H certification programs including livestock volunteer certification, master volunteer in clothing construction, master volunteer in foods, and shooting sports volunteers
- Youth Issues Conference ,a four-day teen retreat, focusing on leadership development and community service projectsKentucky
- 4-H Club Handbook serves as a guide for 4-Hers, volunteer leaders, and agents in organizing the 4-H program
- 4-H Step Up to Leadership curriculum was completed by 11,106 youth
- Extension specialists coordinated community visioning processes and the development of community plans
- Researchers explored the nature, causes and consequences of change within farm families and farm-dependent communities.
- Kentucky Entrepreneurial Coaches Institute provided training for individuals who then mentor future entrepreneurs.
- Business Retention and Expansion Program is a community-based research project in which the community determines the needs of existing businesses so as to retain them.
- UK partners in the "Engaging Youth Serving Communities" program that stresses youth and adults working together to promote community change.
- UK Community Leadership Development extension faculty led seminars in rural Serbia and prepared community development "train the trainer" materials.
- Clothing construction was taught by the 80 Certified Master Clothing Volunteers in 52 counties
- Extension facilitates many community coalitions that sponsor community activities such as health fairs, Five-a-Day nutrition programs, Backpack for Hunger, Workplace Wellness, senior day cares, and day camps.

2. Brief description of the target audience

General public

Officers of extension councils and district boards, extension homemaker organizations and 4-H programs.

Volunteers from Kentucky counties with appropriate background and experience and subject matter knowledge that we can build upon for leadership training.

Step up to Leadership" curriculum and activities are designed for youth in grades K-12.

Kentucky teens with an interest in becoming more involved in their communities.

Local businesses, entrepreneurs, and those receptive to honing leadership skills and becoming more involved their community.

Local officials

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	586000	0	264000	0
2008	553197	254908	370424	102106

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	3	
2008	0	3	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Published research journal articles

Year	Target	Actual
2008	3	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Number of citizens indicating increased leadership knowledge, skills, or confidence through participation in leadership programs.
2	Number of adults and youth utilizing improved skills in communication, problem solving, or group process in addressing community issues and needs.
3	Number of people who are involved in addressing significant community issues.

Outcome #1

1. Outcome Measures

Number of citizens indicating increased leadership knowledge, skills, or confidence through participation in leadership programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	38000	58025

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

4 H Livestock Programs have historically been a foundation cornerstone for the 4 H Program. Due to changing demographics of the country which are reflected in 4 H membership, youth involvement in livestock programs has declined through the years, although 105 of Kentucky's 120 counties still have active livestock programs involving over 35,000 enrolled youth.

What has been done

In response to growing concern over the uniformity and quality of these programs, the Kentucky 4 H Livestock Volunteer Certification (KLVC) program was developed to (1) ensure that all youth and volunteer leaders have access to high quality, comprehensive materials regardless of county resources, (2) ensure a sound and well rounded educational experience for youth enrolled in livestock and livestock related projects, and (3) empower local volunteer leaders to successfully lead a club in a fun, interactive environment. A comprehensive curriculum with over 100 individual lesson plans and a state of the art resource kit has been developed for use by local volunteer leaders for work with county livestock clubs. Counties wishing to offer livestock projects are required to have volunteer leaders who attend workshops and have been certified in the use of the curriculum and resource kit.

Results

In FY08, 77 additional leaders received certification, now totaling 466 leaders in 105 Kentucky counties (every county with a 4 H Livestock Program) This has resulted in 108 livestock clubs, which has in turn increased number of youth enrolled in livestock programs, and developed a better understanding of rules, regulations and expectations by leaders and the youth themselves. Evaluations of workshop participants indicated increased knowledge and skills on the part of the program graduates. As a result of this program, 2,006 youth completed more than 6 hours of instruction.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Number of adults and youth utilizing improved skills in communication, problem solving, or group process in addressing community issues and needs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	53000	57458

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Youth in rural Kentucky communities often report having limited experiences in the civic engagement process. Adults often make decisions on behalf of youth, with little or no input as to what issues are most pertinent. As a result, there are fewer positive youth adult relationships, less sense of civic responsibility and fewer youth involved with volunteer efforts. Ultimately, there is a lack of community connectedness and sense of belonging on the part of youth. Counties witness a 'brain drain,' where youth leave these communities as adults, with no desire to return.

What has been done

Kentucky has been active in the 'Engaging Youth, Serving Communities' initiative. This project examines the experiences of youth and adults working together to promote community change; assessing the changes in attitudes of (of youth and adults) toward youth leadership and adult support.

Results

Youth and adults continue to have positive perceptions of one another as they work together as partners. It has become very apparent that by participating in this project, youth have developed a great deal of confidence, along with numerous life skills (leadership, communication, social). As a result, they have demonstrated their effectiveness by getting involved in other projects. Some of those include: Serving on a county-wide drug task force (Lyon County); working with family resource centers to provide food to youth in at-risk families (Monroe County), and working with the mayor to install playground equipment in a community that had no park for children (Todd County).

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families and Communities

Outcome #3

1. Outcome Measures

Number of people who are involved in addressing significant community issues.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	24000	22969

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Kentucky took a distinctive approach to the problem of assisting tobacco farmers who would suffer economically as the tobacco quotas were eliminated. They strategically set aside a portion of the funds from the Master Tobacco Settlement to help communities in tobacco dependent regions adjust to changes in the tobacco sector and encourage agricultural diversification.

What has been done

The Kentucky Entrepreneurial Coaches Institute is designed to encourage economic diversification in 19 Northeastern Kentucky Tobacco Dependent Counties and focuses on training two classes (averaging 35 in each) of community volunteers who are willing to coach or mentor entrepreneurs in the region. The KECI is structured as a 16 month program. The program consists of seven workshops which include an opportunity for international travel to learn about entrepreneurship development in a different cultural setting. Each person selected for the program receives a fellowship covering the bulk of the cost of the 2 3 day sessions.

Results

Fifty-eight individuals have graduated during the past two years. The results of the program evaluation suggest that the fellows have been actively involved in building their own skills and, in turn, using them to create a culture of entrepreneurship in Eastern Kentucky. According to a Kentucky Entrepreneurial Coaches Alumni survey conducted in the summer of 2008, as a result of KECI efforts by graduates: 94 new businesses have been started, 57 businesses have expanded, 131 new jobs have been created, \$3 million in new grants have been stimulated, alumni have spearheaded visioning/strategic planning in 3 counties, and youth entrepreneurship programs have been developed.

Long term impacts of this program show increased confidence, knowledge and skills related to the program participants ability to bring about economic impact to the region.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
802	Human Development and Family Well-Being
903	Communication, Education, and Information Delivery

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)

Evaluation Results

In 2006, the Federal Reserve Bank of St. Louis, Louisville Branch, hosted a workshop given by representatives of the Association for Enterprise Opportunity (AEO) on microenterprise development organizations, their roles in other states, and their impact. As a result of the workshop, participants representing a number of economic development entities in Kentucky expressed a desire to establish such a statewide organization after realizing that Microenterprise employment represents almost 20% of all private employment in the United States and that more than 87% of all businesses in the U.S. are microenterprises.

