

**Penn State Cooperative Extension
ANNUAL REPORT OF
ACCOMPLISHMENTS
AND RESULTS
FY2006**

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GOAL 1

Through research and education, empower the agricultural system with knowledge that will improve competitiveness in domestic production, processing, and marketing.

Overview

Penn State is dedicated to the integration of research and extension, and faculty and county-based educators collaborate to develop and successfully implement the objectives of the five-year plans, seeking continuous input from citizens, local advisory groups and boards, the Pennsylvania Council of Cooperative Extension Associations, and the Penn State Agricultural Advisory Council. Pennsylvania farmers, like those in many other parts of the nation, face major challenges in maintaining and improving the profitability of their operations.

The market environment for key Pennsylvania commodities, such as dairy and livestock products, changes rapidly due to shifts in regional and national supply and demand. Ongoing management challenges affect Pennsylvania's food and agricultural system, and concerns about the safety and security of the system continue. Penn State Cooperative Extension addressed these challenges in Goal 1 through three overarching program goals: (1) improving the profitability and sustainability of agri-food system enterprises; (2) improving agricultural productivity and efficiency; and (3) increasing knowledge and skills to manage animal waste and nutrients. Within each of these areas, issues critical to a diverse clientele were addressed, particularly for underserved groups such as Anabaptists (Amish and Mennonites), groups for whom Spanish is the first language, and in regions of the state where the population is geographically dispersed.

Significant efforts were devoted by Cooperative Extension faculty and field-based educators to improving the business skills and risk management skills of farmers and agribusiness managers. Many programs, some offered in partnership with community institutions, teach the important aspects of business planning and entrepreneurship. Financial and production management analysis trainings and a range of crop insurance programs led to the use of strategies that reduce costs and increase profits. Additionally, effective personnel management is an increasingly important factor for the financial performance of farms and agribusinesses and for their ability to meet exacting quality and food safety standards.

The food system in the United States is increasingly a consumer-driven system, and programs on developing new market opportunities, the creation of new cooperative marketing ventures by farmers, value added activities and entrepreneurship help farmers improve profitability. Extension field-based educators and faculty report that there were 37,914 participants engaged in programs related to profitability and sustainability of agri-food system enterprises. Of those evaluated, 1,543 indicated increased knowledge, skills

and abilities related to profitable and sustainable operation of farm and agri-food businesses.

Food safety and biosecurity were increasingly important issues for Pennsylvania's food producers, agribusinesses and consumers. More than 30,660 participants took part in programs oriented to improving production management strategies with 2,494 demonstrating the application of increased knowledge and skills in this area, and 442 producers reporting success in developing sustainable agricultural systems or adopting components.

Given the importance of animal agriculture in the Commonwealth of Pennsylvania, issues relating to animal waste and nutrient management continue to be a high priority for many farmers and for the public at large. More than 3,220 people participated in programs related to animal waste and nutrient management.

Highlights of successful Penn State Cooperative Extension activities and documentation of their benefits are noted in the following section. A complete listing of programs is available at <<http://pow.cas.psu.edu>>.

| | FY2006 |
|--------------------------------|---------------|
| Human Resources (FTEs) | 74.41 |
| Fiscal Resources (Smith-Lever) | \$2,405,173 |
| Fiscal Resources (match) | \$2,405,173 |

GOAL 1

Through research and education, empower the agricultural system with knowledge that will improve competitiveness in domestic production, processing, and marketing.

Planned Program – *Operating Agri-Food Systems for Profitability and Sustainability*

KEY THEME – Agricultural Profitability

Increasingly, small farmers and entrepreneurs are seeking a means to increase the value of commodities or develop an agriculturally related business. Cooperative Extension offers a variety of programs on business planning, financial planning, risk management, business succession, and direct marketing for farm owners. Several examples are provided below.

a. Brief description of activity:

Dairy producers need a systematic method to identify bottlenecks to profitability on their farms. More than 45 campus- and field-based educators, staff, and faculty across regions, departments and disciplines collaborated to develop the Profitability Assessment for Dairy (PA Dairy) program to assist producers in identifying bottlenecks in their operations and to determine a dollar amount for each bottleneck. The program tools provide a consistent process for whole farm evaluation and provides consultants with a systematic method to identify bottlenecks to profitability on their client's farms, as well.

This year statewide dairy bottlenecks committee members conducted six producer trainings by teleconference and six dairy consultant trainings. Additionally, they provided in-services for extension educators as well as trainings for 30 producers and 30 consultants. The PA Dairy Tool was used to identify bottlenecks on more than 80 dairy farms in 2006.

b. Impact/Accomplishment:

- Results from 38 farms that ran the PA Dairy tool show they were losing mean annual revenues of \$91,589 because of milk quality and udder health, milk yield and components, culling and replacements, and reproduction issues.
- Data was collected from producers who attended two different meetings (n=12).
 - Data indicated that the management bottlenecks on these farms were costing producers an average of \$677 per cow and \$161,031 per farm.
- On one farm where the tool was used, the owners made small changes suggested by the team, which cost less than \$1,000. As a result an increase of more than \$60,000 income per year was reported.

- Post surveys were conducted with dairy producers who attended PA Dairy Tool trainings (N=30). Participants ranked the effectiveness of the PA Dairy Tool to define their bottlenecks.
 - 93% ranked the tool as moderately to very effective in defining bottlenecks in dairy herd management
- Post surveys were conducted with dairy advisors who attended PA Dairy Tool trainings (N=51). Participants ranked how likely they would be to use the PA Dairy Tool.
 - 46% responded very likely; 28% moderately likely; and 19% somewhat likely

a. *Brief description of activity:*

Long-term sustainability of farm businesses depends upon the farm management team's ability to plan for the future and to implement and adjust their plans. An increasing number of farmers are exploring direct marketing to increase profits, also. One program example is a workshop about business planning and marketing offered to 32 participants who attended the 2006 Pennsylvania Association for Sustainable Agriculture (PASA) meeting. The workshop provided an opportunity for participants to engage in hands-on practice activities that could be applied to their own business plans.

b. *Impact/Accomplishment:*

- An evaluation was conducted following the PASA marketing workshop.
 - 89% of participants were likely to develop a business plan after attending the workshop, compared to 39% prior to the workshop.
 - 89% of participants were likely to conduct market research after attending the workshop, compared to 50% prior to the workshop.
 - 69% of participants were likely to consult a professional to help manage risk after attending the workshop, compared to 12% prior to the workshop.
 - 70% of participants were likely to adopt at least 2 forms of risk management practices after attending the workshop, compared to 6% prior to the workshop.

a. *Brief description of activity:*

The "Tilling the Soil of Opportunity" curriculum provides participants with information on important aspects of business planning and entrepreneurship. The course is offered in partnership with community institutions. Local speakers, such as lending officers, participate in the program. More than 270 individuals participated in courses offered in various locations. Several results of attending sessions are noted.

b. *Impact/Accomplishment:*

- A Hispanic woman completed a feasibility study, developed a business plan and time table, and started her Peruvian restaurant in May 2006.
- Four individuals from a dairy farming family (Anabaptist, 2 generations) researched the market for farm-fresh ice cream, baked goods, and meats. They developed a feasibility study for a retail farm store, evaluated and selected the equipment needed to start manufacturing ice cream using their own milk, and developed a business plan

which resulted in receiving the financing to begin construction (outlet is slated to open in Spring 2007).

- A young, first-time farmer wrote a loan proposal which secured sufficient capital for him to purchase a dairy farm and a small herd of cows. As a result of discussions in class with more seasoned dairy farmers, he plans to focus on building genetics of his herd to raise and sell bred heifers to other dairy farms as a main source of income.
- c. *Source of Federal Funds—Smith-Lever 3b&c, State matching funds.*
- d. *Scope of Impact—State specific, Multistate Extension and Integrated Research and Extension.*

KEY THEME – Agricultural Competitiveness

- a. *Brief description of activity:*
Cooperative Extension educators work with producers and buyers to determine niche markets, develop local markets, and provide assistance in marketing and human resource management strategies. As an example, the Feeder Calf Marketing program, in collaboration with West Virginia Cooperative Extension, allows small beef producers to sell their cattle in more competitive markets. Marketing has been expanded by offering two delivery dates, allowing producers who calve later to participate in the program.
- b. *Impact/Accomplishment:*
- The number of calves marketed in this year's calf pool increased from 187 to 356 calves.
 - Calves delivered in October realized about a \$.07/lb premium
 - Calves delivered in December should realize about a \$.30/lb premium
 - As a result of creating the additional delivery date, 115 calves were marketed and producers recognized an additional \$15,375 income.
- c. *Source of Federal Funds—Smith-Lever 3b&c, State matching fund.*
- d. *Scope of Impact—State specific, Multistate Extension and Integrated Research and Extension.*

Planned Program – Agricultural Productivity and Efficiency

KEY THEME – Animal Health and Animal Production Efficiency

Agri-security and Emergency Preparedness

a. *Brief description of activity:*

Cooperative Extension educators and faculty in the College of Agricultural Sciences continue an active role in developing educational programs and applied research projects for Agri-security and Emergency Preparedness within the Commonwealth.

Large Animal Emergency and First Aid Training: Faculty from the Departments of Veterinary and Biomedical Sciences and Agricultural and Biological Engineering and field-based educators designed and taught three regional large animal emergency training programs. Eighty-eight first responders and volunteers from various local and state agencies attended. Program topics included personal safety, zoonotic diseases, animal behavior, and incorporation of animal care within an emergency setting. Hands-on demonstrations included large animal first aid, large animal evacuation, with full sized equine model, trailer rescue, and animal capture and herding. Additionally, a 12 minute video production, developed in cooperation with Penn State's WPSU outreach staff, provides an orientation to animal emergencies for both companion animal and large animal owners. The project was supported by training funds through a federal disaster preparedness program. The video features interviews with several volunteers who were actively involved in animal rescue and sheltering during the summer floods across the state.

Pandemic Flu Preparedness: A faculty member in the Department of Veterinary and Biomedical Sciences and a field-based educator conducted a program on avian influenza (AI), viral surveillance, local preparedness and personal health prevention. The audience included local business leaders, hospital staff, Farm Bureau directors, emergency management coordinators, and rural physicians. As a result of the avian influenza program, county agencies and businesses formed a task force. These partners developed a county pandemic response plan. More than 650 community and business leaders in the Susquehanna Valley have been reached through this effort during the past year.

Avian Influenza: AI continues to be a concern in the Commonwealth. Extension educators provide educational programs to help explain the AI control response plan developed by the Pennsylvania Department of Agriculture (PDA). Eradication for suspect flocks are diagnosed, evaluated, and performed with assistance by educators and veterinarians. Additionally, in April a workshop on current avian influenza and on-farm biosecurity measures was provided to poultry producers and the public by experts from the Department of Veterinary and Biomedical Sciences, the PDA, and USDA-APHIS. A total of 57 attended the workshop. To reach a wider audience, the presentations were video taped and are available on the Web at <http://www.cas.psu.edu/docs/biosecurity/avianfluvideos.html>.

b. Impact/Accomplishment:

- Large Animal Emergency and First Aid Training:
 - As a result of the success of the first responder training, additional financial support has been obtained for 2007 to provide training to more emergency responders and volunteers.
 - Participants rated the usefulness of the training curriculum to an emergency first responder or rescue personnel: 22 very useful, 7 moderately useful, 5 useful.
 - Participants comments included: “Should be mandatory for all first responders.” “(The presenters) expertise was unbelievable and so appreciated.” “Good overall class for novices and pros alike.” “Exposure to these field exercises is critical to the training curriculum.” “Showed me weaknesses in my abilities in protocol.”

- Pandemic Flu Preparedness:
 - As a result of developing a county pandemic response plan, Union County became the first county in the state to exercise their capability to respond to an incident requiring the use of emergency stockpiles (Push Pacs) and Point-of-Distribution (POD) for antiviral medications.
 - The Union County plan is one of two in the nation currently being evaluated by the Center for Disease Control as an example of how a rural community plans for and prepares to deal with potential health system emergencies.

- Avian Influenza Awareness and Control:
 - 90% of commercial Commonwealth poultry producers are participating in the voluntary program to test flocks in Pennsylvania every month.
 - As a result of developing video clips of the workshop on AI, 7,810 individuals from Pennsylvania and across the country have visited the Web site.

Animal Production

a. Brief description of activity:

Livestock extension educator in one region collaborated with animal health company representatives to tissue sample 414 head of cattle in five separate farm operations to analyze the incidence of Bovine Viral Diarrhea (BVD). Laboratory tissue testing has found the incidence of PI calves to be about .55% nationwide.

b. Impact/Accomplishment:

- Testing revealed results of .24% (one positive in 414 samples) in the region.
- A post-meeting survey indicated that 100% of participating cattle producers (n=34) learned new information or increased their knowledge regarding incidence of BVD.

a. Brief description of activity:

Meat goat production is greatly increasing in Pennsylvania and producers are looking for information to help them become a profitable enterprise. The Goat Meat Home Study Course is offered via the Web. Additionally, the Sheep Home Study Course and Beef Home Study Course were offered this year. One hundred ninety six current and future livestock producers participated in these courses.

b. Impact/Accomplishment:

- In a follow-up evaluation, 100% of participants (n=70) adopted one or more new management practices to improve their operation.
 - 84% made changes in record keeping; 69% completed a financial analysis
 - 74% made changes to their vaccination program; 79% made changes to their deworming program

c. Source of Federal Funds—Smith-Lever 3b&c, State matching funds, and Homeland Security funds through the Pennsylvania Department of Agriculture.

d. Scope of Impact—State specific and Integrated Research and Extension.

KEY THEME – Plant Production Efficiency

Cooperative extension faculty and field-based educators provide educational programs to enhance agronomic production for sustainability and profitability. The statewide Crop Management Extension Group, comprising faculty and field-based educators, focus on grain crops, forage crops, soil management, soil nutrient management, pest management, and sustainable agriculture.

a. Brief description of activity:

The Grain Crop Management Group works with producers and input suppliers across the state to diagnose crop problems and develop solutions to enhance production. In response to flooding in June 2006 in the Susquehanna and Delaware Rivers, extension educators and specialists rapidly disseminated information to those affected, and a special newsletter related to managing flood damaged crops was developed. Educators interacted with the local farm press, the Pennsylvania Department of Agriculture and various local agencies to disseminate information regarding replanting options, recovery potential, and feed quality of the damaged crops.

A faculty member and several educators in the Soil Management Group aggressively supported the Pennsylvania No-till Alliance, an organization of producers and professionals dedicated to promoting the no-tillage concept. Activities involved in-depth tillage and no-till training workshops for more than 100 USDA-NRCS, Pennsylvania Department of Environmental Protection and Department of Agriculture, and Conservation District personnel. Additionally, a series of field days and conferences were offered across the state focusing on increasing the adoption of no-tillage crop production. More than 1,000 participants attended, including a growing number of Amish and Mennonite producers.

The extension Nutrient Management Group was involved at several levels of the process related to major changes occurring in nutrient management legislation in Pennsylvania. A faculty member and project associates provided science based information and advice to policy and administrative personnel in the state government who were charged with implementing these changes. The technical aspects of the new

law and regulations are based primarily on Penn State Cooperative Extension recommendations, such as those found in the *Penn State Agronomy Guide*. The Agronomy Guide and other related extension publications were updated to address issues in the new regulations. The team developed and conducted a wide range of educational programs to diverse clientele groups potentially impacted by these changes. (See Nutrient Management for environmental impacts of these efforts.)

Efforts of the Pest Management Group involved developing timely crop production recommendations distributed through the Field Crop News newsletter and The Agronomy Guide. Both publications are distributed electronically and hard copy. The Field Crop News was revised and will be published weekly compared to biweekly in order to deliver more timely information. The use of both resources has grown dramatically in 2006, and Web activity has grown substantially in the last year.

Educators in the Sustainable Agriculture Group developed and offered six educational field days co-hosted by the Pennsylvania Association of Sustainable Agriculture (PASA). Content focused on the role of cover crops for ecologically-based weed management. Research and/or demonstration plots at each location helped communicate the educational message. Approximately 475, including farmers, teachers, and other agricultural professionals attended one or more of the events.

The Forage Management Group has developed and implemented a broad range of educational programs and delivery methods to address forage crop production, pest management, and storage challenges. For example, 245 producers and agriculture professionals attended a national silage management conference.

b. Impact/Accomplishment:

- Results of a survey of crop production in one county: no-till corn production in 2006 was estimated at 67%, increasing from 37% in 2004.
- As a result of advice to state policy and administrative personnel related to nutrient management legislation, the technical aspects of the new law and regulations are based primarily on Penn State Cooperative Extension recommendations.
- Web site visits to The Agronomy Guide increased from 3,800 to 7,000 visitors/month and Field Crop News increased from 600 to 2,800 visitors/month.
- Evaluations of educational programs related to sustainable agriculture indicate:
 - 70% of the participants at a Penn State field day increased their understanding of 4 to 5 concepts in ecological weed management.
 - 61% of participants attending a farmer-hosted field day increased their understanding of 4 to 5 topics in cover crop management and soil quality including the role of seed predators in suppressing weeds.
- 82% of producers surveyed (n=64) indicated they expected to change some aspect of silage management in their operation based on attending the national conference.

c. Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.

d. Scope of Impact—State specific and Integrated Research and Extension.

Planned Program – *Animal Waste and Nutrient Management*

KEY THEME – Nutrient Management

a. Brief description of activity:

Public concern regarding livestock production has intensified in recent years. Hog production appears to draw most of the criticism, due in part to highly publicized manure spills as well as the emission of offensive odors. Other livestock enterprises are not free from public scrutiny. While livestock producers have been increasingly proactive in adopting best management practices in regard to manure handling and odor and fly control, much of the farming community has not yet developed strategies for minimizing odor emissions and for optimizing manure utilization. Faculty and extension educators assist producers in adopting best management practices, not only to improve public opinion, but also to protect the environment. Through various programming efforts, educators facilitate the adoption of mandatory and voluntary nutrient management plans and provide livestock producers with management strategies aimed at minimizing the loss of manure nutrients. Educators reported more than 1,874 people participated in programs related to nutrient management including activities related to air quality issues.

In 2005, the Manure Hauler and Certification Act (Act 49) was passed by the state legislature. The Penn State certification program forms the basis of the new program, now mandated by the state. During calendar year 2006, nine training sessions were offered in anticipation of the final regulations. A total of 598 people attended, becoming certified either as Manure Hauler Level 3 or Manure Broker Level 1. Additionally, two Nutrient Balance Sheet training sessions were held for individuals who wish to complete Manure Broker Level 2. A total of 30 people completed this training. An additional 100 people who had already received training previously completed certification requirements for Manure Hauler Level 1.

