

Penn State Cooperative Extension
PLANS OF WORK
FY2000-04

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Planned Programs

Goal 1

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

Goal 1

#1. Statement of Issue

Penn State Cooperative Extension conducted a statewide needs assessment in the summer of 1998 to prepare for developing the new Penn State Cooperative Extension Plans of Work. During the course of this process (described in more detail in the "Stakeholder Input" section of this plan), about 7,000 citizens throughout the Commonwealth were asked to identify the short-term and long-term needs for extension educational programming related to an agricultural system that is highly competitive in a global economy. Special attention was paid to contacting members of groups who might be considered "underserved." Needs assessment participants across the state identified these major needs for Goal 1:

- Sound business management practices to achieve greater agricultural profitability and sustainability.
- Better understanding and use of agricultural marketing systems (e.g., pricing, futures, hedging, advertising).
- Adoption of existing and new technologies and production management alternatives for increased agricultural efficiency and profitability.
- Individuals at all levels within the food and fiber system (cooperatives, agricultural organizations, producer and processor groups) need enhanced leadership development.
- Improvement of product quality.
- Educational programs related to animal health/disease issues
- Need to explore expansion, specialization, and/or diversification within industries.
- Need for improved understanding about the food and agricultural system, the forces of change and likely implications from both producer and public perspective.
- Need to support all models of agriculture—sustainable, organic, conventional, etc.—to promote environmentally, economically, and socially sustainable farming and food systems.
- Impact of public policy and regulations on achieving global competitiveness.
- Education of those engaged in public policy making to maintain agriculture in Pennsylvania.
- Increased understanding of ethical issues related to biotechnology in food and fiber production.

The success of Pennsylvania's largest industry, the food system, depends greatly on the continued efficient and cost-effective production of animal and plant products. High quality ornamental and green industry products are also in increasing demand, along with the services associated with their care. In the past, the only demand on producers was to efficiently produce a low-cost and high quality food supply.

Managers in our agri-food system now face an increasingly complex array of managerial tasks and decisions. Increased economic globalization and a reduced role of government in the

agricultural sector have led to increases in the price risk faced by agri-food systems businesses. Consumers have a greater interest and stake in agricultural practices through environmental and food safety regulation. Rapidly changing technology, production alternatives, and labor supply situations increase the number and complexity of the daily and strategic decisions agri-food system managers must address. To remain competitive in an evolving business environment, agri-food system managers need adequate business skills to acquire necessary information, make rational economic decisions, and chart strategy for their businesses.

Society is questioning whether our agricultural production system is sustainable in its present form. Sustainable agricultural production practices and technologies must be profitable, environmentally sound, and consistent with society interests. If production agriculture in Pennsylvania is to remain a viable and strong industry, returning economic benefit to the Commonwealth, it must adopt appropriate new technologies and new management principles, as well as evaluate fundamental structural changes in the business. To address this situation, Penn State Cooperative Extension will focus on several areas of sustainable cropping systems, educating producers, growers, agribusiness, the green industry, and crop consultants about how to make their businesses more profitable and sustainable.

Public concern regarding livestock production has intensified in recent years. Hog production appears to draw the most 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. Inappropriate handling of manure from any livestock enterprise can lead to contamination of ground or surface water. And in some circumstances, communities can face additional challenges, such as loss of property value, change in neighborhood aesthetics, or increased problems with traffic and safety. Despite these ongoing concerns, many communities continue to thrive next to major livestock producing areas in Pennsylvania. The absence of conflict in these communities may be partly attributable to a historical presence of livestock production. As well, livestock and poultry producers have been increasingly proactive in adopting best management practices in regard to manure handling and odor and fly control.

There remains much to be done, from both a public and agricultural perspective. The public often relies on sensational and exaggerated reports in the media to form their opinions about animal agriculture. This warrants increased educational efforts. Furthermore, much of the farming community has not yet developed strategies for minimizing odor emissions, and for optimizing manure use. We need to help producers adopt best management practices, not only to improve public opinion, but to protect and preserve the environment. To address these needs, Penn State Cooperative Extension will offer education and information about the impacts that large livestock operations have on communities. Programs for livestock producers will focus on manure and dietary management strategies aimed at reducing or stabilizing waste nutrients, as well as manure odor control.

As part of the educational programs delivered under this goal, Penn State Cooperative Extension will also provide timely information about changing marketing conditions and shifting

Goal 1

government policies and regulations and will educate ag sector business owners and managers about alternative market outlet opportunities available locally, regionally, nationally, and internationally. We will also provide educational programs and materials on a regular basis to agriculture-dependent business owners, managers, and employees on changing marketing conditions and government policies and regulations affecting the ag sector.

#2. Performance Goals, Output and Outcome Indicators

Penn State Cooperative Extension has selected the following performance goals and associated output outcome indicators to measure our success in conducting educational programs related to Goal 1.

Performance Goal: Clientele will improve their ability to operate agri-food system enterprises profitably and sustainably.

Output indicator - number of participants in programs related to profitability and sustainability of agri-food system enterprises.

Outcome indicator - number of participants who demonstrate they have increased their knowledge and skills related to profitably and sustainably operating their agri-food business.

Performance Goal: Clientele will improve their agricultural productivity and efficiency, and knowledge of pertinent FQPA regulations.

Output indicators:

number of participants in programs related to production management strategies to enhance agricultural productivity or efficiency.

number of participants in programs related to the Food Quality and Protection Act.

Outcome indicators:

number of participants who demonstrate they have increased their knowledge and skills so they can improve their agricultural productivity and efficiency.

number of participants who demonstrate they have increased their knowledge of the FQPA and/or the skills to incorporate FQPA principles and practices into their management practices or educational programming.

Performance Goal: Clientele will increase their knowledge and skills to manage animal waste and nutrients.

Output indicator - number of participants attending programs related to animal waste and nutrient management.

Outcome indicator - number of participants who demonstrate increased knowledge and skills to manage animal waste and nutrients.

Goal 1

#3. Key Program Components

The Penn State Cooperative Extension educational program delivered under Goal 1 during FY2000-04 will include three key program components:

Operating Agri-Food Systems for Profitability and Sustainability. This key program component includes educational curricula relating to business skills; improving the ability of Pennsylvania producers to understand and use marketing systems; and strategies to enhance agribusiness competitiveness.

Agricultural Productivity and Efficiency. This key program component includes educational curricula relating to improving animal production; improving agronomic production; improving horticulture and green industry production systems; and general production agriculture.

Animal Waste and Nutrient Management. This key program component includes educational curricula relating to nutrient management; manure and dietary management strategies to reduce nutrient excretions; odor control; and public policy and the impact of animal agriculture.

#4. Internal and External Linkages

In developing new programs and delivering our existing extension educational programs, Penn State Cooperative Extension has forged strong linkages across departments within our own College of Agricultural Sciences, with faculty and staff in other colleges and units at Penn State, and with faculty and staff at universities and organization beyond the Commonwealth of Pennsylvania's borders. Some examples of these internal and external cooperative activities include:

Seven multi-disciplinary Plan of Work management teams comprised of both faculty from a variety of disciplines and agents from a number of counties developed the educational program included under Goal 1 and will contribute to the ongoing management of this program.

Linkages with both basic and applied research through faculty joint appointments and the integrated multi-functional responsibilities of all department heads and deans in research, resident education, and extension.

Penn-Jersey Ag Committee involves agents from Penn State Cooperative Extension's Northeast and Southeast Regions with agents in New Jersey border counties who plan, implement, and evaluate a variety of agricultural programs throughout the year.

Tri-State Tillage Conference involves agronomy agents in Penn State Cooperative Extension's Northwest and Southwest Regions with colleagues from Ohio and West Virginia.