In April, 2008 a group of persons representing public, private and nonprofit organizations, in an effort to support and expand microenterprises in Kentucky, came together to plan a new statewide organization designed to support micro businesses and entrepreneurs. Extension specialists facilitated the strategic planning discussion and drafted the plan.

Partners for Entrepreneurial Advancement in Kentucky (PEAK) is now a statewide, nonprofit organization supporting economic development through the growth of microenterprise development agencies and microenterprises, especially those located in rural and economically challenged areas. This is the only such organization in Kentucky and one of a limited number in the nation.

Key Items of Evaluation

Program #3

V(A). Planned Program (Summary)

1. Name of the Planned Program

Diet, Nutrition and Healthy Lifestyles

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	0%	0%	22%	10%
502	New and Improved Food Products	0%	0%	14%	10%
503	Quality Maintenance in Storing and Marketing Food Products	0%	10%	3%	0%
504	Home and Commercial Food Service	0%	15%	0%	10%
511	New and Improved Non-Food Products and Processes	0%	0%	4%	0%
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%	0%	4%	0%
702	Requirements and Function of Nutrients and Other Food Components	0%	15%	11%	10%
703	Nutrition Education and Behavior	67%	20%	8%	10%
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.	0%	0%	4%	0%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	0%	5%	10%	10%
721	Insects and Other Pests Affecting Humans	0%	5%	10%	10%
722	Zoonotic Diseases and Parasites Affecting Humans	0%	0%	4%	0%
723	Hazards to Human Health and Safety	4%	10%	2%	10%
724	Healthy Lifestyle	29%	20%	4%	10%
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	0%	0%	0%	10%
Total		100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	100.0	5.5	1.0	10.0
Actual	131.5	7.9	1.0	11.3

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c 1817543	1890 Extension 687376	Hatch 1049589	Evans-Allen 608007
1862 Matching 15021494	1890 Matching 624611	1862 Matching 3890778	1890 Matching 137270
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Extension conducted programs with and for clientele related to diet, health and food safety. Programs included volunteer training, health fairs, Extension Homemaker leader lessons, safe night programs, and healthy homes programs.

Programs focused on the nutrition and fitness of children such as 4-H school enrichment, after-school programs, day camps, summer camps, The Longest Day of Play, and Get Moving Kentucky.

Partnering with 2,054 coalitions to address issues impacting the lives of Kentuckians.

Research on the nutrient effects of high-fat diets, antioxidant effects on cancer prevention, environmental effects on nutrient requirements

UK researchers determining the influence of dietary and environmental factors on nutrient requirements

Cooperative Extension's LEAP program (Literacy, Eating, and Activity for Primary Youth Health) reached over 22,000 youth with nutrition and physical activity information

KSU researchers examining food consumption and physical activity as they relate to childhood obesity, and the effects of vegetables on osteoporosis

KSU's "Ready 101: A Kentucky Approach to Preparing Communities for an Infectious Disease Outbreak" emphasized individual and community awareness for pandemic influenza and other widespread emergency situations.

UK researchers studied the economic, environmental, safety, and health impacts of nanotechnology in agricultural, food, and biological systems

Extension agents partnered with local schools, agencies, and businesses to offer Get Moving KY, a wellness education program reaching over 15,000 Kentuckians

UK studies confirmed that enzyme hydrolyzed proteins can also function as antioxidants.

"Second Sunday," an Extension led effort, closed off streets so people could increase their physical activity by walking, biking, and skateboarding in 71 counties

UK researchers used sensors to explore acoustic emissions generated by bacteria to fingerprint different strains of bacteria

Researchers found that shoppers desire more local food in the marketplace

UK studies found that PCBs likely do not exert their tumor promoting activities in the liver by activating PPAR α or by increasing Kupffer cell activity.

"Weight: The Reality Series" an Extension weight reduction program, was offered in 51 counties with 2,048 participants.

EFNEP taught nutrition to 6,043 low-income families

KSU coordinated a Community Garden Project that provided Hispanic families with produce and the opportunity to preserve food for the winter months.

Fruit and vegetable consumption of the Food Stamp Family Nutrition Education Program participants increased from 3.2 to 4.5 servings per day.

The Rural Price Project examines geographic differences in the cost of living

Small Steps to Health and Wellness Program focuses on the similarities of problems of health and finances

UK researchers use the BOD POD to assess body composition of individuals in weight-loss programs. The 4-H Jump Into Foods and Fitness program addressed nutrition and physical fitness

2. Brief description of the target audience

Extension agents
 Community agencies
 Volunteer leaders
 Parents
 Grandparents
 General public
 Public housing residents
 Children

Teens

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1007000	0	123000	0
2008	815758	194247	532378	76670

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	10	
2008	13	15	28

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Published research journal articles

Year	Target	Actual
2008	10	15

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Number of individuals who experience a change in knowledge, opinion, skills, or aspirations regarding lifestyle changes (diet, exercise, etc.) that improve personal health.
2	Number of citizens reporting making lifestyle changes for the purpose of improving their health.
3	Number of individuals implementing personal health protection practices appropriate for their life stage (preventive health practices, participation in screening and detection opportunities, immunizations, etc.).
4	Number of individuals adopting at least one new safety practice (bicycle helmet, smoke detector, radon detector, fire extinguisher, farm safety devices, ATV safety, etc.).
5	Number of individuals indicating they gained knowledge related to safe food storage, handling, and preparation.

Outcome #1

1. Outcome Measures

Number of individuals who experience a change in knowledge, opinion, skills, or aspirations regarding lifestyle changes (diet, exercise, etc.) that improve personal health.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	85000	105512

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Kentucky is the 4th most obese state in the nation and every year the rate of physical activity is being reduced. According to the US Department of Health and Human Services, Center for Disease Control and Prevention, 87% of Kentucky youth ate fewer than five servings of fruit and vegetables daily during the past seven days. As portion sizes have grown in the last 20 years, so has the incidence of adult and childhood overweight and obesity. Many chronic diseases are directly related to poor eating habits, obesity and overweight.

What has been done

In the Jump into Foods and Fitness (JIFF) program curriculum focuses on the daily practice of healthy lifestyle choices, increased physical activity, planning meals and serving correct portion size, new strategies for physical and mental relaxation and the implementation of gradual changes through the development of their personalized My Pyramid.

Results

Nearly 7,600 youth in 52 Kentucky counties participated in the 4 H Jump Into Foods and Fitness Program with 97% of these youth reporting the adoption of at least one new health or nutrition habit during their participation in the program. One in five participants completed personal activity logs and recorded health and nutrition habits and used pedometers to measure increases on physical activity.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
703	Nutrition Education and Behavior

Outcome #2

1. Outcome Measures

Number of citizens reporting making lifestyle changes for the purpose of improving their health.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	40000	50626

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obesity has reached epidemic levels in Kentucky with heart disease being the number one killer of Kentuckians. Adults and youth need educational information as well as motivation to get moving and improve their diets.

What has been done

'Weight: The Reality Series' is a ten-week weight reduction educational program designed to help adults learn to control their weight. The curriculum includes lesson plans, participant handouts, marketing materials and evaluation tools. In addition to the educational sessions agents are working to establish organized activities and support groups to help insure success in health related programs.