During 2005-06, major changes occurred in nutrient management in Pennsylvania with new nutrient management legislation being passed and new regulations developed. These changes directly or indirectly impact all farms with animals in the state. The Nutrient Management Group (see Agronomic Production) developed educational programs to assist the impacted clientele in adapting to and implementing these changes, including required training to update certified nutrient management planners and training for new certified planners. Nutrient management plans direct the management of over half of the manure produced in Pennsylvania to achieve both agronomic production and environmental goals. The individuals trained in this program are responsible for updating all of these plans as well as developing new plans for farms over the next several years. Implementation of these plans is helping Pennsylvania meet water quality goals for the waters of the commonwealth and for the Chesapeake Bay.

- b. *Impact/Accomplishment:*
- 44 livestock and poultry producers participated in nutrient management certification training, and 66 individuals participated in advanced phosphorus training.
 - 15 livestock producers completed certification requirements for the Pennsylvania Environmental Agricultural Conservation Certification of Excellence (PEACCE).
 - 21 proposed livestock producing sites were evaluated for their potential to create odor conflict. Recommendations were made in written reports to the participants. The site evaluation program will be a central component of new odor regulations in the Agriculture, Communities, and Rural Environment (ACRE) legislation. The regulations are being written by extension educators and professionals from the Pennsylvania Department of Agriculture.
 - 216 producers reported success in adopting components of sustainable agricultural practices; 226 indicated they implemented such practices.
 - To date, nutrient management plans have been written for nearly 2,500 farms covering approximately 600,000 acres.
- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific and Integrated Research and Extension.*

KEY THEME – Other

- a. *Brief description of activity:*
 Farm work injury prevention programs help farmers, farm families and employees identify, eliminate, reduce and manage hazards and risks on the farm and at agricultural work sites. Many programs target underserved audiences; one program reaches Anabaptist youth in one-room schools. Additionally, pesticide safety programs provide educational information to pesticide applicators as well as and pest management and certification/recertification credits. For example, 1,154 license-holders attended 12 pesticide update meetings in one region. Two examples are noted.
- b. *Impact/Accomplishment:*
- Post session evaluations of the pesticide safety programs (559 responses) indicated that as a result of what they learned at previous meetings:
 - 78% now use pesticides more safely,
 - 44% changed how they manage specific pests, and
 - 36% have reduced pesticide use.
 - More than 1,200 Anabaptist youth and teachers participated in farm and home safety programs. Teachers reported (27 responses): 140 students put poison control stickers on phones, 25 students created escape plans, and 133 students plan to use reflective materials and/or flashlights at night.
- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific and Integrated Research and Extension.*

GOAL 2

To ensure an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention, and education.

Overview

Penn State is dedicated to the integration of research and extension, and faculty and county-based educators collaborate to develop and successfully implement the objectives of the five-year plans, seeking continuous input from citizens, local advisory groups and boards, the Pennsylvania Council of Cooperative Extension Associations, and the Penn State Agricultural Advisory Council. As outlined in the plan of work, Cooperative Extension emphasizes the overarching goal of developing a systems approach to food safety. Within this area, sub-goals and objectives guide Cooperative Extension faculty and field-based educators in solving issues critical to a diverse clientele.

Food safety is a serious concern throughout the food system. Any solutions must take a broad, farm-to-table approach and must involve farmers/producers, food processors, food handlers, food retailers, consumers and government regulators. Penn State Cooperative Extension provided assistance and specialized training to groups such as livestock, fruit, vegetable and other crop producers; meat, poultry and other food processors; retailers, restaurant owners and workers, and other volunteer cooks, as well as food safety practices for consumers. All over Pennsylvania, several thousand practitioners were trained, tested and certified, who in turn, trained additional people or changed their behavior. The result was an increased awareness of food safety practices throughout the food system, and a safer food supply for the consumer.

Cooperative Extension educators continue their training efforts to help clients in food establishments meet the requirements of the Pennsylvania Food Service Employee Certification Act. This year 1,345 participants passed the ServSafe[®] certification exam making them eligible to apply for certification. Excellent progress on reaching underserved audiences with food safety programming has been made, particularly in accommodating non-English speaking audiences.

By keeping a broad, farm-to-table focus when applying solutions to our food safety problems and taking careful, multiple steps, we can ensure that real progress will occur. Extension educators are actively involved in providing training for food producers and processors related to food safety and sanitation practices. Programs for other types of food certification, such as Beef and Pork Quality Assurance are offered. In all, 1,179 participants were reported to have received these types of certification, and 3,343 youth received quality assurance certification/ethics training.

Additionally, county-based educators offer an array of food safety programs for non-profit organizations that serve and distribute food. They also reach very diverse audiences, from kindergarten and elementary students to senior citizens. This year, a total of 16,091 contacts were reported for programs related to food safety. Of those

participants evaluated, 2,030 demonstrated increased knowledge and understanding of practices to ensure safety of the food system. A total of 3,205 participants identified one or more food safety practices they intend to implement as a result of attending programs.

Highlights of successful Penn State Cooperative Extension activities and documentation of their benefits are noted in the following section. A complete listing of programs is available at <<http://pow.cas.psu.edu>>.

| | FY2006 |
|--------------------------------|---------------|
| Human Resources (FTEs) | 10.01 |
| Fiscal Resources (Smith-Lever) | \$307,186 |
| Fiscal Resources (match) | \$307,186 |

GOAL 2

To ensure an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention, and education.

Planned Program – *A Systems Approach to Food Safety*

KEY THEME – Food Quality

Food safety is an issue that needs the attention of everyone involved in the food system, from producers, processors, and government regulators to food handlers, food retailers, and consumers. By keeping a broad, farm-to-table focus when applying solutions to our food safety problems and taking careful, multiple steps, we can ensure that real progress will occur. Cooperative extension educators provide programming relevant to a variety of constituents such as livestock, fruit, vegetable and crop producers; meat and poultry processors; professional food processors and volunteer cooks, as well as consumers.

Livestock Quality Assurance

a. Brief description of activity:

Beef, dairy, and swine producers have participated in Quality Assurance programs to enhance the quality and safety of animal products to eliminate hazards such as antibiotics from milk and meat produced in Pennsylvania. More than 12,000 participants attended programs, and 1,179 individuals completed quality certification training. Quality assurance and ethics programs are offered to 4-H youths across the state, with parents and youths receiving certification. More than 3,343 participants completed quality assurance certification and/or ethics training during the year. Several examples are provided.

b. Impact/Accomplishment:

- In one region, 100% (N=634) of youth demonstrated an increased knowledge of quality assurance and ethics; 91% (N=1,289) identified proper injection sites for vaccinations and 81% (N=1,289) explained at least two injection methods.
- In western Pennsylvania, 12 Beef Quality Assurance Certified producers in cooperation with a local sale barn have developed a Quality Assurance Certified preconditioned feeder calf sale. 100% (n=38) of the Pennsylvania Calf Pool participants have maintained BQA Certification.
- 217 youth in one county completed recertification training. Divided into age groups, Juniors (N=71) scored 90% or better, Intermediates (N=101) scored 91% or better and Seniors (N=45) scored 91% or better.
- More than 2,060 youth received Pork Quality Assurance certification.

c. Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.

d. Scope of Impact—State specific and Integrated Research and Extension.

KEY THEME – Food Handling

Training for Cider Makers

a. Brief description of activity:

Nationally, many foodborne disease outbreaks have been attributed to consumption of unpasteurized fruit juices. In response, the Pennsylvania Department of Agriculture (PDA) mandates that cider makers receive food safety training sufficient to meet the requirements set forth in the Pennsylvania Food Employee Certification Act. A Cider Safety Course was offered for cider makers who currently are required to obtain food safety training under the Pennsylvania Food Employee Certification Act. The curriculum, approved by PDA, teaches the principles of food safety and sanitation as they relate to the manufacture and retail sale of apple cider. Forty four Pennsylvania cider makers participated in the course offered at three different locations. Post-course evaluation results are shown below.

b. Impact/Accomplishment:

- In a post-test, participants at each location showed increased knowledge in food safety, increased awareness of food safety issues related to cider, and understood the significance of food safety in their daily cider making operations.
- On a scale of 1 to 7 (1=Low and 7=High), participant scores ranged from 5.9 to 6.5 in response to how likely they were to use the material learned the next time they make cider.

c. Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.

d. Scope of Impact—State specific and Integrated Research and Extension.

KEY THEME – Food Safety

a. Brief description of activity:

Cooperative extension campus-based faculty and field-based educators conduct a variety of food safety programs for diverse audiences from food service employees to consumers, including youth of all ages to the senior population. This year 13,381 individuals participated in food safety programs statewide. The potential impact is that more than 1 million customers and/or consumers in a three to six month period may positively benefit due to food handlers participation in the food safety programs conducted by Penn State Cooperative Extension. Results from all food safety programs are noted below. Results from specific programs are highlighted under Food Safety as well.

b. Impact/Accomplishment:

- Of those surveyed:
 - 2,030 participants indicated they increased their knowledge of various food safety issues/topics,
 - 3,413 identified one or more new things they learned as a result of attending,
 - 3,205 identified one or more food safety practices they plan to implement.

- Of those evaluated in a 3 to 6 month follow-up survey:
 - 287 participants reported they implemented at least one new practice, and
 - 139 increased the frequency of an established safe food handling practice.
- Of those evaluated in other follow-up surveys:
 - 558 individuals reported sharing the food safety information learned with others.
 - 145 people purchased equipment to enhance the safety of the food they serve.
- Survey results from various programs indicate:
 - 985 participants modified, developed, and/or implemented a HACCP plan to enhance the safety of the food they serve.

Training for Food Safety Certification

a. Brief description of activity:

The Pennsylvania Food Service Employee Certification Act requires that each Pennsylvania licensed food establishment shall have at least one person certified in food safety. In response Penn State Cooperative Extension developed the Statewide Food Safety Certification Program (SFSCP), which consists of a 16-hour workshop taught by extension field-based educators. The National Restaurant Association's ServSafe[®] program is offered collaboratively with Penn State Continuing Education and Penn State campuses and/or with local organizations and is the basis of the (SFSCP). To serve the needs of food handlers with various ethnic backgrounds, courses have been offered in Spanish, Italian, and Chinese. In addition to those employed by restaurants, food preparers in schools, child-care centers, hospitals, and nursing homes have also enrolled in this training. This year 1,345 participants passed the ServSafe[®] certification exam making them eligible to apply for certification. Results of evaluations are noted below.

b. Impact/Accomplishment:

- Post-workshop evaluations indicate:
 - 99% (N=747) gained knowledge in at least one area (good personal hygiene; controlling time and temperature; preventing cross-contamination; cleaning and sanitizing; foodborne pathogens; and HACCP) as a result of attending
 - 95% (N=740) plan to implement and/or increase one or more safe practices.
- Follow-up evaluations related to practices implemented within 3 to 6 months indicate:
 - 76% (N=167) of the participants implemented at least one new practice,
 - 69% (N=173) increased the frequency of at least one safe practice,
 - 95% (N=163) indicated they trained and/or shared information with others on various safe food handling practices, and
 - 73% (N=683) plan to implement and/or increase at least one practice.

Food Safety for School Food Authorities

a. Brief description of activity:

The School Lunch Act requires school food authorities (SFAs) to implement a food safety program for the preparation and service of school meals served to children in the school year beginning July 1, 2005. The program must be based on Hazard Analysis and Critical Control Point (HACCP) principles and conform to guidance issued by the USDA. Penn State Cooperative Extension was designated by the

Pennsylvania Department of Education as the official trainer to assist SFAs as they comply with this new requirement. Training materials from National Food Service Management Institute were used for the trainings.

b. Impact/Accomplishment:

- Results of post-workshop evaluations indicate:
 - 98% (N=689) gained knowledge in at least one area related to standard operating procedures, HACCP processes, controlling time and temperature, etc.,
 - 82% (N=684) increased knowledge in four or more areas as a result of attending the workshop,
 - 76% (N=684) plan to implement and/or increase at least one practice, and
 - 100% (N=684) planned to modify, develop, and/or implement HACCP.

Training Volunteer Cooks

a. Brief description of activity:

Many non-profit volunteer-led community organizations, such as fire departments, churches, civic groups, granges, etc. serve food in various ways as fund raising projects. Most of the volunteers who prepare and serve this food have no training in food safety. “Cooking for Crowds” was designed to meet the need for food safety education for the volunteer food handler.

b. Impact/Accomplishment:

- Post-workshop evaluations indicate:
 - 86% (N=349) of participants gained new information in four or more areas, and 13% gained new knowledge in one to three areas of food safety.
 - 90% (N=683) plan to implement and/or increase at least four or more practices, and 19% plan to implement and/or increase one to three practices.
- Of those evaluated in follow-up surveys (3 to 6 months):
 - 164 organizations used the training manual to plan/implement food fund raisers.
 - Two participants in previous “Cooking for Crowds” classes organized a classes for their church or community. One volunteer convinced the local volunteer fire company to sponsor the cost of the class for 30 community volunteers.

a. Brief description of activity:

The “Keep It Cool!” project helps consumers increase their awareness of the need to check refrigerator temperatures to insure that food is not in the temperature danger zone. A team educators in the Capital Region developed a refrigerator food safety program with materials and messages appropriate for use with multi-cultural audiences of various ages and literacy levels. The entire project was a cooperative effort among extension educators and partners in Penn State Outreach.

The comprehensive program includes a food safety skit, an entertaining tabletop display, the USDA Fight BAC! handout, a short informational lesson on refrigerator food safety and thermometer use, and a program evaluation response card (self-addressed, stamped envelope). Participants receive a complementary refrigerator thermometer and are encouraged to complete the assessment indicating changes in

behaviors based on their participation. This engaging program was offered at sites across the state from AARP meetings to educational child care trainings. Additionally, an educational package of the program (CD) was prepared and marketed to outside groups. Evaluations indicate that the program generated memorable messages and behavioral changes. More than 920 thermometers and response cards were distributed (n=507 responses returned).

b. Impact/Accomplishment:

- 100% of the participants checked their refrigerator temperatures after the program.
- 91% (n=499) of the participants increased their awareness about the need to check refrigerator temperatures to be sure food is not in the temperature danger zone.
- On a seven-step scale, 86% (n=382) of the participants increased their likelihood of checking refrigerator temperature by three or more levels after visiting the program compared to before.
- 49% (n=249) adjusted the temperature control dial to reach a safe temperature as a result of the thermometer program.

c. Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.

d. Scope of Impact—State specific

GOAL 3

Through research and education on nutrition and development of more nutritious foods, enable people to make health-promoting choices.

Overview

Penn State is dedicated to the integration of research and extension, and faculty and county-based educators collaborate to develop and successfully implement the objectives of the five-year plan of work, seeking continuous input from citizens, local advisory groups and boards, the Pennsylvania Council of Cooperative Extension Associations, and the Penn State Agricultural Advisory Council. As outlined in the plan of work, Cooperative Extension emphasizes the overarching goal of increasing healthy food choices among Pennsylvania adults and youths. Within this area, sub-goals and objectives guide Cooperative Extension faculty and field-based educators in solving issues critical to a diverse clientele.

Pennsylvania has the largest rural population and the second-largest senior population (16 percent) in the U.S. The population is largely White (88 percent) with increasing numbers of African Americans and Hispanics. Diseases that have lifestyle antecedents—heart disease, cancer, cerebrovascular disease, and diabetes—are among the six leading causes of death in Pennsylvania. According to the BHRFS of 1996, a significant portion of residents are physically inactive, overweight, not eating fruits and vegetables five or more times a day, and have elevated blood cholesterol, all predisposing risk factors for chronic diseases. Many Pennsylvanians are not following the principles embedded in the USDA Food Guide Pyramid/My Pyramid and balancing caloric intake with regular physical activity. Cooperative Extension faculty and field-based educators create and offer a variety of programs that help people adopt lifestyle practices that promote health and wellness.

The incidence of diabetes increased by 33% during the last few years. On a different front, about one in two women and one in eight men will eventually develop osteoporosis, a highly debilitating disease. Therefore, prevention of both diseases is critical. Similarly, all adults and children must practice healthful eating in order to maintain or increase their wellness and health. The rates of obesity and overweight in Pennsylvania adults and children are also increasing dramatically. There is an urgent need within the state for sound nutrition and health information and training for health care and education professionals.

Educational programs addressing diabetes, obesity, osteoporosis, and diet and health were offered to a large number of Pennsylvania residents. As a result, thousands of people increased their knowledge about these diseases, understood better the prevention practices, and became more confident in making the proper diet and lifestyle changes. Similarly, thousands of participants increased their awareness of a more healthful diet and adopted diets consistent with dietary guidelines for good health.

Cooperative Extension has made significant progress in providing educational programming opportunities that increase healthy food choices among Pennsylvania adults and youths. During this fiscal year, 48,425 individuals participated in programs on nutrition across the life cycle. Of the participants evaluated, 2,747 identified strategies to decrease health risks, 3,645 reported an increase in healthful food choices and 1,971 reported making recommended lifestyle changes.

Highlights of successful Penn State Cooperative Extension activities and documentation of their benefits are noted in the following section. A complete listing of programs is available at <<http://pow.cas.psu.edu>>.

| | FY2006 |
|--------------------------------|---------------|
| Human Resources (FTEs) | 23.56 |
| Fiscal Resources (Smith-Lever) | \$669,350 |
| Fiscal Resources (match) | \$669,350 |

GOAL 3

Through research and education on nutrition and development of more nutritious foods, enable people to make health-promoting choices.

Planned Program – Nutrition, Diet and Health

KEY THEME – Human Health and Human Nutrition

According to the PA Department of Health, the percentage of overweight youth in Pennsylvania is slightly higher than the national average. Risk factors for heart disease, such as high cholesterol and high blood pressure, occur with increased frequency in overweight children and adolescents compared to children with a healthy weight. Additionally, Pennsylvania is the state with the largest number of individuals diagnosed with osteoporosis in the nation. One in two women and one in five men have osteoporosis. Extension educators offer a variety of programs focused on prevention and management of chronic diseases. A total of 115 programs focused on overweight youth reached 3,776 participants, and 3,719 individuals participated in programs related to osteoporosis prevention. Examples of several programs are highlighted.

Childhood Overweight and Obesity

a. *Brief description of activity:*

The Family Fitness/Childhood Overweight Prevention program was initiated this year. The program targets children 8 to 11 years of age and their parents and focuses on helping them make healthier food choices, improve family intergenerational communication and time management skills related to healthy food choices, and increase physical activity. A team of extension educators offered Family Fitness at 11 sites statewide during the school year. A total of 346 participants were involved in the pilot program. Additionally, a marketing recruitment video and training videos were developed for the program in collaboration with Penn State's WPSU broadcasting staff. Forty-nine educators and county collaborators, including area hospital and health educators, were trained to offer Family Fitness.

b. *Impact/Accomplishment:*

- Pre- and post-program evaluations showed significant improvement ($p < .05$) in the following areas (N=157 students, 85 parents):
 - Healthy eating behaviors in children; Increased minutes of physical activity and ease of physical activity; Improved communication/agreement and goal setting with parents for healthy eating, physical activity, and preparing meals together
- Compared to control groups at the intervention sites (N=30 students, 15 parents), participants showed significant improvement in the following areas ($p < .05$):
 - Consumption of whole grains, trying new fruits and vegetables, consuming less higher fat and sugar foods and drinks
 - Setting more healthy eating goals, planning meals together, and increased knowledge of Nutrition Facts labels.