Bi-State Horticultural Meetings involve agents from counties in Penn State Cooperative Extension's North Central Region with colleagues from contiguous counties in New York state.

Commercial Floriculture Meetings are coordinated by agents from counties in Penn State Cooperative Extension's Southwest Region in concert with colleagues in Ohio and West Virginia.

Goal 1

Ongoing collaborative educational meetings related to livestock programs are held by agents from counties in Penn State Cooperative Extension's Southwest Region and West Virginia colleagues.

Dairy Days - agents from counties in Penn State Cooperative Extension's Susquehanna Region co-sponsor this event with Southern Tier counties in New York State.

Alternative Enterprise Conference is a joint venture among counties in Penn State Cooperative Extension's South Central Region and Maryland and West Virginia.

Regional Maple Conference - a joint venture between Penn State Cooperative Extension's South Central Region and New York.

Interiorscape Conference - planned by Penn State Cooperative Extension's multi-county Southeast Urban Agriculture Committee. Participants come from 12 states.

Ag Computer Conference is planned by agent in Penn State Cooperative Extension's Capital Region in cooperation with colleagues from Maryland.

Pennsylvania Farmer Magazine is a co-sponsor of this event, which draws participants from all mid-Atlantic states.

More internal and external linkages are emerging as our new state educational program plan takes shape for implementation on October 1, 1999. These new linkages will be discussed more thoroughly in our annual reports.

#5. Target Audiences

TARGET AUDIENCES for the programs under Goal 1 will include a wide variety of individuals and groups including farmers and farm managers; small and part-time farmers; women farm operators; minority farm operators; ag sector and ag-dependent business owners, managers, and employees, including women and minorities; cooperatives; agency and organization personnel who relate to Pennsylvania's ag industry; agribusiness and crop consultants; artificial insemination technicians; builders and equipment installers for agribusiness; green industry personnel; farm lenders and bankers; the general public; park personnel; meat and poultry producers and processors; pesticide applicators; sanitarians; youth, including 4-H members; veterinarians, and volunteers.

Penn State Cooperative Extension is committed to providing equal access to educational programs, and to making all reasonable effort to encourage participation in educational programs by minority, underserved, resource-stressed and previously underserved segments of Pennsylvania's population.

#6. Program Duration

Program duration is intermediate term (one to five years) for all components of the extension educational program planned and delivered under this goal area. At the end of this five-year plan of work cycle, Penn State Cooperative Extension will once again undertake a comprehensive program development process, including in-depth discussion with stakeholders, to determine the focus of future extension educational programs. Our ongoing process of periodic discussion during the course of each year among administrators, faculty, field-based extension educators, Plan of Work management teams, and frequent interaction with advisory groups is designed to allow flexibility to modify existing educational activities or add additional program components in response to changing needs in Pennsylvania.

#7. Allocated Resources

	FY2000	FY2001	FY2002	FY2003	FY2004
Human Resources (FTEs)	84.05	84.05	84.05	84.05	84.05
Fiscal Resources (Smith-Lever + match)	\$6,087,867	\$6,087,867	\$6,087,867	\$6,087,867	\$6,087,867

This table represents human and fiscal resources supported by Smith-Lever 3(b) and (c) funds and the match for those funds. In addition, some Smith-Lever 3(d) funds are used in support of educational programs in this Goal. Additional funds are also received from county governments as well as grants and contracts from competitive sources such as government, foundations, trusts, industry, etc. which contribute materially to the conduct and impact of Penn State Cooperative Extension programs under this Goal and may be viewed a product of leveraging our Smith-Lever appropriation, but are not under the direct control of the Director of Cooperative Extension.

Goal 1

#8. Education and Outreach Programs

Penn State Cooperative Extension is currently implementing the fourth and final year of its FY1996-99 State Plans of Work. Programs currently being delivered which are pertinent to the critical issues identified in the "Statement of Issues" for Goal 1 include:

- Vegetable Disease Management: Informed Decision Making by Producers
- Enhancing Dairy Farm Management and Profitability
- Integrated Crop Management (ICM) for Mushroom Producers
- Greenhouse Production and Business Management and Development
- Sustainable Cropping Systems
- Grape Production Education
- Farm Level Decision Making
- Increasing Profitability in PA Livestock and Livestock Processing Enterprises
- Animal Health and Well - Being
- Agricultural Marketing and Policy Economics
- Poultry Technology Transfer
- Sustainable Turf, Ornamental, Nursery, and Greenhouse Crop Management
- Tree Fruit Production Systems for an Evolving Fruit Industry
- Dairy Farm Production Facilities
- Integrated Crop Management Systems for Vegetables and Berries

Since 1996, most newly-created county positions, and most existing positions which have become vacant, have been filled by field-based educators with multi-county responsibilities. Some examples of multi-county cooperation in the programs covered by Goal 1 include:

- Penn State Cooperative Extension's North Central extension region where agents with agricultural responsibilities in all eight of the north central counties meet and plan programs together and print an eight-county ag calendar;
- Penn State Cooperative Extension's Capital region where a 7-county area is covered by a regional agronomy team consisting of four positions;
- Penn State Cooperative Extension's Northwest Dairy Cluster which includes five agents (nutritionist, ag engineer, farm management, agronomy, and veterinarian) from three counties who collaborate to provide a comprehensive program for dairy producers.

Penn State Cooperative Extension's Southeast Urban Agriculture Committee which collaborates on a variety of programs including the annual Interiorscape Conference which draws participants from twelve states.

Goal 2

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

Goal 2

#1. Statement of Issue

Penn State Cooperative Extension conducted a statewide needs assessment in the summer of 1998 to prepare for developing the new Penn State Cooperative Extension Plans of Work. During the course of this process (described in more detail in the "Stakeholder Input" section of this plan), about 7,000 citizens throughout the Commonwealth were asked to identify the short-term and long-term needs for extension educational programming related to a safe and secure food and fiber system in Pennsylvania. Special attention was paid to contacting members of groups who might be considered "underserved." Needs assessment participants across the state identified these major educational needs for Goal 2:

- education in food safety techniques in food production, processing, and food service (pre and post farm gate HACCP)
- education in food safety techniques on the farm
- education of consumers and decision makers on food safety from farm to table
- education in food safety techniques in the home and community, including youth, the elderly, and at-risk populations
- public policy education for consumers and decision makers regarding both domestic and foreign food safety issues, food quality inspection and regulation related to chemicals, antibiotics, and drugs
- understanding of the Food Quality Protection Act and implications for both producers and consumers.
- education of consumers and producers regarding the contrast between Pennsylvania and international production practices.

Food safety must be a high priority for everyone: producers, processors, government regulators, food handlers, food retailers, and consumers. The need for food safety awareness from farm to table creates a valuable opportunity for Cooperative Extension to work with others, not only to provide safer food, but also to strengthen consumers' confidence in our nation's food supply.

Millions of Americans become ill, and thousands die, as a result of foodborne illness. The economic impact of these illnesses, in terms of medical care, lost wages, and associated costs, is in the billions of dollars per year. Clearly, foodborne illness is more than just an occasional minor digestive upset—it can result in serious, life-threatening health problems. While foodborne illnesses are not new, many factors have forced us to pay closer attention to foodborne pathogens as a health risk. The first of these is a growing knowledge about how pathogens are transmitted through food, as well as how they cause disease. Second, new pathogens are continually emerging and old pathogens reemerging. Third, the elderly and immune-compromised are two groups that are growing in numbers and are more susceptible to

Goal 2

foodborne diseases. And last, for a number of reasons (more imported foods, convenience foods being prepared in advance, inadequate knowledge and practice of food safety), opportunities for foodborne illness are increasing.