Results

Some 130 sessions of Weight the Reality Series were offered in 60 counties with over one third of participants succeeding in losing 5% or more of their initial weight during the program. Program participants averaged 6.5 pounds of lost weight and a waist reduction of nearly 2 inches. Of 25 behavioral changes measured, those that were considered most effective by successful participants were:

1. Measured and controlled portions.
2. Becoming more active during the day.
3. Keeping a journal of what and how much you eat and your activity level.
4. Walking at least 30 minutes 5 days a week.
5. Drinking more water.
6. Develop a support team of family, friends and co-workers.

In 2008, over 105,512 individuals reported an increase in knowledge or skills related to diet and exercise and 50,626 actually made lifestyle changes as a result of involvement in Extension programs related to improving personal health.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

Number of individuals implementing personal health protection practices appropriate for their life stage (preventive health practices, participation in screening and detection opportunities, immunizations, etc.).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	26000	37446

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Environmental hazards in housing affect the quality of life and add billions to health care costs annually. Family budgets may be strained due to costs associated with health and safety problems caused from defects in or improperly maintained home systems and use of hazardous products. Health hazards include allergens, mold, toxic materials, dangerous gasses, fire safety and other health concerns.

What has been done

The Healthy Homes and Communities curriculum is used with adults and youth in various settings. Programs are focused on fire safety, smoke detectors, carbon dioxide and poisonous gas in its detection, radon and lead issues, safe storage and use of pesticides, mold and mold abatement as well as other related topics.

Results

In FY 08, 17 Kentucky counties reported participating in Extension's Healthy Homes and Communities Program with 2,517 clientele improving their knowledge and skills related to home safety and causes of environmental hazards in housing. Actions most frequently taken by clientele as a result of participation in Healthy Homes and Communities training were:

- * Posting emergency numbers by the phone
- * Eliminating one or more identified safety hazards
- * Detecting and removing mold and mildew
- * Safe storage and usage of home pesticides and hazardous household products
- * Testing homes for radon
- * Selecting, using and storing home pesticides more wisely

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
703	Nutrition Education and Behavior

Outcome #4

1. Outcome Measures

Number of individuals adopting at least one new safety practice (bicycle helmet, smoke detector, radon detector, fire extinguisher, farm safety devices, ATV safety, etc.).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	26000	28246

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Although we typically look at disease and social ills as the greatest threat to our youth, the fact remains that accidents are responsible for more calls to the emergency room and deaths than any other factor.

What has been done

In an effort to help youth learn safety practices many county Extension programs include a youth Safety Education Day. Programs are typically structured around Practical Living Skills and Everyday Dangers youth face. A review of the core content of county programs showed that youth are exposed to: the different Safety and Health Agencies in the community, the importance of using safety equipment such as helmets for ATV's, bicycle safety, and life jackets and watercraft safety as well as helping youth understand that safety practices help to prevent injuries and provide a safe environment.

Results

Program evaluations require that youth be able to identify and explain ways to prevent injuries at home and at school (e.g., seat belts, helmets, poisonings, etc.) in a variety of situations. As a result of these programs, evaluations reveal that the majority of youth can now identify at least four unsafe practices or situations in their own home, each youth had corrected at least one of the concerns, and youth reportedly had used four or more of the safe practices learned.

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
724	Healthy Lifestyle

Outcome #5

1. Outcome Measures

Number of individuals indicating they gained knowledge related to safe food storage, handling, and preparation.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	25000	36152

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farmers markets are traditionally looked at as a way to market locally grown produce in an effort to generate more income for producers, however research has shown that the more rural areas of the state have less access to quantities and varieties of fresh fruits and vegetables at affordable prices.

What has been done

Extension Agents supported 133 Farmers Markets in 93 counties with 1921 local producers taking advantage of this opportunity to provide local shoppers with farm fresh, 'Kentucky Proud' produce. Most of these markets accepted food vouchers and food stamps from low income and senior customers.

Results

Extension agents assisted markets with 521 media campaigns and 346 educational programs assisting customers with information on nutrition, food preparation, food safety, storage and preservation, thereby making fresh, locally grown produce available and affordable to more Kentucky families.

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies
504	Home and Commercial Food Service
721	Insects and Other Pests Affecting Humans
703	Nutrition Education and Behavior

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

Evaluation Results

Key Items of Evaluation

Program #4

V(A). Planned Program (Summary)

1. Name of the Planned Program

Social and Economic Opportunity

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
511	New and Improved Non-Food Products and Processes	0%	0%	2%	0%
601	Economics of Agricultural Production and Farm Management	9%	0%	12%	16%
602	Business Management, Finance, and Taxation	0%	0%	12%	17%
603	Market Economics	0%	0%	9%	0%
604	Marketing and Distribution Practices	7%	12%	4%	17%
605	Natural Resource and Environmental Economics	0%	0%	7%	0%
606	International Trade and Development	0%	0%	13%	0%
607	Consumer Economics	0%	0%	8%	0%
608	Community Resource Planning and Development	84%	45%	13%	0%
609	Economic Theory and Methods	0%	0%	3%	0%
610	Domestic Policy Analysis	0%	0%	13%	0%
611	Foreign Policy and Programs	0%	0%	4%	0%
803	Sociological and Technological Change Affecting Individuals, Families and Communities	0%	10%	0%	50%
805	Community Institutions, Health, and Social Services	0%	33%	0%	0%
Total		100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	25.0	6.5	1.3	2.8
Actual	31.5	4.2	1.0	2.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
436528	233708	1499412	87451
1862 Matching	1890 Matching	1862 Matching	1890 Matching
3607782	333213	5558255	124000
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Extension has delivered educational programming and workshops on topics such as understanding community dynamics, asset analysis, business planning, marketing, and hospitality management.

Research projects on the impact of agricultural trade policies agricultural exports
 Cooperative Extension facilitated the establishment of networks of those engaged in agritourism to enhance sales, marketing and buying

UK researchers are evaluating the effects of food safety scares on long-term economic losses. Researchers measured the impacts of environmental policies, competition policies, and food safety standards on food exports. UK Extension's Estate and Financial Planning for Life Program taught estate planning to over 1,200 participants. KSU developed the eCommerce training series to assist small business owners in how to use the internet to support their businesses. The Departments of Horticulture and Biosystems and Agricultural Engineering are working to find and develop appropriate tools for small-scale agricultural enterprises. UK researchers investigated the compensation private land owners required to open their land to the public.

Marketmaker, a web-based link between producers, processors, and consumers, is a way for producers to increase their income and add value to products.

KSU coordinated a series of small business workshops on how to own and expand a business.

UK researchers examined the impact of the Tobacco Buyout Program on family businesses. Two county Extension Agents for the Arts positions were established to celebrate the arts through local arts councils, art festivals, music festivals, and craft festivals. UK researchers are examining the role of labor market policy on the supply and demand of workers in rural areas. The 4-H American Private Enterprise System program prepares helps high school juniors understand the American private enterprise system. UK and KSU collaborate on the Business Retention and Expansion program which assist communities keep existing businesses in their communities.

UK researchers are studying the importance of health in consumer's food choices, and an evaluation of the effectiveness of food-related programs aimed at improving health.

KSU, in collaboration with the Small Business Development Center at Murray State University, conducted the Hopkinsville Entrepreneurs Advantage Training Program.