- Preliminary six month post average body mass index (BMI) values met the program goal of remaining stable, with 69% decreasing or remaining stable (N=22 of 34).
- Parents and students comments include:
 - Parents; “We are more excited about trying a healthier lifestyle.” “Our whole family is eating healthier, smaller portions, walking in the neighborhood.”
 - Students; “I run more. I spent a little less time ...watching TV.” “I learned to eat healthy and why its important.”

a. *Brief description of activity:*

The Keystone Color Me Healthy program is designed to incorporate healthy eating ideas and increased physical fitness into early education curriculum resulting in healthier food choices and increased physical activity, thus lowering the obesity and overweight occurrence in children. Color Me Healthy (CMH) is part of a larger statewide collaborative effort between Pennsylvania’s Department of Education, Health, Public Welfare, the Office of Child Development, the Tuscarora Intermediate Unit, the Head Start State Collaboration Project, the Pennsylvania Nutrition Education Network, the American Cancer Society, and Penn State Cooperative Extension. In 2006, 2,748 child care providers in 51 counties have been trained to use the program materials. Findings from a survey of these child care providers follow.

b. *Impact/Accomplishment:*

- 81% of child care providers use CMH in the classroom with 73% of those providers using one or more kit components at least once a week.
- More than 62% of trainees surveyed stated that children in their care move, dance, jump, and run more often since they started using the materials.
- More than 75% of those surveyed said children now know more about healthy eating habits and can recognize and name fruits and vegetables.
- Most childcare providers (84%) gave CMH an excellent or very good rating.

a. *Brief description of activity:*

Cooperative extension is a member of the Pennsylvania Advocates for Nutrition and Activity (PANA) to build statewide capacity for developing an environment to support and promote active lifestyles and healthy food choices. The PANA initiative incorporates a broad range of activities to address obesity, including policy and environmental changes in the community, improving school health practices and promoting healthy weight in healthcare settings. The initiative operates through a diverse coalition of partners from state agencies, universities, non-profit organizations, professional associations, and the business community. Cooperative Extension facilitates Community Champion activities with schools and communities and hosts the satellite training conferences. Extension educators reached more than 2,600 participants through the PANA initiative this year. Evaluations of several programs are noted below.

b. *Impact/Accomplishment:*

- Two healthy food demonstrations were offered to 400 middle school students. Teachers reported the following results four weeks after the program:

- 72% (N=197) of students indicated they could recall one or more new concepts they had learned about fats and sugars.
 - 22% (N=197) indicated they had tried at least one recipe at home.
 - More than 1,000 adults and school age children in one county, in which the number of children who are overweight and/or at risk of becoming obese is higher than the national average, attended a four-month Shape Up PA program.
 - In a follow-up survey two months after the Shape Up program, 10 adults reported losing weight and maintaining weight (total of 90 lbs.), and 18 adults reported increasing their physical activity.
 - A follow-up survey seven months after the Shape Up program indicated (21 surveys returned) that 81% maintained or decreased weight (total of 132 lbs.)
- a. *Brief description of activity:*
 A team of extension educators, working with two Intermediate Units, Marywood University, the Pennsylvania Department of Health and a local agency, offered two conferences on childhood wellness in the Northeast Region. A total of 218 health care professionals and educators attended the conferences focused on childhood obesity. Participants attending “Skills for Working with Overweight Children” completed a post program survey (n=111).
- b. *Impact/Accomplishment:*
- 56% indicated they were very prepared to use two techniques to reduce body weight of an overweight child; 97% indicated they plan to implement techniques
 - 51% indicated they were very prepared to encourage parent involvement
- a. *Brief description of activity:*
 Nutrition education programs, funded through a PA Tracks nutrition education grant, target low-income students and senior citizens. A total of 67,232 participants were reached through the PA Tracks program with a majority of the programming efforts (59%) reaching school-age youth. More than 1,480 programs were offered by 20 paraprofessionals and 46 community partners.
- b. *Impact/Accomplishment:*
- An increase of participants intention to change behaviors after attending classes in the content areas is shown:
 - 55.9% increase in intention to consume 1.5 cups of fruits or more, and 51.4% increase in intention to consume 2 or more cups of vegetables each day
 - 51.9% increase in intention to eat 2 or more servings of dairy products each day

Osteoporosis

- a. *Brief description of activity:*
 Strength training and proper nutrition have been shown to improve bone mass, muscle mass, and improve the emotional health of many seniors. The StrongWomen program teaches safe strength building techniques, an appreciation for regular exercise and proper nutrition which help improve physical health and reduce susceptibility to osteoporosis and other age-related maladies. The StrongWomen

program series consists of 24 strength training classes with nutrition information shared at each class.

- A total of 173 extension educators and site leaders have been trained and certified to deliver the research-based strength training course. Additionally, seven StrongWomen Site Leader training programs were offered to train leaders to lead programs in their communities. A total of 101 new site leaders in six counties were trained—80 cooperative extension staff or collaborators and 21 individuals from external organizations. In FY2006, 474 programs were offered to 2,646 women. Evaluation results of several StrongWomen programs are highlighted below.
- b. *Impact/Accomplishment:*
- 98 participants (97 women and 1 man) attended two StrongWomen strength training programs in one county. Pre- and post-assessments were completed to measure strength, flexibility and endurance (N=34). For example, participants' average number of arm curls completed in 30 seconds, increased from 19 arm curls in pre- to 21 arm curls in post-assessment. Results of a written evaluation showed (N=43):
 - 67% (n=27) reported feeling very much or quite a lot stronger physically
 - 58% (n=25) reported increasing their general physical activity level
 - 91% (n=39) reported having a definite plan to continue strength training at least twice a week, and 91% reported one lifestyle change they made as a result of attending
 - 84 participants attended the StrongWomen program in another county. Post-fitness assessments were completed by 66 participants who attended the last class session.
 - 100% (n=66) of participants reported their health is better because of the program, and 100% feel physically stronger.
 - 96% (n=63) indicate that their joints are less painful
 - 4 participants indicated they decreased their medications for chronic disease (e.g., cholesterol, osteoporosis, blood pressure, etc.) since beginning the program.
 - Comments from participants include: "I have lost 7 inches in the 6 weeks and have more energy." "My blood sugars have improved from day 1 by 100+ points less!!"
 - Results of a program offered to 16 participants in another county indicate:
 - 100% (n=15) enjoy better health, and 100% feel physically stronger
 - 94% (n=14) have improved their balance, and 94% increased their activity level
 - 6 weeks after the class, one participant who continued strength training reported attributing the program to her speedy recovery and functioning after surgery.
 - If each participant in the Site Leader training program (101) leads a pilot group of 6-8 in the next six months, this will result in 600-800 women and men who can improve their health and nutrition and possibly prevent a fall or fracture.
- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific and Integrated Research and Extension.*

GOAL 4

Enhance the quality of the environment through better understanding of and building on agriculture's and forestry's complex links with soil, water, air, and biotic resources.

Overview

Penn State is dedicated to the integration of research and extension, and faculty and county-based educators collaborate to develop and successfully implement the objectives of the five-year plan of work, seeking continuous input from citizens, local advisory groups and boards, the Pennsylvania Council of Cooperative Extension Associations, and the Penn State Agricultural Advisory Council.

Pennsylvania's water and forest resources are essential to our society's consumptive needs and environmental settings. These resources support water usage within our population, provide a source of raw materials for economic pursuits and serve as an ecological reserve for our environment and society's spatial needs. The management of this complex resource base is the focus for several key Cooperative Extension programs designed for resource owners and the general public. As outlined in the plan of work, Cooperative Extension emphasizes two overarching goals: (1) improving watershed management to enhance water quality; and (2) improving sustainability of Pennsylvania forests. Within each of these areas, sub-goals and objectives guide Cooperative Extension faculty and field-based educators in solving the issues critical to a diverse clientele.

The maintenance of water quality within private systems is of strategic importance to many rural populations. This includes engineering and resource issues tied to water supply systems, septic systems and farm ponds. Collectively, these water-resource issues have been addressed through a collaborative set of Cooperative Extension programs involving news releases, publications, water testing and educational sessions relating to supply systems and watershed awareness. Water-resource information was provided to 11,035 people through face-to-face educational programs. As a result, educators identified 1,642 individuals who took action to protect or enhance water quality.

Forest landowners need to understand the dynamics of forest growth and the ecological relationships inherent to these biological settings. Timber harvesting requires landowners to understand this selection process and the allied marketing process, while, at the same time, how to maintain and, potentially, build a forest's integrity and sustainability through time. Cooperative Extension educators have created an assembly of programs that instruct forest landowners on the growth mechanism inherent to forests and the intricate nature of this biological process. These programs and instructional materials provide an overview of silvicultural and management decisions confronting property owners through time. Extension personnel also recommend additional sources of professional assistance to landowners in need of detailed planning. Cooperative Extension programming in private forest management and sustainability reported 20,149 contacts with adult participants. More than 1,480 of those evaluated indicated an increase

in knowledge and skills needed to apply the practices and principles to ensure private forest management and sustainability. More than 724 individuals indicated their intent to implement sustainable forestry practices. Timber harvesting is approached as an educational topic for landowners and loggers. These programs identify the timber products in demand by commercial markets, their measurement and value, and the subsequent need for insuring regeneration, sustainability, and continuity within the forest. The dynamics and complex nature of forest systems also serve as the basis for several youth education programs provided by Cooperative Extension. Educational or career programs reached 1,121 youth participants this year.

Highlights of successful Penn State Cooperative Extension activities and documentation of their benefits are noted in the following section. A complete listing of programs is available at <<http://pow.cas.psu.edu>>.

| | FY2006 |
|--------------------------------|---------------|
| Human Resources (FTEs) | 20.92 |
| Fiscal Resources (Smith-Lever) | \$722,558 |
| Fiscal Resources (match) | \$722,558 |

GOAL 4

Enhance the quality of the environment through better understanding of and building on agriculture's and forestry's complex links with soil, water, air, and biotic resources.

Planned Program – *Watershed Management to Enhance Water Quality*

KEY THEME – **Water Quality**

a. Brief description of activity:

Pennsylvania is home to abundant water resources including 80 trillion gallons of groundwater, thousands of private ponds and reservoirs and 43,000 miles of streams. The state's large rural population utilizes over one million private water systems and about 1.5 million on-lot septic systems. Extension programs and resources are targeted at proper management of private water systems, ponds, solid waste management, increasing understanding of watersheds and groundwater and environmental policy. Programs have been delivered in collaboration with federal, state and local government agencies, civic groups, schools and watershed organizations. A wide variety of program delivery methods are used including satellite downlinks, web pages, web casts, displays, publications, face-to-face programs, site visits, newspaper and radio stories and television programs. A total of 11,035 clients participated in programs related to environmental policy, water resources, and solid waste management.

To meet increasing demand for online resources, the Water Resources Extension Web site (<http://water.cas.psu.edu>) was completely revised to improve the appearance and functionality of the site. The Web site provides clients easy access to valuable educational resources and links to other sources of information. The site includes information on drinking water quality, pond management, water conservation, drought and climate information, and watershed management. Use of the Web site increased by 29% in FY2006 to a total of 10,045 unique annual visitors. The Web site also was used to accomplish online research of private well owners and to advertise new online course offerings.

Extension educators and specialists offered workshops for 906 private water system owners and responded to 881 e-mail and phone questions from clients about private water systems. Additionally, a team of ten extension educators and specialists provide support for the Master Well Owner Network (MWON) to deliver education to private water system owners throughout the state. In FY2006, 287 MWON volunteers in 60 counties reported spending 820 hours personally educating 3,453 private water system owners. Volunteers reached an additional 32,950 homeowners through newsletters, news articles, and television. Additionally, MWON secured nearly \$70,000 in grant money from the Center for Rural Pennsylvania and the Pennsylvania Water Resources Research Institute to conduct research on private water systems.

b. *Impact/Accomplishment:*

- Educators report that:
 - 1,757 of participants evaluated demonstrated an increase in water knowledge
 - 1,362 participants reported using best management practices to improve water quality.

- Water Resources Extension Web Site: Results of an on-line survey of Web-page visitors showed;
 - 91% found the Web site helpful
 - 84% took action or planned to take action to better manage their water resources

- Private Water Systems: Follow-up surveys of homeowners who interacted with MWON volunteers were conducted. Additionally, as part of the MWON research, 450 private well samples were collected and analyzed for bacteria, pH, lead, nitrate, arsenic, pesticides, hardness, and total dissolved solids.
 - 80% of homeowners who interacted with volunteers took action to better protect their drinking water supply.
 - Well owners in the research were informed of their drinking water results and received recommendations to solve water quality problems where they existed.

- Pond Management: Pond management workshops and assistance were provided to 1,093 pond owners across the state. Two workshops were held in collaboration with the Pennsylvania Lake Management Society and several state and federal agencies. An interactive online pond management home study course was also created this year for use in FY2007. Evaluation results from one program are shown.
 - 71% to 86% (N=44) of the pond and lake management workshop participants reported gains in knowledge of at least two steps on various program topics (lake ecology, water quality, aquatic plants, etc.).
 - 20 participants intend to take action to solve a problem with their pond or lake as a result of attending the workshop.

- Solid Waste Management: Nearly 4,000 individuals attended 133 backyard composting workshops offered in 46 counties. The back yard composting program is a cooperative effort between the Pennsylvania Department of Environmental Protection (DEP) and Penn State Cooperative Extension. The DEP Compost Coordinator reports that more than 60,000 households in the state have received composting bins since this program started in 2000. By composting, homeowners produce a beneficial soil amendment and keep organic materials out of the landfills. Evaluation results from several composting programs are highlighted.
 - 98% (N=47) of the Master Gardeners who participated in a train-the-trainer workshop reported increased confidence and skill in training others to compost.
 - 134 of 159 adults who participated in seven composting workshops indicated they would begin composting within the year.
 - 100% (N=89) of elementary school students participating in compost exercises demonstrated their ability to identify two or more organisms in a compost pile.

- As a result of assistance provide by an educator, a local college received a \$20,000 grant and initiated a food and yardwaste composting project.
- Watershed Education: More than 2,000 clients participated in programs related to watershed including youth programs and stormwater management education. Several programs are highlighted.
 - 92% (N=168) of students in 4th grade who participated in an educational program learned at least one new thing about the importance of wetlands.
 - 27 (53%) of participants representing six different watershed associations completed a post survey following a watershed program. 100% stated the tour helped them in regard to future stream restoration work; 82% indicated that as a result of attending, they now have tools they can use to improve streams.
- c. *Source of Federal Funds—Smith-Lever 3b&c, Multistate Extension and State matching funds.*
- d. *Scope of Impact—State specific and Integrated Research and Extension.*

Planned Program – Sustaining Pennsylvania Forests

KEY THEME – Forest Resource Management

Managing Private Forests

- a. *Brief description of activity:*

Pennsylvania’s 12.5 million acres of privately held forests owned by 528,000 individuals, and families contribute an estimated 90 percent of the raw material to support the state’s five billion dollar forest industry as well as invaluable ecological services to all the state’s citizens. Unplanned timber harvesting is leading to significant long-term forest value sustainability problems relating to changed tree species composition and reduced biodiversity. To ensure the long-term productivity of private forests to supply ecological, social and economic value to Pennsylvanians, extension activities include building partnerships and support for outreach activities by working with the forest industry, the Pennsylvania Bureau of Forestry, volunteers, and forest landowner associations. Extension educators deliver programs through conferences, workshops, woods walks, training, and on-site consultations. Additionally, Forest Stewardship Volunteers provide support to the 23 county Woodland Owners Associations (WOAs) in Pennsylvania, covering about two-thirds of the state’s 67 counties. Volunteers provide educational programs to thousands of forest owners and stakeholders.
- b. *Impact/Accomplishment:*
 - One programming example is “The Woods in Your Backyard” program conducted in association with the Dauphin County Woodland Owners Association. As a result of attending the program, 30 participants decided to initiate new wildlife related management strategies, and 32 participants indicated they plan to incorporate at least

one land management practice on their property. Results of a follow-up survey (11 respondents) on practices started and implemented indicate:

- 73% evaluated existing habitat, 55% established family goals for their property, and 44% developed a map of property.
 - 80% controlled invasive plants, 60% reported less mowing activities, 58% planted trees and 55% cut grape vines.
- To date, 429 Forest Stewardship Volunteers have been trained (366 remain active). This year 21 new volunteers were trained. They reported contributing 2,500 hour in their first year and reached over 60 forest owners.

Professional Development

a. Brief description of activity:

245 forest and natural resource professionals, responsible for managing over 13.1 million acres of forestland, participated in Forest Health 2006. These professionals, representing 27 Pennsylvania counties, learned about the latest research and scientific information on forest health issues that affect forest resource managers. Additionally, 149 resource management professionals, managing nearly 3 million acres, gained the necessary information and skills to deal with forest health situations in 2006.

b. Impact/Accomplishment:

- More than 90% of the professionals who attended the Forest Health conference intend to incorporate the knowledge and skills learned in their work.

c. Source of Federal Funds—Smith-Lever 3b&c, State matching funds.

d. Scope of Impact—State specific and Integrated Research and Extension.

KEY THEME – Natural Resources and Youth

a. Brief description of activity:

Reaching youth about forest stewardship and sustainability is important as they are the next generation of decision makers. An estimated 1 in 9 households in Pennsylvania currently owns forestland, and many of these households or family groups have school-age youth. Natural and environmental resource education through 4-H and other youth programs continues to be a major thrust of Cooperative Extension with more than 4,600 youth involved. Through youth camps, retreats and state-level schools and institutes, youth participate in hands-on environmental learning activities. A new initiative, the Junior Forest Steward Program, was developed which will reach an additional 10,000 youth in the next fiscal year.

b. Impact/Accomplishment:

- More than 29,000 youth gained knowledge through the use of curriculum resources from the “Environment and Ecology” and “From the Woods” series.

- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific.*

KEY THEME – Other

Urban and Community Forestry

Urban foresters and a faculty members provide technical assistance, offer educational opportunities and publications, empower and train volunteers, and assist with grants that support tree planting, pruning, tree care to maintain health and safety, and build public support for community tree programs.

a. *Brief description of activity:*

Satellite surveys indicate up to a 20% loss of tree cover in a five county area in the Southeast. Six training sessions were implemented in partnership with the Pennsylvania Department of Conservation and Natural Resources' TreeVitalize initiative, the Pennsylvania Horticultural Society, and others. A total of 470 people participated in the hands-on training focused on tree biology, planting and care, identification, and how to work within your community.

b. *Impact/Accomplishment:*

- Evaluations indicated that participant's knowledge increased from 79% having little tree knowledge to 70% reporting extensive knowledge after the program.
- A follow-up post card evaluation indicated that 36 participants planted nearly 1,500 trees as a result of the program.
- These new trees meet the overall program goal of increasing tree cover in Southeast Pennsylvania.
- One person started a local shade tree commission in their community.

a. *Brief description of activity:*

Three municipalities in the eastern inner ring suburbs of Pittsburgh, lack comprehensive tree programs. An extension educator participated in planning meetings with community volunteers, municipal officials, and representatives of the Nine Mile Run Watershed Association in each of these municipalities. A "Tree Blitz" was held in each municipality with training provided by the extension educator and the association director, and 57 volunteers learned how to record the data necessary to complete tree inventories.

b. *Impact/Accomplishment:*

- Volunteers gained the knowledge and skills to perform accurate tree identification, measurement, and assessment.
- Data will be analyzed and used to implement comprehensive tree management programs in the three communities.

Managing Wildlife

a. Brief description of activity:

Increasing the hunting and harvesting of deer is essential to forest land management. Research has shown that as much as 85% of forest regeneration failures throughout Pennsylvania are due to over browsing by white-tailed deer. The cost to public and private forest landowners is in the millions of dollars annually. Understanding the impact of white-tailed deer on the forest is imperative to sustainable management of forest resources. Extension educators offer public awareness programs that help participants gain an understanding of whitetail deer biology, management, habitat requirements, and carrying capacity. Two programming examples are noted.

A “Deer Density and Carrying Capacity Workshop” was held at the Treasure Lake community development in cooperation with Penn State DuBois wildlife technology students, the Quality Deer Management Association, and the Treasure Lake Wildlife Committee and Homeowners Association. More than 80 participants learned how to implement a population and habitat monitoring program on their own property or on property where they hunt. Following the training, participants were divided into field crews. Each crew was assigned a portion of the property on which to collect population and browse impact data—the Penn State DuBois wildlife students had designed survey transects for the workshop participants to follow. Deer impact data was collected, summarized, and presented to the Treasure Lake Wildlife Committee.

A series of seminars, designed to bring attention to the ramifications of overabundant deer herds near communities and provide tools to improve the situation, were offered at seven locations across the state. A total of 191 people attended the seminars.

b. Impact/Accomplishment:

- Using the results of the data collected, a deer management plan was developed and implemented for the Treasure Lake community.
 - Deer impact data was collected for two consecutive years over 3,000 acres within the community. The committee drew up regulations and guidelines for an archery season, more than 100 deer management permits were received, and the first hunting season began in fall 2006.
 - To date, more than 35 deer have been harvested.
- Results of an evaluation six months after the series of seminars on deer herds near communities with a 48% return rate (N=92) indicated:
 - 94% reported a better understanding of the effects of a high population of white-tailed deer on forests, other wildlife, and people
 - 35% contacted Pennsylvania Game Commission officials or their local or state government to voice concern about the overabundant deer herd; an additional 39% plan to contact an official
 - 37% implemented techniques to counteract the effects of overabundant deer
 - 16% helped organize members of local communities to help resolve the issue

Wood Products Processing

a. Brief description of activity:

The wood products industries provide significant economic advantage to Pennsylvania, as other primary manufacturing industries disappear or relocate from the Commonwealth. Over 2,000 wood products-related companies have annual sales over 5 billion dollars and account for 10% of the state's manufacturing employment with nearly 92,000 employees. Extension continues to identify areas of strategic importance that will sustain and increase the competitiveness of the Pennsylvania wood products industries and provide new, cutting-edge training that addresses these opportunities.

A variety of programs were offered this year. For example, 205 hardwood industry owners, managers, and employees attended "Lean Manufacturing for the Wood Products Industry," and a 175 loggers attended "Logger Safety" and "First Responder Training" programs. Additionally, the WoodPro Web site exposes the wood products industry to relevant and value-adding resources (<http://woodpro.cas.psu.edu>). The Web site was visited more than 140,000 times, and the audience has grown to more than 500 people who visit the site more than once a month.

Extension educators also were part of a coalition of educational entities that conducted a survey of the secondary wood processing industry in ten contiguous counties located in central Pennsylvania to gain better understanding of the education and training needs of the local industry.

b. Impact/Accomplishment:

- Survey of wood processing industry will guide extension in developing programs and delivery methods that meet needs in industries of various sizes in areas identified: business, marketing, and management skills; technical skills; and personnel programs.

c. Source of Federal Funds—Smith-Lever 3b&c and State matching funds.

d. Scope of Impact—State specific.

GOAL 5

Empower people and communities, through research-based information and education, to address the economic and social challenges facing our youths, families, and communities.

Overview

Penn State is dedicated to the integration of research and extension, and faculty and county-based educators collaborate to develop and successfully implement the objectives of the five-year plan of work, seeking continuous input from citizens, local advisory groups and boards, the Pennsylvania Council of Cooperative Extension Associations, and the Penn State Agricultural Advisory Council.

As outlined in the plan of work, Cooperative Extension emphasizes five overarching goals: (1) increasing the quality of child care, (2) strengthening the capacity of families and communities; (3) increasing youth life skills; (4) developing leadership capacity in adults and youth; and (5) increasing the understanding of public policy issues. Within each of these areas, sub-goals and objectives guide Cooperative Extension faculty and field-based educators in solving issues critical to a diverse clientele.

Our evolving contemporary society is clearly dictating that child care continues to be a major need for families within the Commonwealth. During 2006, 48,500 child care providers engaged in professional development activities through cooperative extension enabling them to operate in compliance with state regulations. Penn State Cooperative Extension's Better Kid Care Program provides statewide educational materials and resources, directs training workshops, satellite broadcasts, Internet-based workshops, telephone help line, videos, and educational activities for child care providers, parents, and employers. More than 177,500 hours of professional development credit hours were delivered to early childhood educators, teachers, and child care professionals across all delivery modalities.

Social and economic changes continue to have a tremendous impact on children and families. Cooperative Extension plays a significant role in collaborations and coalitions that help address these societal issues. More than 57,000 family members participated in programs to increase their parenting, child development, and family financial decision making and communication skills. Of those evaluated, 5,601 increased their knowledge in these areas. Additionally, 12,443 individuals increased their knowledge about the negative implications of tobacco use and tobacco smoke pollution.

The development of Pennsylvania's youth into productive, contributing members of society is the goal of 4-H and related youth development programming. A total of 153,650 youth participated in 4-H and other youth programming. Of these, 20,678 youth demonstrated the development of life skills such as decision making, problem solving, goal setting, and critical thinking. Additionally, 17,421 youth gained knowledge through educational programming in the life, physical, and social sciences, leadership, and

personal development. Traditional club-focused programming continued but more efforts were concentrated on after-school youth programming and reaching underserved audiences.

The development of leaders continued as a major focus for Cooperative Extension programming. More than 26,700 individuals participated in formal leadership and volunteer development programs, and more than 7,000 individuals participated in ongoing volunteer and leadership activities such as extension boards, committees, 4-H and youth volunteers and Master Gardeners. As a result of leadership programming, 1,995 individuals increased their knowledge of and/or performance of leadership skills. More than 16,500 persons volunteered 266,537 hours on various activities, which translates to a value of more than \$4.8 million as a contribution of time to benefit extension.

Community and public policy education and decision making in Pennsylvania are characterised by a mosaic of decentralized jurisdictions, authorities, and interests. Local governments continue to be involved in advancing citizen involvement in decision making. Cooperative Extension educators offer content and process related educational programs that help community leaders gain knowledge and skills in areas such as strategic planning, community planning, and land use issues—skills that are required to respond to the challenges and opportunities in today’s complex environment. A total of 14,856 people participated in programs related to community and economic development.

Highlights of successful Penn State Cooperative Extension activities and documentation of their benefits are noted in the following section. A complete listing of programs is available at <http://pow.cas.psu.edu>.

| | FY2006 |
|--------------------------------|---------------|
| Human Resources (FTEs) | 174.9 |
| Fiscal Resources (Smith-Lever) | \$5,152,939 |
| Fiscal Resources (match) | \$5,152,939 |

GOAL 5

Empower people and communities, through research-based information and education, to address the economic and social challenges facing our youths, families, and communities.

Planned Program – *Strengthen and Support Family Well-Being*

KEY THEME – Child Care Issues

a. Brief description of activity:

Penn State Cooperative Extension's Better Kid Care Program provides statewide educational materials and resources, direct training workshops, satellite broadcasts, internet-based workshops, telephone help line, videos, and educational activities for child care providers, parents and employers. Satellite training workshops, produced at Penn State, were down-linked on average to 53 Penn State Cooperative Extension sites across Pennsylvania. Nationwide, over 40 states enrolled in the Better Kid Care satellite training workshops. In almost every state, Penn State Cooperative Extension's Better Kid Care training has been certified which allows early childhood educators, teachers, and child care providers to receive training credits in their respective states. Better Kid Care delivered more than 177,500 hours of professional development credit hours to early childhood educators, teachers, child care professionals across all delivery modalities.

b. Impact/Accomplishment:

- In Pennsylvania, more than 48,500 child care providers were trained statewide enabling them to operate in compliance with state regulations.
- Over 6,750 legally unregulated child care providers received training through participation in satellite workshops or direct training.
- More than 2,630 child care providers received state-mandated certification through distance education web-based units.
- Over 19,645 child care providers enrolled in and participated in the print-based training that enabled them to meet minimum state standards.
- Over 105,000 hours of training was delivered via print-based programs.
- More than 75,165 hours of training was provided to new centered-based staff during the first 90 days of employment units.
- More than 642,075 educational documents were accessed via the Better Kid Care web site <www.betterkidcare.psu.edu>. This resulted in significant savings over mailing print materials.
- More than 75,000 center-based staff in child care centers participated in developing and/or up-dating their Emergency Preparedness curriculum developed and implemented by Better Kid Care.

- a. *Brief description of activity:*
Major changes in the state's quality enhancement initiatives have resulted in an increase in the number of training hours required for many child care providers. Extension educators provide the training needed to increase knowledge and skill levels for Pennsylvania's Keystone STARS accreditation. Examples of several child care programs offered in different counties are noted.

In one three-county area, 898 child care providers participated in 44 educational training sessions to maintain licensing requirements and progress in the Keystone STARS program. In another rural three-county area, extension educators provided 61 professional development opportunities for child care providers to meet the Department of Public Welfare or Keystone STARS requirements. Regulated child care providers in two of the counties are participating in the Keystone STARS quality improvement program. One of these counties ranks as having one of the highest provider participation rates in the state.

- b. *Impact/Accomplishment:*
- End of program evaluations for the child care training sessions indicated:
 - 92% (N=897) of the providers indicated they would be able to use what they learned in the workshop in their child care work.
 - 91% (N=897) listed one or two methods they can use with children as a result of the program
 - High participation rates in Keystone STARS are shown for providers of regulated center, group, and family facilities in one county.
 - Center facilities: 12 regulated with 9 participating for a total of 75%
 - Group facilities: 7 regulated with 5 participating for a total of 71%
 - Family facilities: 77 regulated with 60 participating for a total of 78%
- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific, Multistate Extension (40 states across the country participate in Better Kid Care program) and Integrated Research and Extension.*

KEY THEME – Parenting Education

- a. *Brief description of activity:*
Extension educators provide parenting programs for a variety of audiences across the Commonwealth, from underserved populations and families at risk to prison inmates. Examples of several program offerings that include parenting education and anger management are noted.
- b. *Impact/Accomplishment:*
- At the request of inmates and counselors, extension educators offered Parenting and Anger Management programs at the Lawrence County Jail. Forty of the 45 male and female parents completed the parenting program, and 12 parents completed anger

management sessions. The educators received the following note from one group of males who attended.

“On behalf of our class, I [we] would like to express our utmost thanks and appreciation. We would like to thank you for your time and effort in molding each and every one of us into better parents than we previously were. It was great having someone so sincere and compassionate to teach us such valuable information.”

- Educators use the Family Group Decision Making process to help families solve their problems themselves. Anger Management programs were offered to a total of 151 males and females (approximately 10% African American) in several counties, and a series of programs were offered at the Venango County Jail. Inmates provided many comments about positive changes in their family interactions.
- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific, Multistate Extension and Integrated Research and Extension.*

KEY THEME – Children, Youth and Families at Risk

a. *Brief description of activity:*

Research has demonstrated the effectiveness of several evidence-based family-focused programs among rural youth, including the reduction of substance use, and related economic analyses also have shown that these programs are cost-beneficial (Spoth, Gyll, & Day, 2002). Programs focus on the enhancement of competencies related to reducing risk and increasing protective factors among families and youth. The evidence-based program—Strengthening Families 10-14 (SFP 10-14)—uses the PROSPER model (see Multistates Activities), a community-based approach to program delivery. SFP 10-14 has been implemented in several schools with middle school students and their parents. This year a total of 26 new SFP 10-14 facilitators were trained, and these facilitators reached 6,000 youth.

The SFP 10-14 program began in one local school district as part of a five-year research project under a research grant through the Prevention Research Center at Penn State. The school decided to continue the program for its families, and the program is now funded through a grant and a fundraising program in the district.

In 2005-06, Valley Youth House, a local prevention education agency in Lehigh County, received \$30,000 to provide a family-based prevention program. The agency director asked cooperative extension to collaborate in expanding this program to four additional schools. The program began in the spring using the PROSPER model (see Multistates Activities), a community-based approach to program delivery. Agency funding provided for wages, child care providers, meals for families, and materials and supplies. The extension educator provided support to developing teams at each school and observed SFP facilitators during sessions for program fidelity. The agency also has received grants for 2006-07 from two counties in the amount of \$106,000. A

total of 27 families completed SFP 10-14 in the spring of 2006. At the conclusion of the program, the families completed a survey. Youth rated themselves on 15 topics from a “Now” and “Before” perspective. Parents rated themselves on 20 parenting topics. Results follow:

b. Impact/Accomplishment:

- Youth – most notable increases in skills:
 - Recognition of important qualities in a true friend
 - Ability for youth and parents to sit and discuss issues without yelling or getting mad
 - Ability to get out of situation when a friend wants to do something that will get youth in trouble
- Parents – most notable increases in skills:
 - Ability to let youth know the rules they have for them
 - Ability to see things from their child’s point of view
 - Finding ways to keep youth involved in family activities

a. Brief description of activity:

The SFP 10-4 program continues to be offered to families living in the Mercer County Housing Authority and surrounding community. Workshops begin with an evening meal, followed by parents and youth meeting separately for one hour with a trained facilitator. During the second hour, families come together to share ideas, discuss family topics, and engage in fun, family activities.

b. Impact/Accomplishment:

- In post-test scores, 93% (N=11) of parents indicated an overall improvement in their parenting abilities and interaction with their youth, compared to 69% pre-test scores.
- In verbal post-tests, 76.9% (N=17) of youth identified skills to cope with peer-pressure and the skill to engage when in a frustrating situation, compared to 46.2% (N=13) in the pre-test.

a. Brief description of activity:

Chester County, located in the southeastern region of the state, is known as “The Mushroom Capital of the World.” Latinos/Hispanics is the fastest-growing segment in the county. Amidst the county’s growth and affluence (median value of home ownership in Chester County is \$182,500, almost double the median value for the entire state) there are severe pockets of poverty populated by Mexican migrant and immigrant agricultural laborers and their families.

The Southern Chester County Literacy Coalition (SCCLC), in collaboration with cooperative extension, currently serves twelve apartments and trailer communities in which Hispanic migrant and immigrant families reside. Through previous work, extension staff have gained the trust and respect of the people in these isolated communities. Extension offers 4-H, EFNEP, and Master Gardener programs to individuals in these communities. The programs include literacy activities, nutrition education, and life skills. During the summer, the communities are visited weekly and

staff help start gardens that supply residents with healthy, home-grown food at little to no expense. The program serves an average of 204 children. Parent, grandparents and extended family members are frequently in attendance. This is the only outside contact some of the adults have in these closed communities.

b. Impact/Accomplishment:

- This initiative provides a unique opportunity because of the depth of collaboration between agencies and a willingness to enter the community rather than asking the community to come to the agency.
- Individuals gain comfort from being in their environment and gain confidence in their ability to speak and be heard.

a. Brief description of activity:

A PBS Frontline program, *Country Boys*, was made available in one county to several agencies that work with at-risk-youth. The documentary focuses on the lives of two poor rural youth and the choices they made. The purpose of the program is to help youth realize that despite family issues every choice they make in life is critical and will impact their future.

The program was offered to 12 youth currently in court-appointed foster homes. In addition to the decision-making exercises that came with the teaching unit, extension educators formulated other activities at the suggestion of caseworkers. Caseworkers noted how intensely the youth watched the program. One 19 year old youth said, “Wow, that’s me! I’ve made some stupid mistakes in my life like the one boy. I blamed my alcoholic father for everything that I have done wrong. My choices are really MY choices. This movie made me think of all the things I need to correct and I better do it soon.” The caseworkers indicated that it was an amazing three-hour Saturday morning program, which they plan to offer other youth.

b. Impact/Accomplishment:

- Student evaluations of the program indicate:
 - 98% of the youth would recommend this movie to their friends
 - 100% indicated they would be interested in watching the movie a second time
 - 98% stated that the movie made them think about the decisions they had made and wished now they hadn’t
 - 79% indicated that they had an anger problem to work on
 - 85% indicated that they need to think twice before they act on a problem

a. Brief description of activity:

The New Community Project—Youth Engaged in Technology (YET)—is designed to enhance young people’s marketable skills (especially those related to information sciences and technology), social skills, and prosocial skills. Technology is used as a vehicle through which young people are engaged in learning and contributing to their community. The primary audience involved in the YET program are high school youth in two counties. These students are targeted through referrals from guidance

counselors, nurses, teachers, principals and support staff. In addition, participating youth contribute to others in their community through service activities.