Given the system-wide nature of the food safety problem and the fact that traditional reactive methods such as testing and inspection have not been completely effective, Penn State Cooperative Extension's educational efforts will focus on developing partnerships among government, academia, and the various sectors of the food system for a broad-based approach to food safety that includes forming partnerships and implementing proactive, preventive HACCP plans throughout the food system. A recently enacted Pennsylvania law, "Food Employee Certification Act," will require that at least one supervisory employee in each Pennsylvania food establishment pass the certification requirement. This law will become mandatory on July 1, 2001 and will require training in foodborne illness; time and temperature; relationship between personal hygiene and food safety; cleaning and sanitizing; facilities and equipment layout; and statutory and regulatory requirements.

With our nation's rapidly changing food system, consumers and producers alike often make decisions based on outdated perceptions or incomplete information. Although consumers have become more sophisticated, many are poorly informed about the food they eat, and their dietary choices may reflect this lack of knowledge. Similarly, producers and processors make decisions that affect their own livelihoods without a complete understanding of consumer demographics, changes in tastes and preferences, public concerns about health and the environment, and the structure of value-added industries.

The public gets most of its information about foods and the food system from the mass media, but serious gaps in communication and understanding exist among the media, the food and agricultural community, and the public. An informed public requires accurate communication of food system information, news, and views, as well as an accessible and trusted community of food system and media professionals. Both adults and youth who are unfamiliar with agriculture need to better understand where their food comes from and the constraints under which production agriculture functions.

The U.S. food system, with its sometimes baffling array of local ordinances and federal and state regulations, may be said to be "over-regulated," yet there are some areas in which additional regulation may well be required to assure the safety and affordability of food, the economic viability of farming as an occupation, and the sustainability of the natural environment. The input of all groups is essential and responsive and practical legislation and regulation are to be developed. Penn State Cooperative Extension intends to foster a better understanding of the food system through the use of participatory methods, such as educational programs for adults and youth, and community forums.

Goal 2

#2. Performance Goals, Output and Outcome Indicators

Penn State Cooperative Extension has selected the following performance goal and associated output indicator and outcome indicators to measure our success in conducting educational programs related to Goal 2.

Performance Goal: Ensure the safety and integrity of the food system.

Output indicator - number of participants in programs related to food safety.

Outcome indicators:

number of participants who demonstrate knowledge and understanding of practices to ensure safety and integrity of the food system

number of participants who complete state-approved curricula and pass certification/recertification requirements.

number of participants who receive other types of food safety certification such as Better Process Control School, Pork Quality Assurance, Beef Quality Assurance, etc.

Goal 2

#3. Key Program Components

The Penn State Cooperative Extension educational program delivered under Goal 2 during FY2000-04 will focus on one major key program component: *A Systems Approach to Food Safety*. This key program component includes educational curricula relating to HACCP; best management practices; biological, chemical, and physical hazards associated with food production, processing, distribution, and service; FQPA; and public policy.

#4. Internal and External Linkages

In developing new programs and delivering our existing extension educational programs, Penn State Cooperative Extension has forged strong linkages across departments within our own College of Agricultural Sciences, with faculty and staff in other colleges and units at Penn State, and with faculty and staff at universities and organization beyond the Commonwealth of Pennsylvania's borders. Some examples of these internal and external cooperative activities include:

Two multi-disciplinary Plan of Work management teams comprised of both faculty from a variety of disciplines and agents from a number of counties developed the educational program included under Goal 2 and will contribute to the ongoing management of this program.

Linkages with both basic and applied research through faculty joint appointments and the integrated multi-functional responsibilities of all department heads and deans in research, resident education, and extension.

Agents from counties in Penn State Cooperative Extension's Southwest Region cooperate with the Fayette, New Kensington, and Beaver campuses of Penn State to present food safety courses.

Beef Quality Assurance Program involves cooperation among agents in Greene, Fayette, and Washington Counties in concert with colleagues in neighboring West Virginia counties.

In Penn State Cooperative Extension's Capital Region, family living agents from a number of counties are cooperating, in collaboration with colleagues in Penn State Continuing Education, to provide food safety and sanitation training to restaurant food service personnel in all seven Capital Region counties and neighboring Schuylkill County.

Food safety certification training in Berks County is a collaborative effort between Cooperative Extension, a faculty member at the Lehigh Valley Campus of Penn State, Food Safety Specialist in Pennsylvania Department of Agriculture and the Berks-Lehigh Valley Chefs Association.

Goal 2

More internal and external linkages are emerging as our new state educational program plan takes shape for implementation on October 1, 1999. These new linkages will be discussed more thoroughly in our annual reports.

Goal 2

#5. Target Audiences

TARGET AUDIENCES for the programs under Goal 2 will reflect Penn State Cooperative Extension's farm-to-table approach to food safety educational programming. All citizens in Pennsylvania are important target audiences for food safety education. Some specific groups include producers and growers of food products, including small and part-time farmers, women, and minorities; food processors; food service operations (restaurants, retailers, schools, nursing homes, hospitals, day cares, etc.); non-profit food handlers (church groups, fire halls, etc.); quality control personnel and food microbiologists; local health officers; students in grades K - 12 and their teachers; youth, including 4-H members; volunteers; at-risk groups, including low-literacy and foreign language populations, senior citizens, and limited resource individuals; and immunocompromised individuals who are most likely to become ill and suffer severe consequences from microbial foodborne pathogens.

Penn State Cooperative Extension is committed to providing equal access to educational programs, and to making all reasonable effort to encourage participation in educational programs by minority, underserved, resource-stressed and previously underserved segments of Pennsylvania's population.

#6. Program Duration

Program duration is intermediate term (one to five years) for all components of the extension educational program planned and delivered under this goal area. At the end of this five-year plan of work cycle, Penn State Cooperative Extension will once again undertake a comprehensive program development process, including in-depth discussion with stakeholders, to determine the focus of future extension educational programs. Our ongoing process of periodic discussion during the course of each year among administrators, faculty, field-based extension educators, Plan of Work management teams, and frequent interaction with advisory groups is designed to allow flexibility to modify existing educational activities or add additional program components in response to changing needs in Pennsylvania.

Goal 2**#7. Allocated Resources**

	FY2000	FY2001	FY2002	FY2003	FY2004
Human Resources (FTEs)	12.81	12.81	12.81	12.81	12.81
Fiscal Resources (Smith-Lever + match)	\$907,329	\$907,329	\$907,329	\$907,329	\$907,329

This table represents human and fiscal resources supported by Smith-Lever 3(b) and (c) funds and the match for those funds. In addition, some Smith-Lever 3(d) funds are used in support of educational programs in this Goal. Additional funds are also received from county governments as well as grants and contracts from competitive sources such as government, foundations, trusts, industry, etc. which contribute materially to the conduct and impact of Penn State Cooperative Extension programs under this Goal and may be viewed a product of leveraging our Smith-Lever appropriation, but are not under the direct control of the Director of Cooperative Extension.

#8. Education and Outreach Programs

Penn State Cooperative Extension is currently implementing the fourth and final year of its FY1996-99 State Plans of Work. Programs currently being delivered which are pertinent to the critical issues identified in the "Statement of Issues" for Goal 2 include:

- The Pennsylvania Food System: In Search of our Common Wealth
- Maintaining a Healthy and Productive Interaction between Animals and People: Programs in Public Health, Food Safety, and Total Farm Quality Management
- Implementing the HACCP (Hazard Analysis Critical Control Point) Concept throughout the Food System to Prevent Foodborne Illness and Ensure Food Safety

Since 1996, most newly-created county positions, and most existing positions which have become vacant, have been filled by field-based educators with multi-county responsibilities. Some examples of multi-county cooperation in the programs covered by Goal 2 include:

- Penn State Cooperative Extension's Capital Region where agents from four counties are working together to develop a Food Safety pilot program which will provide food safety programming for the entire 7-county region;
- Pocono Cluster in Penn State Cooperative Extension's Northeast Region where family living agents are working together to present combined workshops on topics related to food safety and security.