The UK Department of Landscape Architecture works closely with Kentucky communities to improve land use planning. Formation of nontraditional advisory groups in the areas of community and economic development, tourism, agritourism, and the arts

2. Brief description of the target audience

- County extension agents
- Farm operators
- Public policy makers
- High school youth
- Agritourism providers
- Active and potential community leaders
- Community leaders and elected officials

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	275500	0	14500	0
2008	295164	160336	75684	32607

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	20	
2008	4	22	26

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Published research journal articles

Year	Target	Actual
2008	20	22

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Number of people involved in addressing significant community issues.
2	Number of ongoing coalitions with which extension is actively involved.
3	Number of people who are ready to enter the workforce.
4	Number of individuals reporting changes in knowledge, opinions, skills or aspirations related to economic or enterprise development.

Outcome #1

1. Outcome Measures

Number of people involved in addressing significant community issues.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	25000	24205

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Insufficient physical activity and obesity are primary risk factors for cardiovascular disease-Kentucky's leading cause of death. Community health service providers often identify lack of exercise as a community health problem. Extension's 'Get Moving Kentucky' campaign is designed to increase awareness of the critical need to increase personal activity levels for better mental and physical health and provide incentive for individuals to demonstrate practice change.

What has been done

'Get Moving Warren County' illustrates Extension's ability to mobilize a community to address this significant community issue. Utilizing materials generated at the state level and local resources, Warren County Extension Agents for Family and Consumer Sciences, Agriculture, and 4-H Youth Development worked with local agencies to develop an eight-week program titled Get Moving Warren County to address exercise and nutrition education. The program was designed not only for adults, but also for youth, so the whole family could 'get moving' together. The Warren County Extension Council collaborated with Mammoth Cave Area Extension Homemakers Association, Warren County 4-H Council, Warren County Extension Homemakers Association, Barren River District Health Department, Health Education through Extension Leadership, The Medical Center's Health and Wellness Center, and other local business partners to conduct Get Moving Warren County.

Results

Programs presented included: portion distortion, healthy beef, resistance training, Hot Yoga, ballroom dancing, hypertension education, and resources in the community. Participants received incentives such as stress balls, pedometers, frisbees, water bottles, and dynabands for attending sessions. Each participant was encouraged to record their daily minutes of physical activity. Prizes were awarded for the most minutes of physical activity recorded over the eight weeks of the program.

According to surveys, over the eight-week program, 73% of participants became more physically active for 30 minutes each day. Seventy-three percent of participants recorded weight loss, lower blood sugar levels, and/or lower cholesterol levels. Many expressed becoming more physically active with family and friends after participating in Get Moving Warren County.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #2

1. Outcome Measures

Number of ongoing coalitions with which extension is actively involved.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	2100	2054

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Viable agritourism enterprises differ from traditional tourism attractions in that family farm locations are usually not easily accessible from population centers and major transportation routes. The critical need for additional access signage for increased profitability was targeted by state and regional agritourism networks.

What has been done

Extension Agents initiated and facilitated agritourism leadership discussions resulting in the establishment of four Regional Agritourism Organizations. One of the first items of business was publicity and signage on public highways. With Extension agents as advisors the team developed, facilitated and coordinated public policy education presentations for Transportation Cabinet secretaries, tourism officials, transportation program leaders and legislators.

Results

After an extensive public policy educational campaign over a 2.5 year period the agritourism friendly amendments to highway signage regulations were confirmed in June, 2007. The changes allow for signage displaying a red barn logo to designate agritourism enterprises, hours of operation, and for smaller signage on county/state road right away locations. Agritourism enterprises are now eligible for a 50% signage cost share with the Transportation Cabinet providing installation. As a result of this development, agritourism operations are rapidly taking advantage of this opportunity and establishing a marketing presence and have immediately reported increasing traffic count, sales and profitability.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #3

1. Outcome Measures

Number of people who are ready to enter the workforce.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	6700	6620

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

4 H is helping Kentucky's youth grow smarter about money, careers, and making life decisions. It uses three programs Reality Store, Mini Society, and Dollars and Sense--to help kids acquire a skill that some of us never learn: how to stretch dollars so you can thrive financially. These programs, requested by school systems and supported by classroom teachers, chambers of commerce, and parents, have been immensely popular.

What has been done

To conduct Reality Store, Mini Society and Dollars and Sense programs, Extension Agents work with schools, local businesses and local government through fairs, workshops and simulations, youth make real life decision regarding education, careers and the related salary, and costs associated with life. Youth are forced to accept a salary associated with their chosen career (based on educational level they choose to achieve), budget that salary and seek out assistance through special 'helps' such as banks and government assistance programs when resources run short.

Results

4 H Extension estimates that 40,000 Kentucky kids take part in the Reality Store program each year. A lot of youth realize for the first time that there is a connection between the careers they choose, the educational requirements for that career, and the potential lifestyle that career might produce. They are amazed at how much it costs to raise a family. The result is that they begin to think about education and career and also realize that budgeting is part of life and that wants and needs are different.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #4

1. Outcome Measures

Number of individuals reporting changes in knowledge, opinions, skills or aspirations related to economic or enterprise development.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	30000	20938

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

An innovative new web based system is connecting Kentucky agricultural businesses, farmers and markets in a unique way to benefit consumers and producers alike. Called MarketMaker, the system features a mapping function and census data on locales and enable buyers and sellers of food products to find each other quicker and easier. Sellers use this interactive tool to identify potential markets and find processors and other businesses they need to profitably move their products to the market. The program comes to Kentucky through the collaborative efforts of the UK College of Agriculture, the Kentucky Department of Agriculture, the Governor's Office of Agricultural Policy, and Allied Food Marketers. Access to the Web site is free and open to the public from any computer connected to the Internet. Kentucky is only the fourth state to become part of this national program developed by University of Illinois Extension.

Results

Use of this system exceeds expectations as traffic on the system in Kentucky exceeded 418,000 hits in 2008 with the national system receiving 4.4 million hits. Examples of reported impact from the Marketmaker website include:

- * A home based business processor who, as a result of this program, exceeded the capacity of her kitchen and used Marketmaker to locate someone to process and package her product.
- * A cattle producer who determined he could sell his 'branded beef' product to high end consumers, the target consumers are households where income is in excess of \$100,000.
- * A chef in a French restaurant where dining is white tablecloth upscale prides himself in using only the freshest ingredients. Marketmaker allows him to locate farmers who can direct market and deliver fresh organic eggs and vegetables to his restaurant.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)

Evaluation Results

Food safety events are the most challenging issues facing marketing channels of agricultural products today. A key question regarding consumer and producer behavior is how they react when faced with unexpected food safety shocks. Firm-level decision making regarding product differentiation, health and wellness, and consumer responsiveness in an environment of highly integrated agriculture and food industries is the heart of this research. Better understanding of consumer reactions to food safety scares helps the food industries construct strategies that can restore consumer confidence after safety crises

University of Kentucky researchers are evaluating the effects of food safety scares in fresh produce and meat markets, consumer responses to these issues and communication strategies needed to respond to such issues. Economic losses associated with such events are not limited to the immediate time and so an understanding of how to regain confidence of consumers is essential.