Facilitated by the site coordinator, the after-school club is conducted at the local high school for about 20 members. Skill development and learning, relationship building and opportunities to contribute are embedded in the design of program. Now in the third year, the curriculum focused on revisiting Web site development, specific “Helping Others” projects, and teamwork activities. YET members have been using more advanced Web development software to develop Web sites for local non-profits, townships, and businesses. Several examples of the “Helping Others” projects are noted below. To strengthen cross site communication, YET members from both sites also collaborated on a YET recruitment video during the summer. The video project was produced and designed by participants—the entire project being member motivated. Additionally, YET members had opportunities to participate in two summer camps: a statewide 4-H GIS camp and NanoTech camp.

b. Impact/Accomplishment:

- Of the 31 different YET participants in Potter County, 58% have a 75% attendance record or better and have been engaged in longer-term projects throughout the year.
- YET members were engaged in community service or “helping other” projects.
 - Presented introductory teaching sessions to older adults and senior citizens
 - Conducted 12 GPS/GIS workshops for 200 students in grade 5 from the county schools and presented workshop for 25 high school age campers
 - A YET member completing his senior year achieved a score of “Passed with Distinction” for his senior project—a 2.5 hour interactive student assembly presentation, which was extremely well received by classmates and faculty.
- 45 students participated in the Washington County YET program, and YET members focused on Web site development, robotics, and continued to track and maintain the geocache they established last year. “Helping Others” projects include:
 - Updating the Washington United Way Web site, making it more user-friendly
 - Completing community project, “Push for Food,” bringing several organizations together to raise over \$20,000 in donations for the Food Bank and Arts Center
 - One YET member completed a local township Web site. He taught himself how to use Adobe Photoshop in order to satisfy the clients requests.

a. Brief description of activity:

A caseworker from the Sixth Street Shelter in an urban community requested assistance from cooperative extension. As a result of concerns expressed about children not having a safe place to be outside, the caseworker wanted to create a community garden at a long-term transitional housing program that focuses on education. The apartment houses many families headed by single mothers. Master Gardeners worked with families to create “The Garden of New Beginnings” in a small courtyard behind the building that was littered and had compacted soil. The goal of the project was to teach families about the environment through programs that include math, science, and reading skills and that emphasize personal responsibility, leadership, and communication skills.

- b. *Impact/Accomplishment:*
 - Participants harvested vegetables (herbs, tomatoes, strawberries, squash, cucumbers) after their first growing season; they learned how to use their produce in cooking
 - Children spend free time playing in the garden; less trespassing and vandalism has occurred
 - A blank wall facing the garden now has a mural painted by a local artist, which was inspired by poems written by residents about the garden
- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific and Integrated Research and Extension.*

KEY THEME – Aging Issues

Pennsylvania ranks seventh among the states in terms of number of children living in grandparent-headed households, with over 164,000 children in this category. Kinship caregivers, particularly grandparents, face a host of emotional, legal, and daily living challenges in the position of raising a second family. Children in these families also are twice as likely to exhibit high levels of behavioral and emotional problems. Cooperative extension is taking a leadership role and joining with other organizations to develop resources, services, and supports for kinship caregivers and the children they are raising. A manual on Kinship Care in Pennsylvania has been developed and distributed. One program example is noted below.

- a. *Brief description of activity:*

The Kinship Care Retreat was conducted in the Northwest region of the state. The Kinship Care support group in Lawrence County meets monthly and planned this year’s retreat. Thirteen families attended retreat workshops on anger management and communication skills. These kinship caregivers and more than 30 children participate regularly in the support group, and five new families have joined the group. In Erie County, as a result of the Kinship Care Initiative and collaboration with different community agencies, an unsolicited \$3,500 grant provided support for eight families to attend the retreat. One of the greatest needs identified by the kinship care families in this county was financial resources.
- b. *Impact/Accomplishment:*
 - Both adults and children identified networking and new friendships formed as one of the most valuable results of the retreat. “I’m not alone!”
 - As a direct result of the Kinship Care Initiative, many new families have applied for and eight have been accepted and are receiving monthly reimbursements through the Federal Family Caregiver Support Program.
- c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*
- d. *Scope of Impact—State specific and Integrated Research and Extension.*

KEY THEME – Other

a. Brief description of activity:

Pennsylvania's families face many challenges that threaten their livelihood and family well-being. Access to resources and the ability to manage resources effectively are key factors to family stability and strength. Families must be able to save, to spend based on goals, and to manage debt responsibly to be financially secure in the present and in the future. Extension educators provide a variety of programs to individuals to establish a firmer financial foundation. Several examples are noted.

b. Impact/Accomplishment:

- Four Steps to a Secure Financial Future, a bankruptcy debtor education program, was developed and educators serving different counties scheduled personal finance classes required of those who file for Chapter 7 and 13 bankruptcies. Fifteen extension educators serving 26 counties scheduled 61 classes. More than 80 people attended 24 classes. Class surveys indicated the following:
 - 96% of participants learned a financial strategy they could use.
 - 95% of participants planned to use a budget at home.
 - 93% or more of participant indicated that by the end of the class they had increased knowledge about how to make a spending plan.
 - 68% indicated they planned to set SMART goals and to establish an emergency fund to cover 3-6 months of expenses.

- PA Saves is designed to assess the effectiveness of a financial education program on the knowledge and practices of adults. The program was offered to a total of 560 participants in four counties. The programs focus on basic budgeting, credit issues, scams, and financial planning. Classes were offered at various sites including senior centers, CareerLink, YWCA, service organizations, church groups, Community Action Programs, housing authorities, Salvation Army, and a Latino after-school program. End of session evaluations indicated the following:
 - 97% (N=92) wrote personal short and long term financial goals
 - 96% (N=90) were able to determine the difference between wants and needs
 - 97% (N=93) were able to identify strategies to protect privacy
 - 71% (N=91) developed a spending plan
 - 92% (N=150) planned to obtain a personal credit history

a. Brief description of activity:

The Mellon Community Bridge Project, a workforce development/work readiness program initiated through a \$1 million dollar grant from the Mellon Corporation, focuses on life skills and workplace skills training for low-income individuals currently not employed or under-employed. The program prepares participants to be reliable workers in a wide range of occupations. The ultimate goal of the project is to use community programs to assist in developing a reliable workforce that fulfills the employment needs of the community.

The program offers training for social service workers and volunteers. This year in the Southeast region of the state, the “Skills for Taking Control of Your Future” curriculum was updated, and six new sections were added on affordable quality child care and parenting. More than 140 individuals participated in the skills training. Additionally, 44 staff members from 24 agencies in seven counties attended training in the skills curriculum. An end-of-session evaluation was conducted. Participants anticipate working with an average of 40.5 clients over the next 12 months resulting in the potential of 1,530 persons benefiting from the training.

In the Northwest region of the state a Workforce Development Advisory Team—including members from businesses, agencies, and educational institutions—was created to identify low-income individuals and their barriers to employment and job retention. The advisory team identified transportation issues as a primary barrier, and workplace appropriate clothing as another barrier. A sub-committee, including local government officials, was formed to address the transportation issue. The extension educator contacted consignment stores who agreed to donate unsold career apparel for women entering the workforce. Nearly 180 participants attended 58 sessions of the “Skills for Taking Control of Your Future” workshops at eight sites.

b. Impact/Accomplishment:

- 71% of the 141 participants who attended the skills training in the Southeast region are now employed either part-time or full-time.
- As a result of the skills training, 44 agency staff members in the Southeast region increased their ability to work with clients on the following topics:
 - Personal Assessment, 67%; Money Management, 95%; Family Life, 90%; Child Care and Parenting, 72%; Nutrition, 79%; Tenant Rights and Responsibilities, 97%; and Workforce Preparation, 90%.
- Results from the skills workshops in the Northwest region indicated that 58 (84%) of the participants who attended workshops increased their knowledge of resource management, and 42 (91%) increased their communication skills.

c. Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.

d. Scope of Impact—State specific and Integrated Research and Extension.

Planned Program – 4-H and Youth Development

KEY THEME – Youth Development/4-H

Cooperative Extension offers a variety of programs promoting and enhancing youth development and life skills through animal and plant sciences, family and consumer sciences, natural resources, applied science and technology, leisure education and outdoor skills, personal development and cultural competency and citizenship. More than 103,500 youth participated in 4-H programs in Pennsylvania during FY2006. Nearly 50,900 youth participated in 4-H school enrichment projects, approximately 22,800 youth

participated in 4-H clubs, 22,300 participated in special interest projects, and about 4,300 participated in camping programs. Examples are noted below.

School Enrichment Programs

a. Brief description of activity:

Science, engineering and technology is a primary focus of the national 4-H Youth Development program. Teachers request support to meet required standards of the No Child Left Behind legislation and science and technology educational standards established for Pennsylvania schools. The 4-H program provides support through many curriculum areas including the animal and plant sciences, engineering and environmental sciences, natural resources, computer sciences, etc.

b. Impact/Accomplishment:

- Enrichment projects such as the 4-H embryology program enable youth to apply basic principles of mathematics, science, English and health through hands-on experiences. Cooperative extension educators provide training, resources and support for the classroom teachers. Classroom teachers continue to use this enrichment program and the program continues to expand with more than 39,000 participants enrolled statewide. This year, 80 teachers in one six county region returned the 4-H Embryology project evaluations.
 - 78 agreed 4-H Embryology was a useful addition to the regular teaching unit
 - 76 agreed they received adequate training for using the project in the classroom
 - 66 integrated 4-H Embryology into non-science curricula (math, English, etc.)
 - Teachers comment that children gained content knowledge as well as making progress in vocabulary and oral language development; they noted that students showed responsibility and learned about being gentle and having patience.
 - Parents are involved during the project; they appreciate the educational value of the project and noted how students' enthusiasm carried over into other subjects.

Afterschool Programs

a. Brief description of activity:

4-H Afterschool programs have a significant impact on the rural areas of Pennsylvania where child care in out-of-school hours is limited. Extension educators provide opportunities for youth to engage in positive learning activities that develop leadership, citizenship, and life skills. One goal of afterschool programs is to introduce youth to opportunities for involvement in traditional local 4-H clubs.

In one county in the southwest, for example, 12% of the total youth population (N=8,000) is involved in some type of 4-H programming. All five school districts participate in a countywide afterschool programming effort that includes 4-H as a supporting community-based partner. A primary objective of the program is to increase academic performance.

b. Impact/Accomplishment:

- An estimated 10% of the Afterschool participants (N=281) joined 4-H clubs.

a. *Brief description of activity:*

A large percentage of the families in one rural county are considered resource-stressed, and they lack ready access to information and resources. After low parent and family participation in FY2005, a needs assessment was conducted to determine parents' programming interests, as well as the factors that would motivate them to attend parent education programs. Career and educational options, community resources, healthy lifestyle information, and information about providing academic help to children were among the top needs cited by those who responded. A variety of 21st Century Afterschool parent and family educational programs were offered throughout the school year. A community advisory board was formed and met monthly to evaluate and direct these 21st Century-sponsored programs.

A total of 741 parents, grandparents, caregivers, and youth participated in seven educational family events and ten community advisory board meetings. This marked a highly significant increase in participation over the previous year, during which no more than 50 individuals participated. An estimated 447 of the participants came from resource-stressed/low-income families.

b. *Impact/Accomplishment:*

- Programming was implemented to address the specific needs and preferences identified in the needs assessment. Changes in program offerings resulted in a marked increase in participation.

a. *Brief description of activity:*

A large majority of students in the York City School District face economic barriers and other challenges. In the third year of Afterschool efforts through the 21st Century Program, 28 youth participated in programs such as food and nutrition and animal science. Additionally, the Migrant Education program offered five summer workshops for 145 students in kindergarten through grade 6, including 117 Hispanic students. Results from the summer workshop follow.

b. *Impact/Accomplishment:*

- 77% of the students could correctly sequence the events of the agricultural cycle of a tomato from farm to consumer
- 61% of the students placed the correct pictures of products in the correct place for prairie habitat; 72% placed the correct pictures of products for rainforest habitat

a. *Brief description of activity:*

Youth from three schools located in Allegheny County, high poverty communities and empowerment districts, were selected to participate in afterschool tutorial programs based on their risk for academic failure. Youth in two schools participated in a structured arts component (theater), and youth from the other school participated in an academic enrichment and support services program. The programs, which combine reading and math instruction, assist students in effecting social, attitudinal, behavioral, and cognitive changes. Programs focused on 4-H, nutrition education, and health and wellness. They included resiliency-building themes (cooperative

education, working as a team, problem solving, building positive relationships, etc.). Significant impact was achieved in all schools in the areas of attendance, behavioral referral, attitude, classroom participation, and PSSA scores as a result of the program.

b. Impact/Accomplishment:

- 78% of the students showed an increase in school attendance.
- Program participants achieved a 99% decrease in behavioral referral.
- All teachers reported moderate to high levels of classroom participation from the students who participated in the program.
- 78% of students who completed the assessment test increased at least one level in math and 72% increased one level in reading.
- 100% of the programs' student mentors graduated and went on to college.

a. Brief description of activity:

The goal of the Afterschool program in Chester County is to address the root causes of a variety of mental health difficulties and unhealthy behaviors that typically confront vulnerable youth, including drug and alcohol abuse, teen pregnancy, dropping out of school, etc. (for background information on this target population see Children, Youth and Families at Risk).

Extension has a longstanding collaborative relationship with COSECHA: Cultivating Community, a consortium of community organizations in the county. COSECHA membership include entities such as Intermediate Units (Even Start and Migrant Education programs), the public library, Girl Scouts, etc. A relationship also has developed with the Chester County Health Department office to increase and facilitate referral opportunities for Hispanic families.

The 4-H program serves as a key facilitating agent in creating positive change for service networks, for individuals, families and communities. Most recently, in collaboration with a professor at West Chester University, teacher education candidates and students in foreign language education—most of whom are Spanish majors—have been working as volunteers (representing in-kind services valued at \$42,000 a year for three years).

In 2006, \$78,932 was contributed to expand program services for 4-H program families. Of this, \$59,932 was awarded by 19 public and private investors, and \$19,000 of arts and craft supplies and books were donated.

b. Impact/Accomplishment:

- The number of youth served by extension staff increased by 50%, and the number of families served increased by 25%.
- 100% of the youth have gained life skills in self realization (respect, responsibility, creativity, reading, writing, self esteem, community involvement, etc.).

Summer Programs for Urban Youth

a. Brief description of activity:

Summer camp programs provide an opportunity for youth to learn through exploring their world and practicing team building, communication, and problem solving skills through positive relationships with adults. Two summer camp programs—Wacky Science and Cultural Arts—were delivered to 369 youth at more than six sites located in primarily urban areas of Montgomery County. The Wacky Science program was designed to be fun and interactive and to encourage students' interest in science and to teach important science basics. The Cultural Arts program—focused on Latino and African cultures—increases cultural awareness. Students are encouraged to appreciate, respect, and enjoy cultural diversity. Evaluations follow.

b. Impact/Accomplishment:

- The Wacky Science program pre- post-tests indicated that the average increase in knowledge was:
 - 56% in small groups with 15 or fewer participants and
 - 42% in larger groups with more than 15 participants.
- The Cultural Arts program end of program evaluation indicated:
 - 95% of the participants were able to correctly describe what culture is.
 - 91% of the participants were able to identify at least two examples of cultural items (e.g., jewelry and music).

c. Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.

d. Scope of Impact—State specific.

Planned Program – Build Leadership Capacity and Volunteer Management and Development of Volunteer Skills

KEY THEME – Leadership Training and Development

a. Brief description of activity:

The Learning Today Leading Tomorrow (LTLT) curricula is designed to help individuals develop and strengthen their personal leadership skills so they can play active and constructive leadership roles in their communities. The curricula focuses on developing and strengthening personal and interpersonal leadership skills, group and organizational leadership skills, and community leadership skills. All educators in the six regions have received training to use the curricula. The program was offered 138 times to more than 1,100 participants. Examples of the variety of audiences served include local and state extension board members, elementary school teachers, HUD subsidized housing families (parenting skills), and State Animal Response Team' (SART) board members. Extension educators across the state continue to receive training. Evaluation results from several offerings are noted.

b. *Impact/Accomplishment:*

- An agreement was reached with the Conservation Districts in two regions of the Commonwealth to conduct training for district leaders, line and clerical staffs, and district board chairs. Twenty-five conservation district managers and board members have completed the leadership trainings. Each session is tailored to meet the needs of participants at the local level.
- As a result of training sessions on effective meetings:
 - Respondents reported their knowledge about effective meetings increased by an average of 43% (N=60).
 - Respondents indicated that the importance of establishing meeting expectations increased by 47%.
 - 92% listed an item they would personally improve at their next meeting.
- Because of the challenges faced by agricultural research farm managers, the planning committee of the Northeast Society of Agricultural Research Managers requested that two LTLT presentations be offered at their annual meeting in 2006. Presentations included *Dealing with Change* and *Managing Conflict*.
 - The research farm managers rated the program an average of 4.6 out of 5, with 5 indicating that the program was the most valuable to their work.

c. *Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.*

d. *Scope of Impact—State specific.*

Planned Program – Community Capacity Building and Decision Making

KEY THEME—Community Development

a. *Brief description of activity:*

The employee skills training programs in rural northwestern Pennsylvania provide excellent examples of cooperative extension's community and workforce development efforts. A consortium comprising 11 manufacturing companies, cooperative extension, and higher education council was established. The aim is to provide pre-employment training to support permanent employment in the region. This is an employer-driven process; employers determine what training is needed.

The InVEST pre-employment program was initiated by cooperative extension to screen potential employees and provide informal education to these individuals. Students learn quality concepts, teamwork skills, communications, economics, health and safety, technology, feedback, and conflict management. Twenty-nine companies have received a workforce training assessment through cooperative extension, and training was provided to upgrade the skills of their workforce. Extension educators also provide training for incumbent workers in the areas of teamwork, economics, diversity, and sexual harassment.

b. *Impact/Accomplishment:*

- 54 students who graduated from the InVEST program were placed in jobs.

- 7 employers reported exceptional results from the students they hired through the InVEST program.
- Comments about the employees and the value of the educational programs are noted:
 - These employees know how to work as a team, they tend to be more willing and able to learn. [InVEST students]
 - This is a much better way to go. [InVEST students vs. temp agency hires] We have quality people coming in, and they have been trained with the soft skills necessary to get along with their co-workers, perform as a team, learn new skills, and understand our business concept.
 - Penn State Extension has done a great job providing training for our current employees. They have customized their teaching toward our audience and made our workforce more effective.
- One graduate of the InVEST pre-employment program now holds a job as the scheduler for a steel mill that employs over 250 people. He comments, “The instruction from Penn State was practical. I went into class looking for work, but I left the class with a lot of new skills and knowledge. I not only got the job I wanted, I got the tools to thrive in this job.”

a. *Brief description of activity:*

Several counties in Pennsylvania are in various stages of developing and implementing The Future of Agriculture (FOA) project in their communities. The core of the FOA project involves building a broad-based, diverse coalition of citizens interested in preserving and enhancing agriculture. Informed citizenry, effective leadership and viable local institutions are essential if small and rural communities are to develop the capacity to control their future. An example of one county’s activities are noted. A presentation of “Cumberland County Agri-business At-A-Glance” was offered to 145 attendees at the annual Farm/City banquet. Additionally, 63 municipal officials, farmers, and agency staff participated in the workshop “Effective AG Zoning.” The workshop goal was to educate municipalities on agricultural zoning as an option to protect farmland from incompatible uses that would adversely affect the long-term economic viability of the area.

b. *Impact/Accomplishment:*

- One valuable outcome of the workshop was the identification of the challenges to implementing effective agricultural zoning and agricultural preservation in the townships. Two of the major challenges were identified—sensitivity to property rights issues and the economic pressures facing farmers.
- As a result of the program, representatives from six of the ten municipalities participating indicated that they intended to pursue at least one of the agricultural zoning options presented.

a. *Brief description of activity:*

One of many examples of preparing the next generation of community leaders is the Youth Community Planning Program, an introduction to community planning which used an interactive planning/land use exercise. The program, offered in a rural

community, included a community survey/needs assessment that was completed by middle school students in the classroom and with community members.

b. Impact/Accomplishment:

- 98% (N=124) of the middle school students could list one thing they learned about planning for a community. One student responded “You have to think from all points of view to get the best community.”

c. Source of Federal Funds—Smith-Lever 3b&c, and State matching funds.

d. Scope of Impact—State specific and Integrated Research and Extension.