Goal 2

Goal 3

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

Goal 3

#1. Statement of Issue

Penn State Cooperative Extension conducted a statewide needs assessment in the summer of 1998 to prepare for developing the new Penn State Cooperative Extension Plans of Work. During the course of this process (described in more detail in the "Stakeholder Input" section of this plan), about 7,000 citizens throughout the Commonwealth were asked to identify the short-term and long-term needs for extension educational programming related to ensuring a healthy, well-nourished population in Pennsylvania. Special attention was paid to contacting members of groups who might be considered "underserved." Needs assessment participants across the state identified these major educational needs for Goal 3:

- need for food and nutrition education across the life cycle to promote wellness based on reliable, research-based information;
- need for education on nutrition and exercise to reduce the risk of chronic disease;
- need for skill-based education in nutrition, meal planning, food preparation, and consumerism for individuals, families, and special needs audiences;
- need for responsive consumer information in emerging nutrition, food safety, and food production issues;
- need for improved variety and quality selection of food through food banks, gleaning, food stamp management, and food assistance.

Pennsylvania has the largest rural population and the second largest senior population in the United States. State residents are largely Caucasian, with increasing numbers of African Americans and Hispanics. Diseases that are related to lifestyle, such as heart disease, cancer, and diabetes, are among the leading causes of death in Pennsylvania.

Many Pennsylvanians are not practicing healthful lifestyles—they are physically inactive, overweight, and eating diets too rich in calories and fat and deficient in fruits, vegetables, and nutrients. These shortcomings create the need for educational programs that will help people adopt lifestyle practices that promote health and wellness.

Americans are eating more meals and snacks on the run, choosing foods less healthful than those prepared at home. Because our food supply includes a bewildering array of foods, the ability to understand and use the information on a food label is increasingly important, but many consumers cannot understand this information or still focus only on a few items on the "Nutrition Facts" panel. The increased interest in ethnic foods, opportunities for eating out, and a decrease in food preparation skills offer opportunities for extension educational programs that emphasize how to make food choices both in the supermarket and for away-from-home meals, as well as teaching basic food preparation and preservation skills. Such programs need to target those

Goal 3

with fewer economic and social resources, and those at vulnerable life stages: teenagers, pregnant women, families with young children, single parents, the elderly, and caregivers. Teens and parents of young children need to understand the basic principles of feeding infants and children.

In an increasingly complex food supply, the opportunity increases for purveyors of misinformation to attract buyers. Consumers are becoming more interested in herbal remedies, fad diets, dietary supplements, alternative medicine, and foods associated with health benefits, real or otherwise. Americans are expected to spend \$30 billion on such items by the year 2010. However, many of these items are not well regulated and some cause serious side effects or even death. Programs that teach consumers how to evaluate claims associated with any herb, food, supplement, or diet plan are needed.

The United States Departments of Agriculture and Health and Human Services have established a variety of nutritional guidelines and objectives, which set the standards upon which to design nutrition education programming. Penn State Cooperative Extension addresses these goals and guidelines by providing the basic foundation of critical thinking skills, followed by specific programs, materials, and content that can be used in nutrition education programs. Because knowledge should not differ with education or economic status, core curriculum ideas for programming will be established.

#2. Performance Goals, Output and Outcome Indicators

Penn State Cooperative Extension has selected the following performance goal and associated output indicator and outcome indicator to measure our success in conducting educational programs related to Goal 3.

Performance Goal: Increase healthy food choices among Pennsylvania adults and youth.

Output indicator - number of persons who participate in programs on nutrition across the lifecycle.

Outcome indicator - number of participants who demonstrate use of the food guide pyramid and/or the nutrition facts panel to make healthy food choices.

#3. Key Program Components

The Penn State Cooperative Extension educational program delivered under Goal 3 during FY2000-04 will focus on one major key program component: *Diet, Nutrition and Health*. This key program component includes educational curricula relating to wellness and food

Goal 3

choices; food and nutrition across the lifecycle; combating misinformation that influences food and health decisionmaking; and food security.

Goal 3

#4. Internal and External Linkages

In developing new programs and delivering our existing extension educational programs, Penn State Cooperative Extension has forged strong linkages across departments within our own College of Agricultural Sciences, with faculty and staff in other colleges and units at Penn State, and with faculty and staff at universities and organizations beyond the Commonwealth of Pennsylvania's borders. Some examples of these internal and external cooperative activities include:

A multi-disciplinary Plan of Work management team comprised of both faculty from a variety of disciplines and agents from a number of counties developed the educational program included under Goal 3 and will contribute to the ongoing management of this program.

Linkages with both basic and applied research through faculty joint appointments and the integrated multi-functional responsibilities of all department heads and deans in research, resident education, and extension.

Many local nutrition education programs are held in cooperation with community colleges and Penn State campuses across the Commonwealth.

Staff in Allegheny and Beaver counties collaborate with the University of Pittsburgh in nutrition education programming.

Collaborations have been on-going for the past year with Penn State's College of Health and Human Development and Hershey Medical Center in presenting the Rural Women's Health conference.

A focus group of agents has been involved with researchers in Penn State's College of Health and Human Development to develop strategies for effective outreach to rural audiences in topics related to heart disease and osteoporosis, and Penn State Cooperative Extension agents participated in conferences on the two topics.

More internal and external linkages are emerging as our new state educational program plan takes shape for implementation on October 1, 1999. These new linkages will be discussed more thoroughly in our annual reports.

Goal 3

#5. Target Audiences

TARGET AUDIENCES for the programming under Goal 3 will encompass individuals, families, and communities who need to acquire the knowledge, skills, attitudes, and changed behavior necessary for consuming nutritionally sound and microbiologically safe diets. Specific examples include family members and individuals of all ages, including pre-school age children; youth, including 4-H members; parents and caregivers; pregnant and parenting teens; single-parent families; individuals living alone or in group settings, senior citizens; community organizations and coalitions; state and local agency personnel; child care providers in both home and center settings; care providers for the elderly and special populations; persons with acute or chronic illness, or debilitating conditions; business and industry representatives; educational institutions (child care facilities, schools, universities, colleges, extension); churches; and volunteer groups.

Limited resource audiences are at greater risk than the rest of the population for dying from, or developing chronic health problems related to nutrient intake and food selection, and are a target audience of special concern to Penn State Cooperative Extension.

Penn State Cooperative Extension is committed to providing equal access to educational programs, and to making all reasonable effort to encourage participation in educational programs by minority, underserved, resource-stressed and previously underserved segments of Pennsylvania's population.

#6. Program Duration

Program duration is intermediate term (one to five years) for all components of the extension educational program planned and delivered under this goal area. At the end of this five-year plan of work cycle, Penn State Cooperative Extension will once again undertake a comprehensive program development process, including in-depth discussion with stakeholders, to determine the focus of future extension educational programs. Our ongoing process of periodic discussion during the course of each year among administrators, faculty, field-based extension educators, Plan of Work management teams, and frequent interaction with advisory groups is designed to allow flexibility to modify existing educational activities or add additional program components in response to changing needs in Pennsylvania.