Results are helping processors and producers create credible quality assurance programs through more effective, communication with consumers. Heightened visibility has created demands for branding, labeling, and product differentiation based on traceability and quality. Producers and retailers are using these results to further differentiate their products and perhaps earn higher premiums, as a strategic response to consumers' risk perceptions. Findings will also reinforce the need for food industry representatives to provide accurate information when a safety crisis arises. Results will show retailers another way to raise consumer confidence in the nation's supply chain by reducing erosion of demand and market share when safety crises do occur.

Key Items of Evaluation

Program #5

V(A). Planned Program (Summary)

1. Name of the Planned Program

Competitive Agriculture

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	1%	10%	15%	0%
201	Plant Genome, Genetics, and Genetic Mechanisms	0%	0%	10%	0%
202	Plant Genetic Resources	0%	0%	2%	4%
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	8%	0%
204	Plant Product Quality and Utility (Preharvest)	0%	0%	0%	2%
205	Plant Management Systems	53%	20%	5%	9%
206	Basic Plant Biology	0%	0%	10%	0%
211	Insects, Mites, and Other Arthropods Affecting Plants	0%	0%	0%	16%
212	Pathogens and Nematodes Affecting Plants	1%	17%	5%	0%
301	Reproductive Performance of Animals	0%	7%	10%	0%
302	Nutrient Utilization in Animals	0%	0%	10%	15%
303	Genetic Improvement of Animals	0%	5%	0%	7%
307	Animal Management Systems	36%	17%	5%	35%
311	Animal Diseases	0%	10%	0%	2%
401	Structures, Facilities, and General Purpose Farm Supplies	1%	0%	10%	0%
402	Engineering Systems and Equipment	0%	0%	5%	0%
403	Waste Disposal, Recycling, and Reuse	0%	4%	0%	5%
404	Instrumentation and Control Systems	0%	0%	5%	0%
601	Economics of Agricultural Production and Farm Management	0%	5%	0%	5%
604	Marketing and Distribution Practices	8%	5%	0%	0%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	145.0	13.3	45.3	13.5
Actual	185.0	11.7	45.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2563609	1025566	2998824	1258238
1862 Matching	1890 Matching	1862 Matching	1890 Matching
21187522	920388	11116509	64603
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Kentucky's national leadership role in eXtension with HorseQuest, DAIReNET, and GardenData
 Master Cattlemen Program conducted in 49 counties KSU "Third Thursday" program for small, limited resource and minority farmers
 UK research on the bioconversion of 11 million tons of agricultural, forestry and urban waste fibrous biomass for biofuel production
 Understanding dormancy and increasing germination rates to improve adoption of gamma grass as a forage, biofuel and conservation planting UK Meat Cutting School for direct marketers, home-based businesses, supermarkets, and producers
 Cattle Genetics Improvement Program to improve beef herd genetics Study of carcass quality, yield, maternal ability, and susceptibility to parasites with hair versus wool sheep
 KSU Goat Production and Management program on profitability, production and health
 Spider mite resistance in tomatoes Study of mineral mobilization form males to foals in late gestation and early lactation
 Kentucky AIM Program encourages the formation of purchasing alliances Cow College provides in-depth training on beef management practices Study of nutrient, antibiotic, and pathogenic bacteria in poultry litter
 KSU Small Farm Program with one-on-one assistance
 FSA Borrower Training Workshop as a requirement for FHA loans
 Weed Management Team develops sustainable weed management strategies
 KSU's bee keeping and honey production program
 Evaluation of new grape cultivars
 Animal Health Risk Outlook website Dairy Beef Quality Assurance Program and Certification
 Master Grazer program conducted in 35 counties
 KSU researchers examining pawpaws and primocane blackberries as a niche crop
 Horticultural researchers examining rootstock impacts on fruit trees
 Investigation of container moisture content, photosynthesis, and plant biomass for woody plants in greenhouse production
 Horse and beef pasture weed control research
 KSU Fish Disease Diagnostic
 New Crop Opportunities Center
 Research the etiologic relationship between bacterial entophytes of forages and placentitis-induced pregnancy losses in horses, cattle and goats

Feasibility of the 25x25 initiative, the goal of having 25% of our expected energy produced from renewable resources in 2025

Support of 133 Farmers Markets in 93 counties with 1,921 producers
 Horse College, educational program for recreational horse owners offered in 15 counties

2. Brief description of the target audience

Beef producers, dairy producers, horticultural producers, limited resource producers, extension agents, farm operators, farmers market members, meat cutters, goat and sheep producers, homeowners, FHA borrowers, aquaculture producers, consumers, community and farm leaders, poultry farmers, hay producers

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1270700	0	39300	0
2008	1920612	1049296	147180	90005

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year Target

Plan: 1

2008 : 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	150	
2008	4	174	178

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Graduate research assistants engaged in research

Year	Target	Actual
2008	25	25

Output #2

Output Measure

- Published research journal articles

Year	Target	Actual
2008	150	174

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Number of producers adopting one or more practices resulting in increased profits.
2	Economic impact of the adoption of farming practices resulting in increased profits.
3	Number of producers adopting resource management technologies (IRM, IPM, soil testing, soil fertility management, etc.).
4	Number of producers completing Master Cattlemen and Grain Academy and receiving their certification.
5	Number of individuals reporting changes in knowledge, opinions, skills and aspirations related to impact of public policies on agriculture and the environment.
6	Number of producers reporting changes in forage preparation and grazing practices
7	Number of agents and producers reporting changes in forage preparation and grazing practices

Outcome #1

1. Outcome Measures

Number of producers adopting one or more practices resulting in increased profits.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	19000	20402

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Grain crops have overtaken tobacco as the most important crop in Kentucky. With more demand for grain crops for energy production, there is increasing potential for improved profits for Kentucky producers.

What has been done

Over 433,200 corn, soybean and wheat acres (nearly 20% of Kentucky's total acreage) were represented at the Kentucky Grain Crops Early Bird Meetings. These meetings were structured in response to producer inputs and are intended to provide the latest information on varieties, fertility, soils, planting and management information to producers before they purchased their inputs for the next growing season.

Results

Responses to post meeting surveys reveal that 98% felt the information was useful to their operations and 92% will attend a similar meeting if offered next year. About 65% of the respondents will conduct a soil test in order to improve fertilizer application efficiencies as a result of this meeting, 40% said the information would influence their corn variety purchases and 38% said it would help in soybean seed variety selection.

4. Associated Knowledge Areas

KA Code	Knowledge Area
604	Marketing and Distribution Practices
205	Plant Management Systems
102	Soil, Plant, Water, Nutrient Relationships
307	Animal Management Systems

Outcome #2

1. Outcome Measures

Economic impact of the adoption of farming practices resulting in increased profits.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	24000000	22981233

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Grower and Direct Marketer Good Agricultural Practices Training Program was developed to be proactive in light of the national food microbial contamination scare. The training was designed to help Kentucky producers and direct marketers improve their produce handling practices and reduce produce microbial contamination.

What has been done

The Good Agricultural Practices (GAP) training program was developed through a cooperative effort between the U.K. Horticulture Department, Kentucky Department of Agriculture and the Kentucky Department of Public Health. Five GAP training sessions were held to instruct Extension Agents producers and vendors. Eighty-seven trainers were certified and numerous producer training sessions were held at the county level by Extension agents.