Planned Program – Consumer Horticulture

KEY THEME – Other

Consumer horticulture greatly impacts environmental quality, and as suburban growth continues, more and more land is occupied by housing which increasingly strains natural systems. In Pennsylvania, gardeners spend on average \$663 per household each year and contribute \$1.2 billion to the Pennsylvania economy. The landscape, nursery and greenhouse industries employ 38,000 people. The popularity of home gardening activities is expected to increase 20% over the next 10 years due to a 53% increase in gardeners, 45 to 64 years of age. Cooperative extension educators offer a variety of educational programs to assist consumers and green industry professionals.

a. Brief description of activity:

The Master Gardener Program, with nearly 2,000 Master Gardener volunteers, served more than 158,500 people this year. Master Gardeners continue to be involved in advanced training programs provided by extension educators and specialist in order to maintain their horticultural knowledge and provide high quality consumer education.

b. Impact/Accomplishment:

- Master Gardeners volunteered more than 90,000 hours representing cooperative extension in their communities. Volunteer time is valued at more than \$1.6 million.
- In one urban county, 43 Master Gardeners attended sessions designed to improve their diagnostic skills. 37 participants responded to the evaluation.
 - 92 % of respondents reported increased confidence in their ability to accurately diagnose plant problems.
 - 100 % of respondents intend to perform a site analysis prior to choosing new plants in order to select plants appropriate to the site.
 - 100 % of respondents reported they would use their knowledge to help clients choose pest resistant plants for their yards.
- 240 Master Gardener volunteers in the Capital and Southeast Regions received turf training. A written evaluation was completed after the class.
 - 93% of the volunteers (N=154) indicated they had increased confidence in their ability to answer questions about lawns after attending the class.

- 36% learned “a lot” and 49% learned “a great deal” from attending the class.

a. *Brief description of activity:*

Extension educators provide a variety of programs to professionals in the green industry. For example, weed control is a critical part of the success of horticultural enterprises. Fruit, vegetable, nursery, turfgrass, and landscape managers require an understanding of weed biology and control methods, especially herbicide use, in order to manage weeds successfully. More than 800 professional horticulturists attended 15 presentations (workshops, lectures, and demonstrations) to improve their knowledge and skills in weed management.

Green industry professionals also need training to stay current with best management practices and to maintain certifications. A five-day course was conducted to help prepare professionals for the PA Certified Horticulturist Training exam. Topics included soils, botany, landscape design, plant diseases, insects and mites, plant identification, turf, invasive plants, garden center operation, etc.

b. *Impact/Accomplishment:*

- Three of the fifteen weed management programs were selected for evaluation (n = 138). One hundred and four surveys were returned.
 - Participants indicated a 50 percent increase in knowledge gained as a result of the presentation/program.
 - 98% indicated they learned how to solve a weed problem.
 - 95% learned how to improve work efficiency
 - 93% learned a strategy to improve the profitability of their business
- 25 green industry professionals enrolled in the PA certification course. A pre- and post-course evaluation indicated knowledge level before and after as noted.
 - garden center area knowledge level: 56.3% before and 100 % after
 - pesticides and safety knowledge level: 43.7% before and 93.3% after
 - planting and pruning knowledge level: 81.2% before and 100% after

c. *Source of Federal Funds—Smith-Lever 3b&c, Multistate Extension and State matching funds.*

d. *Scope of Impact—State specific and Integrated Research and Extension.*

Stakeholder Input Process

During FY2006, Penn State Cooperative Extension developed and delivered extension educational programs based in large part on stakeholder input obtained during the comprehensive needs assessment of more than 7,000 citizens and stakeholders undertaken to develop the FY2000–04 Plan of Work, as described in our Plan of Work submission. A statewide needs assessment process was undertaken also in the spring of 2003 in preparation for the development in 2004 of the Penn State Cooperative Extension State Plans of Work. A widely advertised Web-based needs assessment survey was available to the general public, and extension educators in each county conducted focus groups to obtain stakeholder input concerning major programs to be conducted in the new Plans of Work. In addition, each county conferred with their local advisory groups such as County Extension Boards, Program Development Committees, and volunteers as they determined the local focus of their educational programs prior to the beginning of the FY2006 program year. In a similar process, extension faculty in academic departments conferred with their industry and producer stakeholder groups to determine appropriate discipline-related focus of Plan of Work activities for FY2006.

At the regional and state level, administrators conferred with and received suggestions on program direction from advisory groups such as the Pennsylvania Council of Cooperative Extension Associations, the Penn State Agricultural Advisory Council, the Pennsylvania State Council of Farm Organizations, and the County Commissioners Association of Pennsylvania. <<http://agcouncil.cas.psu.edu>>.

Penn State Cooperative Extension's stakeholder input process was very useful this year in refocusing/reaffirming priorities and in identifying emerging issues. For example, during the course of the FY2006 program year, critical issues and concerns emerged among our stakeholders, which had not been priorities during the needs assessment and subsequent program development processes. The College of Agricultural Sciences' priority to focus on air and water quality, particularly issues related to nutrient management, are the result of input from stakeholder groups.

Penn State Cooperative Extension encourages and supports broad-based representation of all facets of Pennsylvania's citizenry on all local, regional, and state advisory groups.

Program Review Process

No significant changes were initiated in Penn State Cooperative Extension's Program Review Process during FY2006 of the Plan of Work.

Evaluation of the Success of Multi and Joint Activities

Penn State Cooperative Extension educational programs and activities—single state, multistate, multidisciplinary, and integrated—are based on the critical needs identified in our comprehensive statewide needs assessment of citizens and on the ongoing feedback of our network of local, regional and state advisory and stakeholder groups. Additionally, each county monitors and records their success in reaching underserved and under-represented populations. Contacts reported statewide indicate Cooperative Extension's success in reaching underserved populations during FY2006. Analysis of the outcome and impact data continues to show very successful multi and joint program activities for all areas represented in the FY2000–06 Plan of Work.

Multi-State Activities

Penn State Cooperative Extension continues to collaborate with other states on important extension and extension/research activities. Since the implementation of the current plan of work, the director and associate directors have entered into discussions with their colleagues in other states to formalize agreements in support of both ongoing and new multistate cooperative programs. Fiscal support for Penn State Cooperative Extension's ongoing and new multistate extension educational programs has been realigned so that it is auditable to Penn State's appropriated Smith-Lever funds. Cooperative Extension has reached the estimate cost targets in the past. In FY2006, Cooperative Extension expenditures were \$1,272,576 nearly reaching the estimated cost target of \$1,400,000. (See Appendix A).

The Lake Erie Regional Grape Research and Extension Center and Management of Wildlife Damage are just two examples of ongoing multi-state activities that have consolidated states' efforts and which continue to grow, reaching wider audiences. While progress continues on many ongoing projects, new activities are being initiated which has resulted in an increase in the number of multistates efforts for FY2006. Documented impacts of multistate activities are noted in the brief summaries section of the report.

Integrated Activities

Penn State under President Graham Spanier, is dedicated to the goal of becoming “the premier university in the nation in the integration of high-quality teaching, research, and service.” Penn State Cooperative Extension and Penn State's Experiment Station continue in their commitment to integrating research and extension programming, fostering mutually beneficial interactions. Sixty-seven percent of all Penn State Cooperative Extension faculty, administrators and staff working at the University Park campus have joint extension and research responsibilities. These faculty and staff members conduct and support basic and applied research which informs and shapes extension programs. Joint appointments are, and will continue to be, the norm in the College of Agricultural Sciences.

One example of Penn State's integrated response to emerging issues relates to the major changes that occurred in nutrient management in Pennsylvania during 2005-06. New legislation was passed and new regulations were developed that directly or indirectly

impact all farms with animals in the state. Faculty members from several different departments in the College of Agricultural Sciences provided science based information and advice to policy and administrative personnel in the state government who were charged with implementing these changes. The technical aspects of the new law and regulations are based primarily on Penn State Cooperative Extension recommendations, such as those found in the *Penn State Agronomy Guide*. To date, nutrient management plans have been written for nearly 2,500 farms covering approximately 600,000 acres. Implementation of these plans is helping Pennsylvania meet water quality goals for the waters of the commonwealth and for the Chesapeake Bay (See Planned Programs, Goal 1). Another example is the PROSPER project, an innovative model for bringing scientifically proven prevention to communities to strengthen youth, families and communities. This successful research project, being implemented through collaborations with Penn State, Iowa State University and Michigan State University, has expanded to include new school districts in FY2006. (See Multistate Brief Summaries).

Funds supporting the extension portion of joint positions (\$2,809,272) total 30 percent of Penn State Cooperative Extension's Smith-Lever appropriation (See Attachment D).

Multidisciplinary Activities

All educational activities under Penn State Cooperative Extension's FY2000-06 Plan of Work were developed by multidisciplinary teams of faculty and field-based educators. Each of our Key Program Components has a multidisciplinary component. The recent establishment of the Environmental and Natural Resources Institute in the College of Agricultural Sciences is an example of efforts to enhance the effectiveness of our environmental work and promote greater collaboration among scientists within the college and across colleges at Penn State. Penn State Cooperative Extension continues as a major participant in University-wide integrated, multidisciplinary efforts such as the Penn State Children, Youth, and Families Consortium and the Environmental Consortium.

In addition, formalized agreements were forged between Penn State Cooperative Extension and other Penn State units (College of Medicine, College of Engineering, College of Health and Human Development, College of Earth and Mineral Sciences, College of Arts and Architecture, and Public Broadcasting, WPSX-TV) to provide multidisciplinary research and program support in critical educational program areas. One example is the significant threat that the entry of soybean rust in the U.S. poses to growers in Pennsylvania. A national pest management team developed educational programs and Web-based resources that provide valuable information to producers, and a coordinated scouting program is being conducted in conjunction with Pennsylvania Department of Agriculture and USDA-APHIS. A faculty member with a joint appointment between the College of Agricultural Sciences and the College of Earth and Mineral Sciences has been effective in providing national leadership to develop methods for producers to track the long distance movement of the disease. The Web-based soybean rust information network was developed by the faculty member in cooperation with a private weather data company and is the USDA/APHIS Public Soybean Rust Web Site.

MultiState Extension Activities Brief Summaries

Lake Erie Regional Grape Research & Extension Center

The Lake Erie Regional Grape Program (LERGP) is a regional, educational and research program between Penn State and Cornell Universities, and the grape industry. The educational component of the program is conducted by a four-member Grape Extension Team that provides programming in counties in Pennsylvania and New York.

During FY2006, the Grape Extension Team provided educational opportunities through the 14th Annual Lake Erie Regional Grape Growers' Conference, various meetings, workshops, and demonstrations. Research based information on all aspects of viticulture were offered to 775 clients at 26 meetings. Additionally, in response to potential challenges during the growing season, the Grape Extension Team has been holding weekly small group meetings across the region over the past few years. The meeting agendas are determined by questions and concerns of those attending. These informal meeting allow the team to provide a hands-on approach to implementing new research-based information across the grape belt on a variety of subjects.

The LEGBP team also provides pest management advice to growers throughout the season, which, if followed can result in substantial economic benefits for grape growers. While it is difficult to document the full monetary effects of the advice for all clients, four specific consultations with growers for the management of grape berry moth (GBM) were documented. Advice on three different management options were based on individual vineyard scenarios: 1) no insecticide application due to low pest levels (1 grower); 2) treatment of only border areas for GBM instead of the entire vineyard (2 growers); and 3) reducing the grower's intended insecticide rate by one half and treatment of only 25% of vineyard acreage (1 grower).

- These recommendations resulted in over 88% of the acreage (612 acres/689 acres) receiving no insecticide application with a savings of more than \$7,400 in pesticide costs for these farmers. Actual savings are higher if fuel and labor are included.

Natural Resource, Agriculture and Engineering Service Progress Report

As a funding partner of NRAES, Penn State Cooperative Extension faculty and field-based educators and stakeholders across the Commonwealth are entitled to a variety of educational resources to support or enhance programming efforts. The NRAES effort allows for collaboration on projects and activities between field-based educators, faculty, and stakeholders at participating universities.

Penn State, participating as a collaborator, providing both direct financial support and involvement of faculty and staff resources, allows the residents of the Commonwealth to receive the latest research and production practices information in four areas: horticultural production, dairy production, animal waste management, and consumer education while drawing on the expertise of faculty and staff at the 14 participating land-grant institutions.

NASULGC Budget and Advocacy—Penn State has participated as a member of NASULGC to retain the services of Fleishman Hilliard Associates to represent the policy positions of extension and agricultural research on budget and other legislative matters.

NASULGC Extension Program Resources—mandated assessment to support the work on behalf of the Extension System of Dr. James Wade and Ms. Linda Kay Benning. An important component is the receipt of information and funding possibilities available to enhance programming related to critical issues facing the Commonwealth.

NASULGC ECOP Assessment—to support the work of the extension committee on Organization and Policy through NASULGC.

NASULGC eXtension Initiative Assessment—to support development of eXtension. This initiative is led by ECOP of NASULGC to advance the science and practice of engagement and outreach of colleges and universities to people of the states they serve.

NASULGC Leadership Programs—a Penn State faculty member is involved in the Food Systems Leadership Institute, and a faculty member and an extension educator participated in Lead 21, designed to enhance and shape the future of the land-grant university system and higher education system by developing future leaders.

NELD North Central—two extension educators participated in this national extension leadership program.

MAAREC—The Mid-Atlantic Apiculture Research and Extension Consortium
Pennsylvania has taken the lead in an effort to establish a regional research and extension program to address the pest management crisis facing the beekeeping industry in the Mid-Atlantic region. A working group—with representation from the beekeeping associations, departments of agriculture, and land-grant universities New Jersey, Maryland, Delaware, Pennsylvania, and West Virginia—meets twice a year to identify research and extension priorities for apiculture in the Mid-Atlantic region. The USDA/ARS (Beltsville Bee Lab) also participates. Addition, Virginia has been invited and expects to join MAAREC as a participating state. In the past year the group has turned its attention to the expansion of the Africanized bee.

- MAAREC has developed a regional Africanized Bee Action Plan and is working to implement this plan.

Commercial Vegetable Guide Progress Statement

The Mid-Atlantic *Commercial Vegetable Production Recommendation Guide* is a cooperative effort of vegetable extension specialists from Delaware, Maryland, New Jersey, Pennsylvania and Virginia. These specialists participate in the annual revision and production of the guide. Over 8,000 vegetable growers use the guide to improve production in the Mid-Atlantic Region.

Administrative Multistate Efforts

Penn State Cooperative Extension administrators provide leadership to numerous regional and national committees and organizations. These organizations help coordinate extension programming and operations through professional agent and faculty associations, by conducting applied research, and by supporting policy initiatives within extension and colleges of agricultural sciences.

PROSPER Project

PROSPER (**P**ROmoting School/community-university **P**artnerships to **E**nhance **R**esilience) is an innovative model for bringing scientifically proven prevention programs to communities to strengthen youth, families and communities. The PROSPER project, a five-year collaborative research project, is being implemented through Penn State and Iowa State University. The project includes two successive groups of 6th grade students in 14 communities in Pennsylvania and 14 communities in Iowa. Seven communities in each state were randomly assigned to receive the PROSPER programming in 2003. Thus far, nearly 3,000 families have completed the Strengthening Families Program (SFP), one of the evidence-based programs offered through PROSPER, in 14 sites in Pennsylvania and Iowa. Over 11,000 students in grades 6 and 7 continue to participate in the study, either in SFP and/or a school-based evidence-based prevention curriculum.

During 2006, community teams—including school leaders, parents, community leaders, students, and health and social service providers—focused on the issue of identifying and securing local funding to sustain PROSPER programs. A total of \$369,000 in local and state grants were obtained for programming in existing PROSPER communities *and expansion to new communities*. Extension educators became involved in expansion of PROSPER to new school districts. In 2006-2007, PROSPER will be implemented in 18 new school districts. Additionally, nine extension educators are participating in a series of meetings to explore initiating PROSPER programming in their counties.

- According to recent project findings, PROSPER youth are less likely than their peers to have used drugs (marijuana and inhalants) in the last year compared to youth who are not in PROSPER.
- Research on PROSPER family interventions suggest that for every one dollar the community spends on prevention programming they are potentially saving \$9.60. This savings represents money that would have been spent on special education, mental health, and drug and alcohol treatment services. Because there is a lower need for the use of the court system and drug and alcohol rehabilitation services, evidence-based interventions like those used in PROSPER communities save money.

Plum Pox Virus (PPV)

Penn State Cooperative Extension continued its leadership role in collaborating with state and federal departments of agriculture, growers' associations, legislators and community members to develop and implement educational and research programs to educate growers, government officials and the general public about PPV and effective eradication methods. Growers continue to be supportive of the eradication program and are cooperating with Pennsylvania Department of Agriculture surveys and eradication activities.

Mid-Atlantic Regional Water Quality Program

This regional partnership among land-grant universities in Pennsylvania, Maryland, Delaware, Virginia and West Virginia, and CSREES, was developed to advance water quality protection and restoration efforts in the Mid-Atlantic by providing water quality science support, training, and education.

- A pamphlet, “A Primer on Water Quality Credit Trading in the Mid-Atlantic Region,” was developed to explain water quality trading programs. Made possible by the regional water quality partnership, it is co-authored by a Penn State faculty member and extension associate with partners from West Virginia University and the University of Maryland. <<http://agenvpolicy.aers.psu.edu>>

Water Quality Issues in Poultry Production and Processing

The objective of this project is to evaluate the impact of dietary management strategies to reduce the nitrogen and phosphorus concentration in poultry litter and manure and to evaluate the practical and economic potential of fermentation to preserve nutrients in farm mortalities. Results of this work is communicated to the Pennsylvania Department of Agriculture and to extension educators who conduct training.

Management of Small Grains

Pennsylvania continues to play an active role in leadership in the extension activities of this multistate project for small grain diseases east of the Rocky Mountains.

- Researchers in southern wheat growing regions communicate disease incidence and severities concerning economically important diseases that later spread across the U.S. in a northerly direction by means of spores or insect vectors. Early-season communication allows northern states to estimate potential risk of epidemics.

Soybean Diseases

Pennsylvania participates with other states, including those of the North Central Region which produces 80% of soybean grown in the U.S. Annual meetings are held to exchange reports on soybean diseases and soybean disease research.