Goal 3**#7. Allocated Resources**

	FY2000	FY2001	FY2002	FY2003	FY2004
Human Resources (FTEs)	16.71	16.71	16.71	16.71	16.71
Fiscal Resources (Smith-Lever + match)	\$1,064,086	\$1,064,086	\$1,064,086	\$1,064,086	\$1,064,086

This table represents human and fiscal resources supported by Smith-Lever 3(b) and (c) funds and the match for those funds. In addition, some Smith-Lever 3(d) funds are used in support of educational programs in this Goal. Additional funds are also received from county governments as well as grants and contracts from competitive sources such as government, foundations, trusts, industry, etc. which contribute materially to the conduct and impact of Penn State Cooperative Extension programs under this Goal and may be viewed a product of leveraging our Smith-Lever appropriation, but are not under the direct control of the Director of Cooperative Extension.

#8. Education and Outreach Programs

Penn State Cooperative Extension is currently implementing the fourth and final year of its FY1996-99 State Plans of Work. Programs currently being delivered which are pertinent to the critical issues identified in the "Statement of Issues" for Goal 3 include:

- The Northern Appalachia Leadership Initiative on Cancer
- Better Health through Nutrition Decisions and Food Choices
- Enhancing Community Health

Since 1996, most newly-created county positions, and most existing positions which have become vacant, have been filled by field-based educators with multi-county responsibilities. Some examples of multi-county cooperation in the programs covered by Goal 3 include:

- Penn State Cooperative Extension's North Central Region where agents cooperate to deliver programs in three multi-county units (McKean/Potter, Elk/Cameron, and Clearfield/Jefferson);
- Penn State Cooperative Extension's Northeast Region where the northern cluster (Susquehanna, Wyoming, Wayne, Lackawanna) counties cooperate in delivery of programs related to conveying research results pertinent to Goal 3;
- Penn State Cooperative Extension's Southwest Cluster where four family and consumer science educators divide responsibilities for programming in foods and nutrition.

Goal 3

Goal 3

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.

Goal 4

#1. Statement of Issue

Penn State Cooperative Extension conducted a statewide needs assessment in the fall of 1998 to prepare for developing the new Penn State Cooperative Extension Plans of Work. During the course of this process (described in more detail in the "Stakeholder Input" section of this plan), about 7,000 citizens throughout the Commonwealth were asked to identify the short -term and long-term needs for extension educational programming related to a safe and secure food and fiber system in Pennsylvania. Special attention was paid to contacting members of groups who might be considered "underserved." Needs assessment participants across the state identified these major educational needs for Goal 4:

- greater awareness and understanding is needed on issues relating to the rural/urban interface;
- producers and residents of Pennsylvania need to increase their understanding and knowledge of nutrient management;
- community leaders and individuals need to be educated in regard to safe community and individual water systems;
- decision makers and the general public need to be educated on issues related to waste management;
- all sectors of the population need expanded knowledge of the importance and value of agriculture, environment and natural resources to the local, state, and national economies and to quality of life;
- educational programming related to sustainable forestry practices;
- educational programming on soil management techniques to reduce erosion and improve soil quality;
- education in the use and reclamation of environmentally damaged sites, including mining, oil and gas production lands, industrial lands, abandoned railroad rights -of-way and acidified streams;
- education of producers and the general public on modern/alternative practices;
- educational programming on soil management techniques to reduce soil erosion and improve soil quality.

Pennsylvania has long been known for its abundant water resources . The Commonwealth boasts more than 43,000 miles of streams, 2,300 reservoirs, and 76 natural lakes. There are six major watersheds in the state, with one of those, the Susquehanna, providing more than half of the fresh water entering the Chesapeake Bay. Even a portion of the headwaters of the historic Potomac River is found in Pennsylvania.

The state is also home to more than 900,000 private individual water supplies, 95 percent of which rely on the state's abundant groundwater as a source of supply. These supplies take advantage of groundwater that is normally of very high quality. However, because of improper

Goal 4

well construction, the use of springs, land use changes, and other problems, almost 40 percent of these supplies suffer from bacterial contamination. Other water quality problems associated with private, individual water supplies include radon, acidic water, and iron and nitrate problems.

Surface water supplies have also been exposed to the ravages of water pollution. Acid mine drainage from abandoned coal mines pollutes more than 2,500 miles of Pennsylvania's streams. Some of this pollution comes from abandoned surface mine land, and the rest from abandoned deep mines. Acidification, as a consequence of acidic deposition, affects at least another 700 miles of streams.

The heavily agricultural regions of southeastern Pennsylvania have surface and groundwater pollution problems associated with nutrient applications to farm land and disposal of animal and food processing wastes. As efforts to feed the world's population intensify, these problems are likely to worsen.

Abandoned and active gas and oil wells dot the landscape in some regions of the state. These too are potential sources of water pollution. Petroleum products and the salt brines that accompany natural gas production are potentially significant polluters of surface and groundwater.

There are almost 1.5 million Pennsylvania homes that depend on on-site facilities for the treatment of domestic wastewater. Proper management of these facilities is crucial to groundwater quality enhancement.

Pennsylvania has, on the one hand, a rich treasure of clean water and, on the other, a legacy of serious water pollution. In the former are resources that will sustain the Commonwealth for the next century and the responsibility to prevent degradation. In the latter is an opportunity to change a legacy of neglect to one of improved stewardship and restoration for future generations of Pennsylvanians.
water systems.

To improve drinking water quality in private individual water systems, Penn State Cooperative Extension will provide educational programming on water supply problems, monitoring private well water, avoiding the purchase of needless water treatment equipment, and how to get their water properly tested. We will maintain up-to-date references on drinking water quality and water treatment issues, as well as improve access to these materials by maintaining a water quality website. To address water quality management at the community level, Cooperative Extension will update and create additional educational materials to incorporate changes in public policy and other new information.

Goal 4

Pennsylvania's 17 million forested acres support a \$4.5 billion per year forest products industry that employs 90,000 people. Recreation and tourism generate additional revenue and employment. Pennsylvania's extensive forest land makes the state the nation's leader in hardwood timber production and an important supplier of non-timber forest products. The environmental benefits of forested acreage, such as high quality water resources, diverse animal and plant life, and influences on climate and air quality, are an invaluable consideration for the entire populace. Nearly three quarters of Pennsylvania's forest land is owned by more than a half million private owners who are often unaware of their management opportunities. After the period of exploitive harvesting that characterized turn-of-the-century logging, these forests are again reaching economic maturity. Unfortunately, poorly conceived and executed timber harvests are threatening the future of the state's forest resources, both commercial and noncommercial. A recent assessment across both publicly and privately held forest land shows that fewer than half of recent harvests followed guidelines necessary for sustainable forests that can meet both our immediate and long-term needs. The same study suggests that the Best Management Practices, already established for Pennsylvania forests, could change this situation quickly.

Fewer than 25 percent of Pennsylvania's private forest land owners know where to get professional resource management assistance or know about the management options that can improve their returns from and enjoyment of their land. Many land owners conduct high-impact activities such as timber harvesting without the long-term planning that would ensure the sustainability of timber, recreational opportunities, wildlife habitat, water resources, and other economic and environmental benefits of productive forest land. Studies show that most landowners would practice sustainable management if they knew what to do or where to go for help. For that reason alone, effective educational programming in natural resource management for private land owners and the natural resource professionals who serve them is essential in a state that depends so heavily on its forest resources.

Some current issues that demand our attention are increasing numbers of private ownerships coupled with decreasing parcel size; forest fragmentation at the urban and rural interface; state and federal tax laws; estate planning options; and the need for coordinated land-use planning processes across the state. A variety of educational programs will be developed or enhanced and offered to private woodlot owners, natural resource professionals, landowners, volunteers and youth audiences to facilitate critical thinking and development of decisionmaking skills.

Penn State's Best Management Practices will help timber harvesters, land owners, and forest resource professionals make better forest management decisions, and address such topics as water quality, planning, and special habitats.