Results

Good Agricultural Practices training certificates were issued to 1,027 individuals through this program. Producers now have a working knowledge of how contamination takes place and the procedures needed to improve the safety of their produce. Sampling certificates were issued to 729 vendors after passing a written test. These certificates are required by the Department of Public Health to sample raw agricultural products at 120 Kentucky farmers' markets and Kentucky Farm Bureau Certified Roadside Markets. This training was very pertinent this spring following the tomato/pepper salmonella scare. Kentucky growers were able to capably discuss GAP procedures implemented on their farms with buyers, significantly improving produce sales. The ability to sample produce has also substantially improved vendor produce sales and increased income.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
604	Marketing and Distribution Practices

Outcome #3

1. Outcome Measures

Number of producers adopting resource management technologies (IRM, IPM, soil testing, soil fertility management, etc.).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	23000	25353

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Because of Kentucky's vast forage base, numerous small farms and proximity to markets nationwide, beef production offers one of the greatest hopes for the agricultural economy in the commonwealth. Since the decline of the tobacco industry in Kentucky agricultural producers have been looking for commodities to replace tobacco income.

What has been done

Through the Allied Inputs and Marketing Program (AIM), livestock producers learn about group purchasing and marketing and how small and medium sized producers are able to take advantage of economies of size. The AIM concept supports producers efforts to form local alliances thereby reducing input costs of production and creating a greater demand for their product through collective production and marketing plans.

Results

Currently, three AIM alliances are functioning in Kentucky. Together they encompass 116 producers who own approximately 5,400 cows. Purchased costs of products were from 20-30% lower than available through traditional markets. Financial analyses have indicated that production costs were reduced \$45 per cow this year. Cooperative marketing efforts have also been successful. Feeder calf sales have generated a \$5.12 / cwt. premium over other cattle sold in Kentucky that same day, thus increasing profits for these producers by approximately \$405,000.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
205	Plant Management Systems

Outcome #4

1. Outcome Measures

Number of producers completing Master Cattlemen and Grain Academy and receiving their certification.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	300	402

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Kentucky Master Cattleman Program continues to be an integral part of the comprehensive effort underway to replace diminishing tobacco revenue by improving Kentucky's expanding beef-forage operations. It is a collaborative effort of the University of Kentucky College of Agriculture, Kentucky Cattlemen's Association, and Kentucky Beef Network.

What has been done

The program consists of 10 four hour sessions that focus on management, nutrition, facilities, environmental stewardship, genetics, reproduction, herd health, and marketing. Materials are developed by Extension specialists from the University of Kentucky, who deliver the program and train extension personnel.

Results

The Master Cattlemen program was conducted in 49 counties with 402 producers completing the program and making production improvements affecting over 71,000 head of cattle and 73,000 acres of forages.

These producers sold 6,172 calves through CPH sales which have very stringent ownership, weaning, feeding and vaccination requirements. Even for those non CPH calves marketed by these producers, vaccination and castration before weaning were management practice most commonly adopted.

Record keeping is a part of the cattle business that few producers enjoy, but keeping good records is very important to an operation's success. Keeping accurate records allows producers to make decisions based on cow performance, not guess work. As a result of participation in Master Cattleman, 114 producers (28% of participants) reported adopting record keeping systems for their livestock operations (CHAPS 27, SPA 4, and Other 83).

Master Cattlemen 49 Counties Reported Participating

402 Number of producers completing the Master Cattleman Program.

13 Number of non producers/industry reps, vets or others completing program.

Number of Participants adopting record keeping systems as a result of participation in Master Cattlemen (enter a number for each)

27 CHAPS

4 SPA

83 Other

19422 Number of cows in a controlled breeding/calving season.

28191 Number of cows exposed to semen tested bull.

6679 Number of cows bred using estrus synchronization and AI.

24163 Number of cows placed in a cross breeding system.

25806 Number of cows placed on a complete mineral.

20127 Number of cows vaccinated.

16478 Number of non CPH calves implanted.

23294 Number of non CPH calves castrated before weaned.

30540 Number of non CPH calves vaccinated.

6172 Number of calves sold in CPH Sale.

26419 Number of acres hay now covered or stored inside.

46946 Number of acres grazing land now rotationally grazed.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
205	Plant Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
604	Marketing and Distribution Practices
401	Structures, Facilities, and General Purpose Farm Supplies

Outcome #5

1. Outcome Measures

Number of individuals reporting changes in knowledge, opinions, skills and aspirations related to impact of public policies on agriculture and the environment.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	26000	36280

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farming is a business and as such, is subject to different tax laws than the average homeowner. For most farming businesses the changing tax laws, required documentation, depreciation of equipment, tax implications for the Conservation Reserve Program (CRP) and tobacco buyout payments and other public policy decisions create a tax situation which cannot be learned from a pamphlet or from a disk purchased in a box.

What has been done

The Department of Agricultural Economics conducts professional in-service training for tax preparers, CPAs, farmers, attorneys, and related persons on new federal income tax law, Kentucky state tax provisions, and ethics. This is the argest tax education program in Kentucky and one of the ten largest in the U.S.

Results

During November 2007 to January 2008 there were 1,476 participants at 15 different two-day seminars, 71 participants at three Beginner Tax schools, and 116 participants at Ethics Seminars. The CEUs are recognized by the CPA Society, the KY State Bar, and the Department of Insurance. There were 24,416 hours of CEUs awarded. Particular attention is paid to the tax handling of Tobacco Buyout payments, conservation payments, drought-induced livestock sales and related topics. Participants evaluations indicate overwhelming approval of content and instruction and repeat participation is 90%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
604	Marketing and Distribution Practices

Outcome #6

1. Outcome Measures

Number of producers reporting changes in forage preparation and grazing practices

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Goat numbers in Kentucky continue to increase with many people starting goat operations with little to no livestock production experience or knowledge. Cost of production has been rising due to increased cost of fertilizer and supplemental feed, making it difficult for small producers to remain profitable. There has also been an increase in health related issues with goats that have been linked to over grazing and forage issues. These problems lead to the idea of developing and conducting a forage program for goats that would include pasture management, pasture renovation, proper grazing management, and options to extend the grazing season.

What has been done

Producer input was collected as part of program planning at the October 2007 Third Thursday program that indicated producers had a large interest in forage management and information on forage utilization. It was decided to conduct a focused program on forage programs for goats. The program was limited to 60 participants due to space and there were 56 that actually attended that day. The people were small goat and sheep producers from several areas of Kentucky. Producers received information that helped them learn to better manage their forage resources, improve forage quality, reduce over grazing, reduce dependence on supplemental feeds, and reduce cost while maintaining or improving productivity of their animals.

Results

Producers indicated that they planned to implement this grazing system to improve forage utilization and quality. They also indicated that they were planning on renovating pastures through the addition of legumes to reduce fertilizer requirements while improving quality of cool season pastures. Producers learned methods to establish forages without the dramatic reduction in grazing through the use of alternative planting strategies. This is especially important for small farmers that have a limited land base and need to utilize all their available pasture land for grazing.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #7

1. Outcome Measures

Number of agents and producers reporting changes in forage preparation and grazing practices

2. Associated Institution Types

•1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

It has been estimated that there are over 135,000 ponds in KY. These ponds are used for a variety of purposes including: drinking water, irrigation, livestock watering, and recreation. Every spring and summer many days and thousands of dollars are spent attempting to control aquatic weed growth in these ponds. Uncontrolled, aquatic weeds can prevent agricultural and recreational use of these ponds causing loss of income and recreational opportunities. Failure to properly identify and treat aquatic weeds often leads to incorrect herbicide application and ineffective treatments. Furthermore, no training programs exist within a reasonable distance of KY residents to update certification for pesticide applicators permits.