- Soybean disease research at Penn State University focused on white mold (*Sclerotinia* stem rot), Soybean rust, and fungicide evaluation during the 2005 growing season.

Nutrient Management to Reduce PH and Nitrogen in Animal Waste

Research is being conducted to determine response of lactating dairy cows to dietary protein under various silage programs. A study consisting of 4 trials that varied the alfalfa to corn ratio to determine the effect of reducing dietary protein on milk production and nitrogen utilization in dairy cows was completed. Results have been included in extension communications to dairy producers.

- 17% protein in well-balanced rations may be sufficient for moderate-producing cows.

Management of Wildlife Damage in the Northeast

Wildlife species cause extensive damage to agricultural commodities, forest regeneration, and suburban landscapes. The Northeastern states are uniquely positioned to conduct research on the integration of the biological and social dimensions of wildlife damage management issues.

- In Pennsylvania, a movement study of deer hunters was completed. Hunters reported walking 2.5 times farther from roads that was evident from the GPS data. This information will be useful for evaluating impacts of changes in harvest regulations.

Controlled Environment Technology and Use

The goal of the committee is to develop or improve the theory and practice of controlled environment technology. The committee will foster a range of cooperative efforts and expects that its activities will continue to promote optimal and economical use of existing growth chamber facilities, while at the same time stimulate development and implementation of new technologies.

Northeast Pasture Research and Extension Consortium

The mission of the Consortium is to link livestock graziers and federal, state, land grant and private research and extension groups into partnerships that will identify, develop, coordinate and promote pasture research and extension leading to economically, socially and environmentally sound and sustainable grazing-based livestock production systems for the Northeast.

Mastitis Resistance to Enhance Dairy Food Safety

Bovine mastitis is the most costly disease currently affecting dairy cattle. While significant advances have been made in controlling some types of mastitis, the complex etiology of the disease and ongoing changes in dairy practices dictate that new and more effective methods for control and treatment be developed. Single site studies are often limited in terms of expertise and cattle numbers. This multistate project provides these advantages.

Agricultural Safety and Health

Agriculture ranks as one of the two most hazardous industries and pressure has increased to improve the safety record for agriculture. The committee produced a National Land Grant Research and Extension Agenda for Agricultural Safety and Health document that served as a catalyst to bring about awareness, to give guidance for the agricultural safety and health issues, and to advocate for funding priorities that address issues reported in the national agenda and identified by stakeholders inputs.

Rural Communities, Rural Labor Markets and Public Policy

In the new economy, knowledge and critical thinking are often the most critical component of the production process. Unfortunately, rural communities continued to be plagued by the out-migration of one of their most valuable assets—young workers with college degrees. This research focuses on the forces that influence the migration decisions of young, educated workers. This project examines the extent to which local governance and local government structure influence out-migration to help better understand how the political organization of rural communities influences decisions on staying or leaving.

- The results are useful to policy makers, as they suggest the importance of acting cooperatively, rather than competitively.

Multidisciplinary Evaluation of Fruit Tree Cultivars

New tree fruit cultivars are continuously being developed around the world. However, most land grant universities no longer have a critical mass of researchers addressing the regional and national needs for evaluating fruit cultivars. The objective of this committee would be to provide a means for scientists in diverse fields to gather and discuss the merits and liabilities of new tree fruit cultivars and to function as a repository and gathering group for new information and publications about tree fruit cultivars.

Use of Entomopathogens in Pest Management Systems

There is a need to accelerate the development and implementation of cost-effective, environmentally safe alternatives to chemical pesticides for insect control. The use of entomopathogens can provide another targeted tool for primary or secondary pests that will compliment the build-up of endemic natural enemies. Over the past five years of this project, significant multistate collaborations have been established addressing the development of entomopathogens for biological control of arthropod pests.

- Results of experiments at Penn State can be found at <http://TransToOrg.cas.psu.edu/>.

Rootstock and Interstem Effects on Fruit Trees

The aim of this project—designed to address a number of high-priority areas within the North Central Region—is to enhance economically and environmentally sustainable practices in temperate fruit production by focusing on rootstocks. Faced with a competitive international market, the demand for higher quality fruit and strong pressure to reduce chemical use, tree-fruit growers need to look to alternative sustainable management strategies. Outreach activities include electronic information transfer, written material for growers and numerous educational programs.

Use of Residuals in Agriculture in the Northeast

Use of residuals on agricultural lands is increasing in the Northeastern U.S. These materials have been used to supplement agricultural phosphorus and nitrogen sources, to adjust soil pH, and to enhance soil structure and tilth. A variety of concerns need to be resolved to ensure the long-term utility of residuals, as well as the preservation of the limited resources of high quality agricultural soils. Our research and extension activities provide important knowledge for decision-makers in the Northeast. The committee aims to avoid duplication of research in this area through coordination, collaboration, and communication.

Economic and Psychological Determinants of Household Savings Behavior

This interdisciplinary research project recognizes that saving is an economic decision made within an existing social context, influenced by life cycle demands and the psychological characteristics of the potential saver. The unique contributions of this cross-sectional study are characterizing saving behavior as a continuum and developing an index to measure that continuum and to examine the impact of both personality and financial resources as barriers to becoming a saver or to saving more.

Fruit and Vegetable Marketing Innovations and Demand Assessment

As the produce sector in the U.S. grows, markets are increasingly complex. There is considerable demand for models to be developed for estimating demand for many commodities. Producers, processors, and marketers/distributors benefit from production and marketing research outputs which enable them to improve management decisions and efficiency. Consumers benefit from a more efficient production-marketing system.

- In Pennsylvania, consumer research studies were conducted in metro-Philadelphia to determine consumer demand for and interest in fresh, in shell edamame, and edamame-based patties. There appears to be consumer interest in purchasing them from a supermarket.

Efficiency of Producing, Marketing and Managing Environmental Plants

The objectives of this project are to 1) evaluate alternative green industry plant production, establishment and maintenance systems; 2) evaluate regional competitiveness within the industry; 3) evaluate demand for plants, materials and services; and 4) evaluate the effectiveness of alternative merchandising techniques.

Western Regional Turfgrass Research

Increased urbanization has been accompanied by a rapid increase in the area of turfgrass, such as home lawns, commercial landscapes, parks, golf courses, recreational facilities, and other greenbelts. There is great demand for research information on turfgrass irrigation management, techniques of turfgrass culture, environmental impacts, and new turf cultivars. The goal of this project is to foster exchange of information of current research and extension activities and to promote cooperative efforts among turf programs in the region.

Carbon Sequestration and Distribution in Soils

Soil erosion results in a considerable economic loss to landowners because of reduced productivity of eroded soil, and to society at large because of degradation of surface water by sediment and sediment deposition, and emission of greenhouse gases into the atmosphere. Knowledge gained from the proposed research will contribute to a more quantitative understanding of agroecosystems on global C balance and increase to our understanding of the effects of erosional processes on the amounts and landscape distribution of C and organic matter.

Commercial Greenhouse Production Systems

The goal of this project is to make significant advances in greenhouse production by improving the utilization of water and nutrients with related reduction in negative environmental impact, developing a control strategy for natural ventilation of greenhouses, and improving the integration of automation, plant culture and environment into a cost effective, sustainable production system for vegetables, specialty and floricultural crops.

- A pilot project was initiated in Pennsylvania to help growers better conserve greenhouse heat. Greenhouse growers were selected by extension specialists in three different regions of the state and students in a Greenhouse Management class were involved in several training sessions as well as site visits to collect data. A final report

recommending conservation or management practices (unedited by the faculty) was delivered to each of the growers.

Migration and Dispersal of Agriculturally Important Biota

The aim of this project is to promote interdisciplinary research focused on the biotic and abiotic processes directly influencing migration and dispersal of biota, and to assist in developing management strategies for migratory and dispersing biota.

Improving Sweet Corn: Genetics and Management

The U.S. has long dominated the world sweet corn market, but U.S. leadership is being seriously challenged in both processed and fresh sweet corn. To expand consumption in both the U.S. and the important export markets, food and nutritional quality of the product must be improved. Another challenge is pest management to ensure high performance with minimal pesticide use. To keep the sweet corn crop viable, coordination of research efforts is required because publicly-supported sweet corn researchers are widely scattered across the country.

Production and Handling of Perennial Nursery Stock

Plant production, transition handling, and reestablishment of nursery stock continues to be challenging in light of new plant introductions and growing techniques. It is essential for researchers to understand past and current problems and constraints in order to design integrated research approaches to address issues facing perennial plant producers.

- Pennsylvania research has provided growers and landscapers with a list of landscape trees that are not susceptible to Asian longhorned beetle infestation. Additionally, they have evaluated two species for seed production, viability, and germination rate among cultivars as part of evaluating differences in their potential to become invasive.

Chemistry, Toxicity of Soil Residuals

Disposal of residual waste products is a problem that requires practical scientific information to determine if the residual constituents can be safely reused without harming the environment or unfavorably impacting nutrient and trace element pathways.

The group's work focused on the bioavailability of nutrients in manure or biosolids amended soils has focused on phosphorus availability in residuals amended soils.

- The University of Florida working in cooperation with Penn State University has found that total P content (Pt) and several soil test measures of 'plant available' P have proven to be unreliable measures of bioavailable or environmentally relevant P in biosolids and manures and in soils amended with the materials.

Multistate Evaluation of Wine Grape Cultivars

This research project will test the performance of clones of the major global cultivars and of new or previously neglected wine grape cultivars in the different wine grape growing regions within the U.S. This work will improve the competitiveness of U.S. grape growers and wineries by providing performance and quality information that is much needed for planting decisions.

Managing of Emerging Pests on Golf Courses

The maintenance of annual bluegrass on golf courses in the Northeast and Mid-Atlantic has become increasingly complicated by two emerging pests: the annual bluegrass weevil and anthracnose diseases caused by a fungus. The ABW is an insect of increasing concern—it is a notorious and damaging pest of close-cut annual bluegrass. Also, superintendents are struggling to control anthracnose diseases and often rely heavily on fungicides. This multistate effort will fill critical knowledge gaps in our understanding of the biology, ecology, and impact of ABW and anthracnose associated with annual bluegrass on golf courses.

Obesity: Assessment, Prevention and Intervention

Overweight and obesity have reached epidemic proportions in the United States. While children learn eating behaviors from adults and peers, there are relatively few studies examining the role of the family, schools, and communities in shaping and supporting behaviors leading to weight gain, loss, or maintenance. A multistate research approach can foster this type of transdisciplinary work. Bringing researchers with a wide range of expertise together will provide a platform for developing innovative, multidimensional methods for obesity assessment and will allow for increased resource capacity, including larger sample sizes from more diverse populations.

Managing Insects and Diseases of Landscape Plants

The geographic scale of insect and disease problems has broadened dramatically as the ornamentals industry has grown. This interdisciplinary committee provides a forum for stimulating regional research and, particularly, extension efforts. Committee members share state progress reports resulting in discussions among entomologists, plant pathologists and USDA-CSREE personnel on current landscape plant health issues.

Renewal of Agriculture of the Middle

The American food system has increasingly followed two new structural paths: while small-scale farm and food enterprises in many regions have thrived by adapting to successful direct markets which enabled them to sell their production directly to consumers, giant consolidated food and fiber firms have established supply chains that move bulk commodities around the globe largely to serve their own business interests. This has had a disastrous effect on independent family farmers—it has led to a disappearing “agriculture of the middle.” The main thrust of the project is to help these farms develop competitive alternatives to commodity agriculture/alternatives which can potentially be much more sustainable economically, socially and environmentally.

Community Tool Box

This toolbox provides accessible tools to local community and economic development (CED) practitioners, such as community leaders, newly elected officials, extension educators, and community technical assistance providers, to increase their knowledge about basic CED issues and be better equipped to assist in decision making and determining the future of their communities. Format, material, and tools have been developed jointly by faculty, extension educators, and other sources. The web site <www.cdtoolbox.net> is a joint collaboration between Cornell University and Penn State

University and is maintained by the Community and Rural Development Institute at Cornell. While primarily intended for rural communities, these community and economic development tools will help communities be empowered to improve residents' economic opportunity and quality of life.

Promoting a National Agenda for Agricultural Safety

National priorities for agricultural safety and health research and outreach were prepared by the NCR-197 committee on agricultural safety and health. This national agenda, which takes advantage of the strength of the land-grant university system, was promoted by a Penn State faculty member to national policy groups and organizations, advisory committees, and decision makers.

Enhancing Nutrient Efficiencies on Dairy Farms

In total, 20 to 30 selected dairy farms in the Monocacy watershed (Pennsylvania and Maryland) will be identified to participate in the project. To date, forage analyses and bulk tank milk urea nitrogen have been tested on 9 farms to evaluate their current status on phosphorus and nitrogen (protein). For the duration of the project, feed samples and milk samples will be collected and analyzed with the goal of monitoring variability. Educational programs and materials will be provided to increase participants understanding of herd nutrition and feeding related to phosphorus and protein nutrition.

Change Agent States for Diversity

The Pennsylvania Change Agent States for Diversity Catalyst Team continues to influence a broad range of extension initiatives and programs. The Extension Director's Initiative requires that every county staff member complete eight hours of professional development training addressing diversity issues. As a result, county directors are conducting specific diversity training sessions for their staff, county extension advisory committees, and program partners. A special professional development session, "Extension Reaching Out to Multicultural Communities: At Home and Abroad"—coordinated with Epsilon Sigma Phi—was held in four locations of the state reaching 200 extension educators. Additionally, extension is affecting local educational programming for the broader community of human service agencies. For example, a series of diversity workshops to help participants understand religions, family culture, and economic disparity was held in one county. Many counties continue offering farm management programs that successfully address the issue of managing Hispanic farm labor, focusing on communication, clarifying instructions, and updating and translating standard operating procedures. Mini-grants also were provided to counties that are addressing new diversity initiatives affecting children, youth, and families. Finally, the first fellow in extension's administrative leadership program completed the yearly internship, an internship dedicated to supporting diversity initiatives.

Putting YOUTH Back into Sports

This project addresses the impact of youth sports on communities and youth. The objective of the curriculum is to address how extension educators can help youth, parents, coaches, and communities understand what youth need from sports. As part an Illinois

Extension's Professional Development Workshop series, 24 educators received training on the Putting YOUTH back into Sports curriculum. Participants indicated they intend to

- approach our City Park and Recreation about training their youth league coaches.
- introduce the curriculum to the county agents in the state.
- discuss these ideas with community sports leaders, coaches and parents.

eXtension Horse Quest—National Equine Resource Team

This national team of equine experts includes a balance of adult and youth educators whose experience and content delivery methodology extend beyond the traditional classroom walls. The team will use internet-based technology and cooperation among multiple universities and equine organizations throughout the U.S. to deliver programs to a diverse clientele. The team recently identified several priorities and directions to pursue for maximum clientele impact.

National Grass-Fed Beef Conference

A Penn State faculty member is planning and will serve as conference coordinator for the conference, which will be held in Pennsylvania in 2007. Topics include animal health and well being, forage systems, and marketing. Participants will learn the latest technology for grass-fed beef production from producers and experts from around the world.

National Poultry Waste Management Symposium

Faculty members are serving on national planning committee for 2006 conference held in Arkansas in October. Program included regulatory updates, poultry production and poultry processing sessions related to issues such as manure management and processing water for discharge into waterways.

Mid-Atlantic Consortium Dairy Extension Inservice

This training program is specifically designed for dairy extension educators and includes cutting edge technical knowledge, case studies, and sharing information about innovative extension programs. A Penn State extension faculty member serves on the planning committee and several Penn State staff provide instruction.

National 4-H Wildlife and Forestry Events

Penn State Cooperative Extension continued its strong associations with the National 4-H Wildlife Habitat Evaluation Contest and the National 4-H Forestry Invitational in 2006. Prior to both national events, a state wildlife field day and a state forestry day were held for Pennsylvania youth. These events attracted over 200 participants with the themes of fisheries habitat and forest conservation. A Penn State extension educator served as co-chair of the invitational held in West Virginia and another served on the National Forestry Invitational Board of Directors.

- Ninety-seven 4-H members and coaches demonstrated skills in forest management that they learned at the event.

Farm Finance and Management Analysis Training

Farm Finance Analysis Training (FFAT) and Production Management Analysis Training (PMAT) courses were offered. The PMAT course includes basic production management

information that is applicable to all producers as well as an innovative self-assessment Production-Impact Plan to improve cash flows.

Fruit Production Innovations – A Systems Approach

An in-depth workshop on risk management strategies to increase orchard profitability and sustainability was offered to 120 fruit growers and related industry representatives. Topics included orchard intensification, economic comparisons of orchard systems, rootstocks, quality and productivity, and a pruning demonstration in English and Spanish. Participants indicated that the educational program would impact transitions in their operations in a number of significant ways, including:

- planting orchards at higher densities, researching the V-trellis for peaches, modifying pruning to maximize light interception, and using the computerized economic spread sheet program for targeting apple production.

National 4-H Embryology

A Penn State extension specialist serves as the National 4-H Embryology project leader and webmaster. Additionally, he serves as 4-H Curriculum System design team leader for Embryology in classroom and serves on the National 4-H Poultry and Egg Conference Executive Committee. This experiential science-based curriculum meets several National Science Standards.

- More than 39,000 students participated in the program in Pennsylvania.
- 80 teachers in one six-county region returned project evaluations: 78 agreed that 4-H Embryology was a useful addition to the regular teaching unit.

Beef Carcass Data Collection

Beef producers, land grant universities, beef improvement associations and agribusiness require more detailed carcass data than a slaughterhouse can provide. Producers who want to improve carcass quality and beef cattle management require more detailed information on such carcass traits as marbling score, rib-eye area, yield grade, kidney fat, quality grade, etc. Extension educators collaborated with extension personnel at several universities, providing carcass data on research projects and beef improvement programs. Additionally, individual producers from several states requested data on their cattle in order to implement changes in their management.

- Detailed carcass information was collected on 1,040 head of market cattle and returned to producers, universities, and beef improvement associations.

Carcass Composting

Extension educators continue to coordinate mortality composting education and research with the Cornell Waste Management Institute. Additionally, an educator served as co-coordinator of the National Carcass Disposal Symposium held in Maryland. More than 190 people attended the meeting.

Beef Cattlemen Program

Extension educators from Penn State and Cornell collaborated with local cattlemen's associations to plan and conduct educational programs for 115 beef producers. The event included tours of a beef processing plant and a 50 cow beef operation as well as

presentations on marketing and meat quality assurance. A Natural Resource Conservation Service representative also discussed available federal and state programs for farmers.

Tri-State Tillage Conference

The annual Tri-State Conservation Tillage Conference focuses on agricultural practices for improving yields, soil erosion protection, and economic profitability. 140 people attended the meeting, and 59% of the participants had attended at least one previous conference.