#2. Performance Goals, Output and Outcome Indicators

Goal 4

Penn State Cooperative Extension has selected the following performance goals and associated output and outcome indicators to measure our success in conducting educational programs related to Goal 4.

Performance Goal: Clientele will increase their knowledge and skills in watershed management to enhance water quality.

Output indicator - number of participants in educational programming related to watershed management and water quality.

Outcome indicator - number of participants who take action to protect or enhance water quality.

Performance Goal: Increase the sustainability of Pennsylvania forests.

Output indicators:

number of adult participants in programs related to private forest land management.

number of youth participants in programs related to private forest land management.

Outcome indicators:

number of participants who demonstrate an increase in knowledge and skills needed to increase the sustainability of private forest lands.

number of youth participants who participate in a structured event that demonstrates knowledge of basic forestry skills.

Goal 4

#3. Key Program Components

The Penn State Cooperative Extension educational program delivered under Goal 4 during FY2000-04 will include two key program components:

Watershed Management to Enhance Water Quality. This key program component includes educational curricula relating to private water system management and watershed stewardship, including groundwater quality and quantity, wellhead protection, and proper management and protection of on-site septic systems.

Sustaining Pennsylvania Forests. This key program component includes educational curricula relating to management of private forest lands; 4/H youth and sustainable forests; and sustainable forestry for resource professionals.

#4. Internal and External Linkages

In developing new programs and delivering our existing extension educational programs, Penn State Cooperative Extension has forged strong linkages across departments within our own College of Agricultural Sciences, with faculty and staff in other colleges and units at Penn State, and with faculty and staff at universities and organizations beyond the Commonwealth of Pennsylvania's borders. Some examples of these internal and external cooperative activities include:

Five multi-disciplinary Plan of Work management teams comprised of both faculty from a variety of disciplines and agents from a number of counties developed the educational program included under Goal 4 and will contribute to the ongoing management of this program.

Linkages with both basic and applied research through faculty joint appointments and the integrated multi-functional responsibilities of all department heads and deans in research, resident education, and extension.

A deer damage program developed jointly with New York state.

Agents from counties in Penn State Cooperative Extension's Northeast Region cooperate with neighboring New York State counties and a SUNY branch campus in presenting annual silviculture workshops.

Agents from counties in Penn State Cooperative Extension's North Central and Susquehanna Regions cooperate with Cornell, Keene Experiment Station, and Department of Forestry in presenting silviculture workshops.

Family and Consumer Science educator in Washington County cooperates with California University in Water Quality programs which involve students and community members.

Goal 4

More internal and external linkages are emerging as our new state educational program plan takes shape for implementation on October 1, 1999. These new linkages will be discussed more thoroughly in our annual reports.

Goal 4

#5. Target Audiences

TARGET AUDIENCES for the programming under Goal 4 will encompass all individuals, families, businesses, organizations and communities with a stake in the stewardship of Pennsylvania's environment. Some examples of these groups include Pennsylvanians who depend on groundwater for household and farm use; water supply officials; municipal planning officials; farm operators and workers, including minorities and women; green industry personnel; youth, including 4-H members; municipal and industrial waste generators; managers of material recovery and solid waste facilities; health agencies; environmental action groups; school teachers and students; energy suppliers and consultants; private forest landowners; natural resource professionals; petrochemical waste reprocessors and manufacturers; pesticide applicators; state and local government agency personnel; private landowners and homeowners; land managers and private groundskeepers; and volunteers.

Penn State Cooperative Extension is committed to providing equal access to educational programs, and to making all reasonable effort to encourage participation in educational programs by minority, underserved, resource-stressed and previously underserved segments of Pennsylvania's population.

#6. Program Duration

Program duration is intermediate term (one to five years) for all components of the extension educational program planned and delivered under this goal area. At the end of this five-year plan of work cycle, Penn State Cooperative Extension will once again undertake a comprehensive program development process, including in-depth discussion with stakeholders, to determine the focus of future extension educational programs. Our ongoing process of periodic discussion during the course of each year among administrators, faculty, field-based extension educators, Plan of Work management teams, and frequent interaction with advisory groups is designed to allow flexibility to modify existing educational activities or add additional program components in response to changing needs in Pennsylvania.

Goal 4**#7. Allocated Resources**

	FY2000	FY2001	FY2002	FY2003	FY2004
Human Resources (FTEs)	16.04	16.04	16.04	16.04	16.04
Fiscal Resources (Smith-Lever + match)	\$1,163,160	\$1,163,160	\$1,163,160	\$1,163,160	\$1,163,160

This table represents human and fiscal resources supported by Smith-Lever 3(b) and (c) funds and the match for those funds. In addition, some Smith-Lever 3(d) funds are used in support of educational programs in this Goal. Additional funds are also received from county governments as well as grants and contracts from competitive sources such as government, foundations, trusts, industry, etc. which contribute materially to the conduct and impact of Penn State Cooperative Extension programs under this Goal and may be viewed a product of leveraging our Smith-Lever appropriation, but are not under the direct control of the Director of Cooperative Extension.

#8. Education and Outreach Programs

Penn State Cooperative Extension is currently implementing the fourth and final year of its FY1996 -99 State Plans of Work. Programs currently being delivered which are pertinent to the critical issues identified in the "Statement of Issues" for Goal 4 include:

- Community Conflicts over Agriculture, Land Uses, and Natural Resources: Finding the Common Ground
- Integrated Pest Management Program for Livestock, Horses, and Poultry Production Systems in Pennsylvania
- Stewardship of Pennsylvania's Forests and Wildlife
- Enhancing Pennsylvania's Wood Products Industry
- Managing Petrochemical Wastes Within Agriculture
- Sustainable Ground Water
- Safe Use of Pesticides
- Urban Integrated Pest Management and Identification for Residential Arthropod Pests

Since 1996, most newly-created county positions, and most existing positions which have become vacant, have been filled by field-based educators with multi-county responsibilities. Some examples of multi-county cooperation in the programs covered by Goal 4 include:

Goal 4

Penn State Cooperative Extension's Northeast Region where the northern cluster counties (Susquehanna, Wyoming, Wayne, Lackawanna) are cooperating in program delivery related to conveying research results pertinent to Goal 4;

Penn State Cooperative Extension's North Central Region where cooperative relationships are being developed between Centre and Clinton counties in the delivery of program related to conveying results pertinent to Goal 4.

Goal 4

Goal 5

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

Goal 5

#1. Statement of Issue

Penn State Cooperative Extension conducted a statewide needs assessment in the fall of 1998 to prepare for developing the new Penn State Cooperative Extension Plans of Work. During the course of this process (described in more detail in the "Stakeholder Input" section of this plan), about 7,000 citizens throughout the Commonwealth were asked to identify the short-term and long-term needs for extension educational programming related to a safe and secure food and fiber system in Pennsylvania. Special attention was paid to contacting members of groups who might be considered "underserved." Needs assessment participants across the state identified these major educational needs for Goal 5:

- foster strengthening and support of the family unit;
- assist individuals and communities in addressing societal issues;
- assist individuals and families to understand implications important for management of resources;
- promote adoption of healthy behaviors among individuals and families;
- provide youth with the opportunity to develop to their maximum potential;
- need for preparation, readiness skills, career training for adults and youth;
- development of business/economic skills and competencies;
- educational programming to assist the general public and decision makers in responding to community and economic development issues;
- provide individuals with the opportunity to develop and enhance leadership and volunteer development skills;
- enhance quality of life through gardening and aesthetics of landscapes.