What has been done

Two educational programs were developed for Aquatic Weed Identification and Algae control training. Since January 2008, these two programs have been used for 6 statewide In-service training programs reaching 100 attendees

The Aquatic Weed Identification training sessions were used to further expand the use of the internet/e-mail for aquatic weed identification by illustrating the type photographs that are effective for on-line weed identification. The Aquatic Weed Identification program/presentation was also placed on my Aquaculture Information Website to allow broader access by county agents, producers and the public.

Results

The Aquatic Weed Identification show/program was downloaded 148 times over 3 months. It is anticipated that e-mail identifications of aquatic weeds using digital photos and that down-loads of the on-line Aquatic Weed ID program/presentation will increase significantly by the summer of 2009. 97% of those who attended the training programs either agreed or strongly agreed that they had gained knowledge and skills about the topics presented (53% strongly agreed). 94% of those who attended either agreed or strongly agreed that they will use what they learned in their businesses, county program or on their farms (56% strongly agreed).

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

Evaluation Results

Key Items of Evaluation

Extension Agents supported 133 Farmers Markets in 93 counties with 1921 local producers taking advantage of this opportunity to provide local shoppers with farm fresh, "Kentucky Proud" produce.

Forty-one of these markets captured sales figures and reported over \$2.5 million in sales as a result of their efforts, translating to over \$5.8 million in statewide receipts.

Joint marketing and educational efforts enable local producers to advertise and attract local shoppers more effectively.Extension agents assisted markets with 521 media campaigns and 346 educational programs assisting shoppers with information on nutrition, food preparation, storage and preservation.

Farmers Market	93 Counties Reported Participating	133	How many Farmers Markets is Extension supporting in your county?
1921	How many different sellers participated in your county's farmers' markets this marketing season?		
323	How many educational programs were conducted for Farmers Market members or potential members in your county?		
7875	How many attended the above mentioned educational events?		
346	How many educational programs/demonstrations were conducted at Farmers Markets for clientele/customers? (Generally related, but not restricted to, food use, preparation, storage/preservation, nutrition, food safety, etc.)		
521	How many Farmers' Market media campaigns targeted consumers in your county? (In addition to your regular Extension newspaper, radio and newsletter efforts.)		
\$2,598,800	If you survey your market membership to determine total income generated by this market over the season, enter that figure here.		

Program #6

V(A). Planned Program (Summary)

1. Name of the Planned Program

Agricultural and Environmental Quality

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	0%	0%	5%	0%
102	Soil, Plant, Water, Nutrient Relationships	0%	0%	10%	5%
112	Watershed Protection and Management	1%	10%	10%	5%
123	Management and Sustainability of Forest Resources	22%	5%	10%	0%
131	Alternative Uses of Land	0%	35%	0%	6%
133	Pollution Prevention and Mitigation	1%	0%	5%	5%
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	20%	0%
205	Plant Management Systems	16%	5%	0%	5%
206	Basic Plant Biology	0%	5%	5%	0%
211	Insects, Mites, and Other Arthropods Affecting Plants	0%	15%	0%	34%
212	Pathogens and Nematodes Affecting Plants	0%	0%	10%	0%
213	Weeds Affecting Plants	0%	10%	0%	25%
215	Biological Control of Pests Affecting Plants	0%	0%	10%	7%
216	Integrated Pest Management Systems	0%	5%	0%	3%
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	0%	0%	5%	0%
403	Waste Disposal, Recycling, and Reuse	13%	0%	0%	0%
601	Economics of Agricultural Production and Farm Management	0%	10%	0%	5%
605	Natural Resource and Environmental Economics	47%	0%	10%	0%
Total		100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	25.0	2.0	7.3	8.5
Actual	32.6	1.6	7.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
452402	144349	1499412	888742
1862 Matching	1890 Matching	1862 Matching	1890 Matching
3738974	122875	5558255	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The University of Kentucky and Kentucky State University are engaged in a wide range of programs geared towards achieving greater harmony between agriculture, people, and the environment. All components of research and extension focus on the broader goal of practicing agricultural and related disciplines in a manner consistent with improving sustainability of resources and protecting ecosystem integrity. Program examples include:

Master Gardener Program conducted in 40 Kentucky counties KSU researchers are examining the effects of soil conditioners and constructed wetlands on water quality.

Master Logger program, focusing on best management practices, safety, laws and regulations, trained 201 new loggers this year. Research is being conducted to develop streamside management zone BMPs that are appropriate for the Central Appalachian Region.

Woodlot owner education program moved to a multi-state approach and reached 165 woodlot owners

Through the collaboration of KU and the Kentucky Department of Fish and Wildlife Resources, Kentucky's Rocky Mountain Elk population has grown to 10,000.

Agricultural Engineering is working to reduce the cost of heating, ventilating and lighting Kentucky's 3,500 poultry houses through energy audits.

Urban Integrated Pest Management programs conduct research and educational programs to stem the contamination of ground water from fertilizer and pesticide usage by homeowners and lawn care companies.

Biosystems and Agricultural Engineering is working with processes and equipment for precision application of manure.

Post-mine land reforestation research results are being used to re-educate mining companies and regulatory authorities.

UK researchers better understanding of the link between nitrate reduction and iron oxidation, thus impacting the way nitrogen is applied to soils.

KSU's Organic Agriculture Working educates growers and extension agents about organic standards and organic production techniques

Forest product and biomass research and education have resulted in a reduction of fines in oriented strandboard (OSB) production.

In collaboration with E-on/U.S., a diversified energy services company, and the U.S. Forest Service, UK has established a planting of native and non-native trees that are appropriate to plant under or near power lines. Water Pioneers program trained 29 high school students to return to their communities to conduct water quality programs UK researchers inject tracers into the surface above caves and then observe its movement into the ground water.

Research is being conducted on a swine finishing facility where the manure will be composed within the facility.

2. Brief description of the target audience

General public
 Community volunteers advanced in horticulture instruction and willing to give back to the community
 Individual commercial loggers in Kentucky
 Woodlot owners
 Farm owners and operators
 Homeowners

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	204000	0	68000	0
2008	308785	379143	129996	112612

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	90	
2008	8	105	113

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Graduate student research assistants

Year	Target	Actual
2008	10	10

Output #2

Output Measure

- Published research journal articles

Year	Target	Actual
2008	90	95

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Number of individuals adopting practices that protect water quality.
2	Number of people utilizing forest management practices.
3	Number of acres upon which new or additional conservation practices are used.
4	Number of individuals adopting one or more practices related to conserving, sustaining and/or protecting soil resources.
5	Number of Farms Certified as Organic

Outcome #1

1. Outcome Measures

Number of individuals adopting practices that protect water quality.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	23000	20926

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) requires the restoration of post mining land use capability to a level 'equal to or better than' that which preceded mining. The majority of coal mined lands in Appalachia were forested prior to mining; however, most mined lands are reclaimed to pasture. The reasons are that reclamation practices tended to inhibit tree growth due to: 1) excessive compaction of the spoil, 2) unsuitable or sometimes toxic rooting material, and 3) competition for nutrients and water by aggressive and often invasive herbaceous species.