- 82% (27 of 33) of participants reported they made at least one significant change in their management practices.
- 42% (14 of 33) of the participants attending these annual no-till meetings indicated they have increased the number of no-till acres as the result of attending.

Small Farm Cluster

Small farms organized or clustered around particular products, practices or socioeconomic groups have immense potential for improving the vitality of communities in rural America. This multistate project includes three faculty members from Penn State and faculty from five surrounding states. Faculty are working with eight different clusters of farms in the region and to date have conducted over 50 interviews with various members. As part of this effort, the group expects to identify ways of enhancing the delivery of extension information and knowledge. This is the first year of a three-year project.

Christmas Tree Meeting

At the request of extension educators from a neighboring state, an educational meeting was offered to 87 Christmas tree growers from five counties in New York. Producers learned about shearing methods, proper use of different shearing tools and safety precautions using these tools.

- 93% (N=53) of those responding to a post program evaluation indicated they learned at least one new practice that they plan to adopt in their operations.

Small Farm Expo

The Northeast Small Farm Expo is a collaborative effort of partners from New Jersey and New York, and attracts over 1,000 participants each year. More than 55 workshops are offered on a variety of topics: rural living, natural resources, commercial horticulture, business, risk management, equine and livestock. Exhibitors also provided demonstrations on products and services.

Mid-Atlantic Direct Marketing

The annual Mid-Atlantic Direct Marketing conference, a 5-state effort, attracted more than 640 participants from 13 states in 2006. Attendees have an opportunity to enhance their knowledge of starting, managing, and growing a retail farm marketing enterprise. The conference included interactive, intensive workshops, concurrent educational sessions, trade show with retail farm vendors, and a tour of premier retail farm markets.

- Pennsylvania was the host state for the conference in 2006.

4-H Youth Exchange Program

Extension educators organized an exchange trip for Pennsylvania 4-H youth who spent a week with 4-H youth in Kansas learning about their history, culture, and state government and visiting 4-H camps to learn about innovative projects. Twenty-four youth from Pennsylvania and 19 youth from Kansas participated in the program.

Regional Farmers' Market Initiative

A Penn State extension farmers' market project has developed over the past two years into a regional project, which includes producers, vendors, market managers, and educators from southwestern Pennsylvania and Northern West Virginia. Educators collaborated to conduct four trainings on marketing, merchandising, and building displays for farmers' markets in cities in both states. This project has led to the development of a NESARE proposal.

Arnot Mall Display and Expo

Educators from Cornell Cooperative Extension organized this three-day "Celebration of Agriculture" event with assistance from several Penn State educators and farm agencies and businesses from both states. The event featured direct marketing operations (maple syrup producers, garden centers, cheese makers), the 4-H program, Master Gardeners and displays with farm animals. Area farmers were also available to talk to shoppers.

Natural Gas and Oil Leasing

More than 1,500 landowners attended informational and public meetings on issues related to natural gas and oil leasing. This is of particular interest to landowners in the Northern Tier of Pennsylvania and the Southern Tier of New York where leasing agreements have been misunderstood.

- Landowners received an estimated additional \$2 million and improved leases as a result of participation in educational programs.

Keystone International Livestock Expo

This regional livestock show is sponsored by the Pennsylvania Livestock Association. One highlight of the expo is the Junior National Swine Registry show in which more than 200 youth exhibit a purebred gilt, compete in a skillathon contest, and are placed in showmanship. Another highlight is the Stockman's contest in which nearly 300 4-H and FFA members compete. Several faculty members and county-based educators serve in various capacities for this event.

Livestock Evaluation Program

This testing program, sponsored by the Pennsylvania Department of Agriculture, provides an unbiased evaluation of animal performance in a common environment and provides a source of genetically-evaluated bulls for the commercial beef industry for Pennsylvania and the Northeast. Penn State faculty members serve in an advisory capacity for the program.

- 136 bulls from 94 farms were consigned and 90 were sold during the year.
- Average sale prices (more than \$2,000 per bull) were at records levels in a reflection of high general cattle prices.

Connecting Rural Communities

Cooperative extension educators from Penn State and the University of Minnesota developed an on-line guide, “Connecting Rural Communities” (www.connectingcommunities.info), to enhance the use and adoption of information technology in rural communities. The guide is designed to help extension educators and community leaders understand about connected communities and their potential, conduct assessments to identify gaps in a community’s connectedness, and design and implement projects that increase connectivity in the community. Twenty two extension faculty and staff from 11 states were introduced to Connecting Rural Communities at a two day training June 2006. The guide is being used by extension faculty and staff in five states to help community leaders understand how information technology can improve the future economic and social well-being of their communities.

Dairy Practices Council

The Dairy Practices Council is a non-profit organization of education, industry and regulatory personnel concerned with milk quality, sanitation, and regulatory uniformity. They develop and disseminate educational guidelines for producers on the production/ processing of milk and manufacturing of dairy products.

Incubation Workshop

This week-long, national/international workshop was instituted in 2006 by a Penn State faculty member in the Department of Poultry Science and a company representative from The Netherlands. The focus of this interactive workshop is to provide hatchery managers the basics of embryology, physics of heat transfer, hatchery design and management, disease control and sanitation, and hands-on exercise experiences to train them to evaluate hatcheries. Attendees from four countries, Wisconsin, and Pennsylvania participated in 2006. The workshop will be conducted twice a year in the future.

Evaluating Meat Goats for Market

Forty-five producers attended a hands-on workshop focused on goat marketing issues and evaluating goats for health, growth, selection grade, etc. The workshop was organized by Penn State and Cornell extension educators and a Meat Goat Producers’ Association. As a result of attending, producers will improve the marketability of their goat herds.

Feeder Calf Pool and Marketing

The Feeder Calf Marketing program (with West Virginia Cooperative Extension) allows small beef producers to sell their cattle in more competitive markets. The number of calves marketed in this year’s pool increased from 187 to 356 calves.

- Producers marketed calves at two delivery dates realizing a \$.07/lb premium and a \$.30/lb premium.
- As a result of creating an additional deliver date, 115 calves were marketed and producers recognized an additional \$15,375 income.

Athletic Field Safety and Maintenance

Educational programs provided information on athletic field safety and maintenance to high school athletic field managers, landscapers, lawn care professionals, professional

field managers, and golf course superintendents in the New England states, New Jersey, Virginia and Nebraska. Participants learned about new varieties of grass, maintenance practices to make fields safer, and how to conduct a field-safety audit.

Maple Syrup Production

Extension educator collaborated with educators at Cornell University to organize and present information at the Twin Tiers Maple School, and he offered an educational program on maple syrup production for University of West Virginia Extension Forestry.

High Tunnel Production Training

Extension educators provided educational training to growers and Master Gardeners on how to manage demonstration high tunnels. Master Gardeners also received educational training on a variety of current topics.

Southeast Floriculture Variety Trials

More than 120 poinsettia varieties, entered by five international breeders, and 100 fall planted pansy cultivars were displayed the 9th Annual Southeast Pennsylvania Poinsettia and Pansy Trials/Seminars. Growers from the four-state Mid-Atlantic region attended.

- 80% of respondents indicated that the trial evaluations helped them select additions to their plant growing list.
- 45% (n=62) of participants indicated they will change practices as a result of attending.

Cooperative Business Development

An extension educator serves as president of the Keystone Development Center Board of Directors. This mid-Atlantic non profit organization, encompassing three states, organizes business, service or other types of cooperatives for individuals, or groups interested in working together to accomplish economic or public services for rural communities first, then urban communities.

Crops at Risk

During the first year of this study of alternative insect management strategies for vineyards, traditional approaches for control of grape berry moth were compared. Preliminary results from the model based timing of insecticide applications show considerable promise. The studies will be repeated in 2007.

Extension Disaster Education Network (EDEN)

EDEN is a collaborative multistate effort by Extension Services across the country to improve the delivery of services to citizens affected by disasters. This effort serves primarily Extension agents and educators by providing them access to resources on disaster mitigation, preparedness, response, and recovery that will enhance their short- and long-term programming efforts. In addition to development for extension, the Penn State program coordinator is involved in regional and national activities and will serve as chair-elect of EDEN for 2006-08.

Integrated Research and Extension Activities

Penn State's College of Agricultural Sciences, Penn State Cooperative Extension, and Penn State's Experiment Station have a long-standing commitment to integrating research and extension activities at Penn State. At the dean's level, each associate dean has responsibility for cross-functional initiatives and activities. Each of the 12 academic department heads has an appointment split evenly between extension, research, and resident education. The dean, associate deans, academic department heads, director and associate director of cooperative extension, and director of the experiment station meet regularly to discuss current and future issues in integrated and extension programming.

The vast majority of faculty with research responsibilities in Penn State's College of Agricultural Sciences also have appointments in either extension or teaching, fostering mutually beneficial programmatic interactions. These faculty members conduct basic and applied research, along with their colleagues, which inform and shape extension programs. This research, in turn, is shaped by extension programs. Of the 341 faculty, staff and administrators at University Park with extension appointments, 230 are supported partially by Smith-Lever and research funds. Funds supporting the extension portion of joint positions (\$2,809,272) total 30 percent of Penn State Cooperative Extension's Smith-Lever appropriation (See Attachment D).

For example, corn silage is an important part of the dairy feed industry with production in Pennsylvania valued at \$185 million dollars. Several hybrid testing programs were developed at the state and county level to provide producers with feedback on hybrid performance and to provide seed companies with targets for hybrid performance. If, through hybrid selection, producers could improve corn silage yield performance by just 2%, this would result in \$3.7 million annually to Pennsylvania corn silage producers. Some hybrids in the tests yield 11-12% higher than the average entry. Our relationship with a key dairy producer organization and a number of seedsmen in the state has led to the continued development of hybrids that are screened for high yields and quality in silage production.

Entries into the statewide program have increased by approximately 20% per year for the last several years, with 159 hybrids entered in 2006. Two producers who based their entire production on our data provide one example. A 5-10% improvement in performance through this hybrid selection on the 400 acres produced by just these two cooperators would result in \$8,000-16,000 benefit. The silage evaluations conducted across the state have provided data to a number of small Pennsylvania seed companies, which has led them to shift their hybrid selections and marketing programs. Additionally, several seed companies have reported increased sales due to the independent data we provide. (Refer to Research Report, Goal 1, Planned Program: Improving Corn Silage, Wheat and Barley Production in Pennsylvania)

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)**

Institution: Pennsylvania State University

State: Pennsylvania

Check one: **Multistate Extension Activities**
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

Actual Expenditures

| Title of Planned Program/Activity | FY 2006 | | | | |
|--|----------------|--|--|--|--|
| Lake Erie Regional Grape Research & Extension Center | 101,247 | | | | |
| Natural Resource, Agriculture & Engineering Service | 33,473 | | | | |
| NASULGC Budget and Advocacy | 22,435 | | | | |
| NASULGC Extension Program Resources | 5,803 | | | | |
| NASULGC ECOP Assessment | 8,960 | | | | |
| NASULGC eXtension Initiative Assessment | 73,960 | | | | |
| NASULGC Leadership Programs | 42,575 | | | | |
| NELD North Central | 10,400 | | | | |
| Mid-Atlantic Apicultural Research & Extension Consortium | 22,313 | | | | |
| Commercial Vegetable Guide | 9,747 | | | | |
| Administrative Multistate Efforts | 51,818 | | | | |
| PROSPER Project | 121,186 | | | | |
| Plum Pox Virus | 32,569 | | | | |
| Mid-Atlantic Regional Water Quality Program | 57,195 | | | | |

Continued on next page

 Director *Dennis Johnson* Date 3/30/07

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)**

Institution:

Pennsylvania State University

State:

Pennsylvania


Check one: **Multistate Extension Activities**
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

(continued from previous page)

Actual Expenditures

| Title of Planned Program/Activity | FY 2006 | | | | |
|---|----------------|--|--|--|--|
| Water Quality in Poultry Production & Processing | 17,817 | | | | |
| Management of Small Grains | 6,907 | | | | |
| Soybean Diseases | 6,907 | | | | |
| Nutrient Mgmt. to Reduce PH and Nitrogen in Animal Wastes | 6,318 | | | | |
| Management of Wildlife Damage in the Northeast | 29,547 | | | | |
| Controlled Environment Technology & Use | 4,327 | | | | |
| Northeast Pasture Research & Extension Consortium | 3,715 | | | | |
| Mastitis Resistance to Enhance Dairy Food Safety | 25,897 | | | | |
| Agricultural Safety & Health | 6,512 | | | | |
| Rural Communities, Rural Labor Markets and Public Policy | 7,825 | | | | |
| Multidisciplinary Evaluation of Fruit Tree Cultivars | 5,637 | | | | |
| Use of Entomopathogens in Pest Management Systems | 5,067 | | | | |
| Rootstock & Interstem Effects on Fruit Trees | 23,613 | | | | |
| Use of Residuals in Agriculture in the Northeast | 8,102 | | | | |

Continued on next page

 Director  **Date** 3/30/07

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)**

Institution:

Pennsylvania State University

State:

Pennsylvania

Check one:


- Multistate Extension Activities**
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

(continued from previous page)

Actual Expenditures

| Title of Planned Program/Activity | FY 2006 | | | | |
|---|----------------|--|--|--|--|
| Economic & Psychological Determinants of Savings Behavior | 16,884 | | | | |
| Fruit & Vegetable Marketing Innovations | 12,149 | | | | |
| Effects of Producing, Marketing & Managing Environmental Plants | 12,149 | | | | |
| Western Regional Turfgrass Research | 8,467 | | | | |
| Carbon Sequestration and Distribution in Soils | 6,970 | | | | |
| Commercial Greenhouse Production Systems | 10,890 | | | | |
| Migration and Dispersal of Agriculturally Important Biota | 8,390 | | | | |
| Improving Sweet Corn: Genetics and Management | 7,405 | | | | |
| Production and Handling of Perennial Nursery Stock | 7,991 | | | | |
| Chemistry, Toxicity of Soil Residuals | 8,102 | | | | |
| Multistate Evaluation of Wine Grape Cultivars | 18,912 | | | | |
| Management of Emerging Pests on Golf Courses | 8,829 | | | | |
| Obesity: Assessment, Prevention and Intervention | 8,013 | | | | |
| Managing Insects & Diseases of Landscape Plants | 5,467 | | | | |

Continued on next page

 Director  **Date** 3/30/07

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)**

Institution:

Pennsylvania State University

State:

Pennsylvania

Check one:

- Multistate Extension Activities**
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

(continued from previous page)

Actual Expenditures

| Title of Planned Program/Activity | FY 2006 | | | | |
|---|----------------|--|--|--|--|
| Renewal of Agriculture of the Middle | 16,264 | | | | |
| Community Tool Box | 1,737 | | | | |
| Promoting a National Agenda for Agricultural Safety | 4,682 | | | | |
| Enhancing Nutrient Efficiencies on Dairy Farms | 2,943 | | | | |
| Change Agent States for Diversity | 25,205 | | | | |
| Putting YOUTH Back into Sports | 8,121 | | | | |
| eXtension Horse Quest | 18,696 | | | | |
| National Grass-Fed Beef Conference | 7,236 | | | | |
| National Poultry Waste Management Symposium | 8,906 | | | | |
| Mid-Atlantic Consortium Dairy Extension In-service | 3,529 | | | | |
| National 4-H Wildlife and Forestry Events | 13,189 | | | | |
| Farm Finance and Management Analysis Training | 52,017 | | | | |
| Fruit Production Innovations – A Systems Approach | 7,879 | | | | |
| National 4-H Embryology | 9,932 | | | | |

Continued on next page

Director



Date 3/30/07

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)**

Institution: Pennsylvania State University

State: Pennsylvania


Check one: **Multistate Extension Activities**
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

(continued from previous page)

Actual Expenditures

| Title of Planned Program/Activity | FY 2006 | | | | |
|--|----------------|--|--|--|--|
| Beef Carcass Data Collection | 7,479 | | | | |
| Carcass Composting | 5,668 | | | | |
| Beef Cattlemen Program | 3,135 | | | | |
| Tri-State Tillage Conference | 7,834 | | | | |
| Small Farm Cluster | 8,706 | | | | |
| Christmas Tree Marketing | 2,983 | | | | |
| Small Farm Expo | 17,289 | | | | |
| Mid-Atlantic Direct Marketing | 11,037 | | | | |
| 4-H Youth Exchange Program | 1,740 | | | | |
| Regional Farmers Market Initiative | 3,303 | | | | |
| Arnot Mall Display and Expo | 5,871 | | | | |
| Natural Gas and Oil Leasing | 3,135 | | | | |
| Keystone International Livestock Expo | 19,494 | | | | |
| Livestock Evaluation Program | 12,471 | | | | |

Continued on next page

 Director  **Date** 3/30/07

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)**

Institution:

Pennsylvania State University

State:

Pennsylvania

Check one:

- Multistate Extension Activities**
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

(continued from previous page)

Actual Expenditures

| Title of Planned Program/Activity | FY 2006 | | | | |
|---|------------------|--|--|--|--|
| Connecting Rural Communities | 14,771 | | | | |
| Dairy Practices Council | 7,551 | | | | |
| Incubation Workshop | 4,355 | | | | |
| Evaluating Meat Goats for Market | 2,834 | | | | |
| Feeder Calf Pool and Marketing | 6,111 | | | | |
| Athletic Field Safety and Maintenance | 2,507 | | | | |
| Maple Syrup Production | 6,534 | | | | |
| High Tunnel Production and Master Gardener Training | 7,334 | | | | |
| Southeast Floriculture Variety Trials | 5,634 | | | | |
| Cooperative Business Development | 5,179 | | | | |
| Crops at Risk | 8,869 | | | | |
| EDEN Multistates Efforts | 17,926 | | | | |
| TOTAL | 1,272,576 | | | | |

 Director 

Date 3/30/07

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

(Attach Brief Summaries)

Fiscal Year: 2005 2006

Select One: Interim Final

Institution: Pennsylvania State University

State: Pennsylvania

| | Integrated Activities (Hatch) | | Multistate Extension Activities (Smith- Lever) | | Integrated Activities (Smith- Lever) | |
|---|---|---|---|---|---|---|
| <u><i>Established Target %</i></u> | | % | <u>25%</u> | % | <u>25%</u> | % |
| <u><i>This FY Allocation (from 1088)</i></u> | | | <u>\$9,257,206</u> | | <u>\$9,257,206</u> | |
| <u><i>This FY Target Amount</i></u> | | | <u>\$1,272,576</u> | | <u>\$2,809,272</u> | |
| Title of Planned Program Activity | | | | | | |
| <u>See Appendix A</u> | | | <u>1,272,576</u> | | | |
| <u>See Integrated Research and Extension Activities</u> | | | | | <u>2,809,272</u> | |
| Total | | | <u><u>\$1,272,576</u></u> | | <u><u>\$2,809,272</u></u> | |
| Carryover | | | | | | |

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



Director

3/30/2007

Date

ATTACHMENT D