Families are fundamental to the lifeblood and strength of our country and world. The family is the central core from which we prepare our children to assume positions of leadership in the future. Healthy child development requires strong, nurturing, supportive families, and every level of our society is affected when families fail to support and guide children. Children and youth, especially those living in high-risk situations and in stress-filled families, need nurturing to reach their full potential.

Child care needs have increased tremendously over the past decade. Parents cannot work productively unless they have care for their young children when and where they need it. Access to affordable, high quality child care is critical to success on the job. Studies have indicated that far too much child care is below minimum quality levels; the training of child care providers remains one of the nation's most critical needs.

Goal 5

The aging of our society characterizes Pennsylvania. While the young adult population is projected to decrease over the next twenty years, the elderly population will grow by about 8 percent.

Penn State Cooperative Extension will offer many educational programs to help family members and others who care for those who cannot independently meet their own daily needs. The need for care is common to both the earliest and latest stages of the human life span, as well as for those temporarily or permanently disabled. Effective caregiving directly relates to maximum development and improved quality of life for those receiving care, and serves as a powerful socializing and humanizing experience for those who provide care. Education programs provide specialized information on individual development, common problems encountered by caregivers, and the community service contexts in which caregivers work. The common aspects of family caregiving are acknowledged, while developing specialized responses to the needs of specific caregivers. Programs on self care skills will be targeted to school age children who spend part of the day at home alone.

Many youth do not have the opportunity to experience enough positive stimulation for personal growth or nurturing support from family, friends, and community. In Pennsylvania, the rate of teen deaths by accident, homicide, and suicide, for example, has increased by 9 percent from 1985 to 1995. During those same years, the teen birth rate has increased by 4 percent, the juvenile crime arrest rate by over 100 percent, and the percent of teens who become high school dropouts by nearly a third. But it's been shown that youth participating in organizations such as 4-H develop problem-solving skills, commitment to service, self confidence, and positive relationships with peers and adults. These youth also experience academic improvement, increased social and psychological development, and leadership development.

Youth development is the process of growing up and developing one's capacities in positive ways, typically in the context of the family, peer group, school, and community. Penn State Cooperative Extension has a proven record of educational programs to help youth become productive, contributing members of society and leaders of tomorrow. We will continue to develop new initiatives and explore new partnerships and collaborations with others within the university and public/private sectors to enhance educational programs for youth in the community.

Empowering people to take action for themselves and to bear the consequences for their actions is necessary for effective leadership. Individuals who demonstrate strong interpersonal leadership skills are the foundation of strong families. Leadership education will prepare adults and youth to meet the expectations of the 21st century. Penn State Cooperative Extension is prepared to help by teaching people how to take action and make change in their lives. With access across the land-grant university system to research-based information, Penn State Cooperative Extension can implement quality extension educational programs that will create tomorrow's leaders.

Goal 5

Penn State Cooperative Extension has thousands of volunteers, adults and teens, who serve on planning and advising committees, teach, counsel, advocate, and serve as resource people. To support this system of volunteer staff requires considerable planning, expertise, and time commitment. While an existing core of volunteers are experienced and skilled in their responsibilities, they need to be challenged as well as recognized for their responsibilities. At the same time, we need to recruit, orient, and involve new volunteers. Penn State Cooperative Extension will place increased emphasis on expanding its volunteer management and development program. With a quality volunteer program in operation, Penn State Cooperative Extension will continue to make a significant impact in the lives of Pennsylvanians.

Community and public policy decision making in Pennsylvania is characterized by a mosaic of decentralized jurisdictions, authorities, and interests. While local government officials play an important role in this decision making, a wide array of constituencies also shape the outcome of these decisions. Citizens, civic organizations, and local governments in small and rural communities face greater challenges in controlling and managing the myriad of issues that face their communities. An informed citizenry, effective leadership, and viable local institutions are essential if small and rural communities are to develop the capacity to control their future. Penn State Cooperative Extension is well positioned to provide educational programs and information required to equip our communities with the tools they need to analyze and respond to these challenges.

Every Pennsylvania citizen is a consumer of horticultural products, and every commercial horticultural enterprise depends finally on the support of the consumer. Nowhere is this more evident than in environmental and ornamental horticulture, where consumer spending is largely discretionary. As suburban growth continues, more and more land is occupied by housing, and this development increasingly strains natural systems. An educated consumer can make better decisions about plants and landscape management practices, resulting in improved urban and suburban environments. Gardening is often reported as the most popular leisure activity in America, and the popularity of home gardening activities is expected to increase 20 percent over the next ten years. Penn State Cooperative Extension programs educate gardening consumers in 67 counties, reaching more than three-quarters of a million households annually. In many counties, volunteers trained as Master Gardeners serve diverse and specialized gardening audiences. Their direct assistance to their local Penn State Cooperative Extension office includes teaching and demonstrating the proper care of garden plants, helping to solve pest problems, giving advice and technical assistance on maintaining a healthy ornamental landscape or vegetable garden, and instructing and involving city youth in gardening projects to enhance their neighborhoods. Cooperative Extension also serves educational needs of a growing number of professional gardeners, horticulturists, first-time landscapers, and garden center employees.

Goal 5

Goal 5

#2. Performance Goals, Output and Outcome Indicators

Penn State Cooperative Extension has selected the following performance goals and associated output indicators and outcome indicators to measure our success in conducting educational programs related to Goal 5:

Performance Goal: Increase the quality of child care.

Output indicator - number of child care providers engaged in professional development activities

Outcome indicator - number of child care providers who increase knowledge, skills, and abilities regarding appropriate child care practices.

Performance Goal: Strengthen the capacity of families and communities to be partners in building strong families and caring safe, productive communities.

Output indicator - number of interagency collaborations at all levels to ensure and improve outreach to families, especially to higher risk families.

Outcome indicator - number of youth and/or parents who have improved social and communication skills.

Performance Goal: Increase youth life skills through participation in 4-H and youth development programs.

Output indicator - number of youth participating in 4-H and youth development programs

Outcome indicator - number of youth demonstrating life skills such as decision making, record keeping, communication, and problem solving.

Performance Goal: Develop leadership capacity in adults and youth.

Output indicators:

number of persons participating in formal leadership and volunteer development educational programs;

number of persons participating in ongoing volunteer and leadership activities (e.g., extension boards, committees, 4-H and youth volunteers, Master Gardeners, etc.)

Outcome indicator - number of persons increasing knowledge or and demonstrating leadership skills.

Performance Goal: Increase knowledge and understanding of current and emerging public policy issues.

Output indicators - number of participants in programs related to public policy issues.

Goal 5

Outcome indicators - number of participants indicating increased knowledge and understanding of public policy issues such as local taxation, land use, environment and natural resources, economic development.

Goal 5

#3. Key Program Components

The Penn State Cooperative Extension educational program delivered under Goal 5 during FY2000-04 will include five key program components:

Strengthen and Support Family Well-Being. This key program component includes educational curricula relating to child care; parenting; aging; family structures; and family/youth resiliency, school and family interactions, violence prevention, and communication skills.

4-H and Youth Development. This key program component includes educational curricula relating to the promotion and enhancement of 4-H and youth development through animal science and embryology; plant sciences; family and consumer sciences; natural resources; applied science and technology; leisure education and outdoor skills; personal development, cultural competency, and citizenship; and leadership curriculum.

Building Leadership Capacity and Volunteer Management and Development of Volunteer Skills. This key program component includes educational curricula relating to developing inter- and intra-personal life skills; leading groups and teams; building leadership in communities and citizens; and volunteer development and management.

Community Capacity Building and Decisionmaking. This key program component includes educational curricula relating to understanding community change; citizenship; public policy; communications; community collaborations; strategic planning and visioning; community needs assessment; conflict management; land use policy; economic development policy; environmental/natural resources policy; local tax policy; economic and fiscal impacts of change; grant writing; non-profit management; and community information networks.