What has been done

Researchers at the University of Kentucky have discovered that reforestation of these sites is possible using low compaction techniques (i.e. loosely dumping 6 to 8 feet of fresh spoil on a stabilized area). To date, this practice has not received widespread implementation due to unsubstantiated concerns over stability, sediment runoff, and aesthetics. Weathered sandstone materials, mixed with surface soils, are known to be excellent materials for use in constructing surface soils on coal surface mines being prepared for reforestation. However, such materials may not be available and/or economically retrievable at a given mine. The primary goal of this project is to determine which mine spoil (shale; brown weathered sandstone; gray unweathered sandstone; or a mixture of shale and sandstones) is most suitable for the rapid development of a soil medium capable of supporting plant life.

Results

The results of this project are critical to the Office of Surface Mining's Appalachian Regional Reforestation Initiative. Efforts are undertaken to re educate mining companies and regulatory authorities regarding what constitutes good forestry reclamation practices. These efforts will also assist in determining the appropriateness of spoil type for reforestation. This result can have significant economic implications for mining firms and the reforestation of mined lands. Additionally, landowners and the public can benefit from the capability of mining firms to restore lands that will support productive forests.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
112	Watershed Protection and Management

Outcome #2

1. Outcome Measures

Number of people utilizing forest management practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	3500	3556

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Forests cover nearly half of Kentucky's landscape and are mostly privately owned. These forests provide an estimated economic impact of more than \$8 billion annually, more than 35,000 jobs, a wealth of recreational opportunities, clean water and a host of other benefits. However, the woodland owners of Kentucky generally know little about forestry and the benefits of forest management.

What has been done

The Woodland Owners Short Course (WOSC) was developed to provide an enhanced educational opportunity for the more than 423,000 woodland owners of Kentucky. The WOSC is a statewide program consisting of a series of full day forestry educational programs spread out across Kentucky. The University of Kentucky co sponsors this program along with several state forestry and water resource agencies. County Extension Agents share significant roles with Extension specialists and researchers including program planning, presentations, and logistics.

WOSC was held in Hart, Bell, Crittenden, and Fayette counties. Individual segments addressed Timber Management and Harvesting, Managing Woodlands, Ponds, Pines, and Roads, Wildlife, Water, Non Timber Crops, Woodland Recreation and Invasive Species. More than 160 woodland owners representing 46,723 acres attended the 2007 WOSC; the average woodland owner owned 292 acres. Participants indicated they would use information from the program on a total 45,980 acres. In 2008 the Short Course was expanded to a regional version for Eastern, Central and Western Kentucky with more than 100 people attending the first three programs addressing woodland management topics.

Results

As a result of this program, participants have reported increased income from their properties through on farm enterprises. The long term impacts from the WOSC will result in increased revenue earned from timber sales for those using a professional forester, improved wildlife habitat, increased woodland productivity, and improved woodland health. It has also resulted in a stronger voice for the state's woodland owners and a greater appreciation and awareness of Kentucky's forests.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

Outcome #3

1. Outcome Measures

Number of acres upon which new or additional conservation practices are used.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	600000	605042

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #4

1. Outcome Measures

Number of individuals adopting one or more practices related to conserving, sustaining and/or protecting soil resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	25000	21303

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Kentucky has more miles of navigable river than any other state in the country. Kentucky rivers, streams, lakes and reservoirs are not only used for drinking and recreation, but also for an expanding food production, food processing and landscape plant production industry. Kentucky's limited water supply is threatened by pollution and overuse. According to the Kentucky Division of Water, education and outreach are key elements in the effort to prevent pollution and to conserve water.

What has been done

In 2008, the Cooperative Extension Service worked with the Kentucky Water Resources Research Institute to train Water Pioneers. The Water Pioneers were 29 high school sophomores from 28 eastern Kentucky counties. These students received a week of intense water education from natural resource experts in the College of Agriculture. Pre and post tests and showed a 30% increase in scores following the training. The Water Pioneers were challenged to return to their respective counties and design and implement a community project that will change the attitudes of their community on the subject of water in their community.

Results

Seven months later, the Water Pioneers reported on the impact they had on their community. Many of the Pioneers worked with young elementary students, passing along water education, water quality and conservation information and practices they had learned earlier. Others made a direct impact on their community by working with business such convincing local restaurants to switch to more environmentally friendly cleaning products. Others created more awareness of water quality issues and conservation practices by working with the local media.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources

Outcome #5

1. Outcome Measures

Number of Farms Certified as Organic

2. Associated Institution Types

•1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2008	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Kentucky's demand for organic products far outstrips its organic production. Between 2002 and 2006 sales of organic products grew steadily in Kentucky but the number of certified organic operations fell by 90% to 12. The decline was due to the loss of an in-state certifier, imposition of more stringent federal organic standards, and lack of extension information about practical techniques compatible with new national organic program standards. Growth of Kentucky's organic sector resumed at the beginning of 2006, when the Kentucky Department of Agriculture was approved as an organic certifier.

What has been done

Between October 2007 and September 2008 Kentucky State University implemented an aggressive program to educate growers and extension agents about organic standards and organic production techniques. A website highlighting work of KSU's Organic Agriculture Working group members (<http://organic.kysu.edu>) attracted 12,215 unique visitors, with web traffic increasing each quarter. KSU organized three workshops and three farm tours highlighting organic production techniques and certification requirements. KSU staff contributed to organic agriculture workshops organized by the Southern Sustainable Agriculture Working Group, the University of Kentucky, The Kentucky Fruit and Vegetable Growers Association, Louisville's Refugee Agriculture Project, and local community gardeners. Approximately 345 people attended these events. A 'Fox in the Morning' television program highlighted growth of Kentucky's organic sector and work conducted at KSU.

Results

Between October 2007 and September 2008, the number of certified organic farms in Kentucky more than doubled, from fewer than 50 to more than 100. Newly-certified organic farms gained access to a growing market that commands premium prices. Relative to conventional farms, these farms will tend to use less energy, support greater biodiversity, employ more people, and generate less environmental contamination associated with fertilizer and pesticide use.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy

Brief Explanation

Extreme drought along with increased fire dangers undoubtedly reduced activity level in forested areas. This lack of moisture reduced successes in new plantings of trees and conservation enhancements involving seedlings.

A significant drop in new house construction has impacted the price of timber, delaying harvest of timber by those who can afford to delay or adjust the timing of income.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)

Evaluation Results

Key Items of Evaluation

In 2008, 40 Kentucky counties reported offering the Master Gardener Program training 395 new volunteers with knowledge and skills to work with Extension Agents in addressing the home and commercial horticulture needs in these communities.

In 2008, Kentucky's 1,064 Extension Master Gardeners (includes persons trained in previous years) contributed 33,357 volunteer hours and served 60,376 clientele addressing home and commercial horticultural needs through workshops, meetings, community garden programs, newsletters, and in-office and on-site diagnostic efforts. The value of the volunteer time contributed to Kentucky Extension Programs by the Master Gardeners is placed at over \$536,000.00.