Consumer Horticulture. This key program component includes educational curricula relating to the Master Gardener program, training for green industry employees, and consumer outreach.

Goal 5

#4. Internal and External Linkages

In developing new programs and delivering our existing extension educational programs, Penn State Cooperative Extension has forged strong linkages across departments within our own College of Agricultural Sciences, with faculty and staff in other colleges and units at Penn State, and with faculty and staff at universities and organization beyond the Commonwealth of Pennsylvania's borders. Some examples of these internal and external cooperative activities include:

Eleven multi-disciplinary Plan of Work management teams comprised of both faculty from a variety of disciplines and agents from a number of counties developed the educational program included under Goal 5 and will contribute to the ongoing management of this program.

Linkages with both basic and applied research through faculty joint appointments and the integrated multi-functional responsibilities of all department heads and deans in research, resident education, and extension.

Joint programs developed with Penn State's College of Health and Human Development.

Joint programs developed with Penn States College of Medicine at Hershey.

Penn State and Cornell are currently developing a joint program effort in economic and community development.

Agents in the McKean/Potter unit work with county agents in New York State in developing and conducting volunteer leadership development programs.

Pilot program in Potter County on developing a Community Information Network has a key partnership with the Potter County Educational Council.

Counties in many regions cooperate with their local Penn State campuses (e.g., Wilkes-Barre, Abington) in presenting Summer Youth Programs.

Westmoreland County family and consumer science educator collaborates with the local community college and a variety of county and community agencies in conducting the annual "Parent Fair."

Susquehanna County family and consumer science educator collaborates with neighboring New York counties (Chemung and Tioga) to present annual "Family Living Focus" seminars/workshops.

Susquehanna County agent works with faculty from both Bloomsburg University and Susquehanna University on Leadership Education programs.

More internal and external linkages are emerging as our new state educational program plan takes shape for implementation on October 1, 1999. These new linkages will be discussed more thoroughly in our annual reports.

Goal 5

Goal 5

#5. Target Audiences

TARGET AUDIENCES for the programming under Goal 5 will encompass a wide-ranging audience affected by issues of enhancing economic well-being and quality of life among families and communities. Those affected include women and men in rural and urban communities; elected and appointed officials at state and local levels; agency representatives; members of interest groups; children and youth from infancy through late teen years; K - 12 educators and their students; parents, including working parents; families, including single-parent, limited resource, and public welfare recipient families; members of minority groups; at -risk populations, including adults and children with physical and mental disabilities; private sector employers and employees, including child care; farmers and farm workers and their families; members and directors of cooperatives; Master Gardeners; youth and adult gardeners; volunteers; agricultural and resource-based professionals; persons providing care for family members; 4 -H members and leaders; members of extension boards and committees; and persons and families who have immigrated to the United States from other nations.

Penn State Cooperative Extension is committed to providing equal access to educational programs, and to making all reasonable effort to encourage participation in educational programs by minority, underserved, resource-stressed and previously underserved segments of Pennsylvania's population.

#6. Program Duration

Program duration is intermediate term (one to five years) for all components of the extension educational program planned and delivered under this goal area. At the end of this five-year plan of work cycle, Penn State Cooperative Extension will once again undertake a comprehensive program development process, including in -depth discussion with stakeholders, to determine the focus of future extension educational programs. Our ongoing process of periodic discussion during the course of each year among administrators, faculty, field-based extension educators, Plan of Work management teams, and frequent interaction with advisory groups is designed to allow flexibility to modify existing educational activities or add additional program components in response to changing needs in Pennsylvania.

Goal 5**#7. Allocated Resources**

	FY2000	FY2001	FY2002	FY2003	FY2004
Human Resources (FTEs)	151.21	151.21	151.21	151.21	151.21
Fiscal Resources (Smith-Lever + match)	\$9,679,962	\$9,679,962	\$9,679,962	\$9,679,962	\$9,679,962

This table represents human and fiscal resources supported by Smith-Lever 3(b) and (c) funds and the match for those funds. In addition, some Smith-Lever 3(d) funds are used in support of educational programs in this Goal. Additional funds are also received from county governments as well as grants and contracts from competitive sources such as government, foundations, trusts, industry, etc. which contribute materially to the conduct and impact of Penn State Cooperative Extension programs under this Goal and may be viewed a product of leveraging our Smith-Lever appropriation, but are not under the direct control of the Director of Cooperative Extension.

#8. Education and Outreach Programs

Penn State Cooperative Extension is currently implementing the fourth and final year of its FY1996 -99 State Plans of Work. Programs currently being delivered which are pertinent to the critical issues identified in the "Statement of Issues" for Goal 5 include:

- Preventing Farm Work Injury
- Consumer Horticulture/Master Gardener
- Promoting and Enhancing Life Skill Development in Families and Youth
- Strengthening and Supporting Rural -based Cooperatives through Leadership Development and Business Skill Education
- Learning Life Skills through Involvement with the 4 -H Animal Sciences Curriculum
- Family Caregiving Across the Life Span
- Education for Individuals and Families Across the Life Span
- Sustainable Community Development
- Urban and Community Forestry -- Natural Resources of Communities
- Local Governance in Pennsylvania: A Training Program for Local Government Officials

Since 1996, most newly-created county positions, and most existing positions which have become vacant, have been filled by field-based educators with multi-county responsibilities. Some examples of multi-county cooperation in the programs covered by Goal 5 include:

Goal 5

Penn State Cooperative Extension's Northeast Region where 4-H agents in Monroe and Pike counties are working in support of cluster concept;

Penn State Cooperative Extension's Southwest Region which has implemented a 4-H Regional Assistant position;

Penn State Cooperative Extension's Northwest Region which has implemented a 4-H Regional Assistant position;

Penn State Cooperative Extension's South Central Region where a *Better Kid Care* coordinator serves four counties.

Stakeholder Input Process

SECTION 2. STAKEHOLDER INPUT PROCESS

A statewide needs assessment process was undertaken in the summer of 1998 in preparation for the development in 1999 of the new Penn State Cooperative Extension State Plans of Work which will begin in FY2000. The process was open-ended, and asked participants to identify any and all needs related to each of the five federal goals. Regional administrators held informational meetings and provided detailed instructions to county staff to ensure that short-term and long-term needs for extension programming were garnered from as comprehensive a group of citizens as possible in every county. Special attention was paid to contacting members of groups who might be considered "underserved" in the local area. The following is an example of instructions provided in each county:

Every four years we have an opportunity to develop new four-year Plans of Work for Penn State Cooperative Extension. As part of this process it is vitally important that we talk to members of internal and external groups to determine what our stakeholders and those who are not so familiar with us see as the most important local issues now and in the future.

All CEDs received a copy of a Needs Assessment booklet written by Arling Etling and Thomas Maloney at the CED Institute in May. It provides a variety of alternatives for CEDs and staff to use in determining how information can be obtained; i.e., written surveys, phone surveys, listening posts, nominal groups or forums. You also have the new video on Extension Base programs that may be appropriate for use with audiences that are familiar with extension.

Because it is imperative that we document our grass roots efforts to assess needs and obtain information from both extension users and non-users, it is necessary to obtain demographic data from respondents. A suggested form is attached for your use:

DEMOGRAPHIC INFORMATION:

Date _____

Are you: Male _____ Female _____ Your age: Under 20 _____
20-35 _____
51-65 _____
Over 65 _____

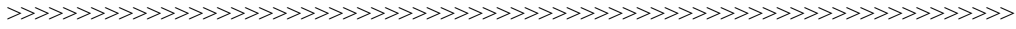
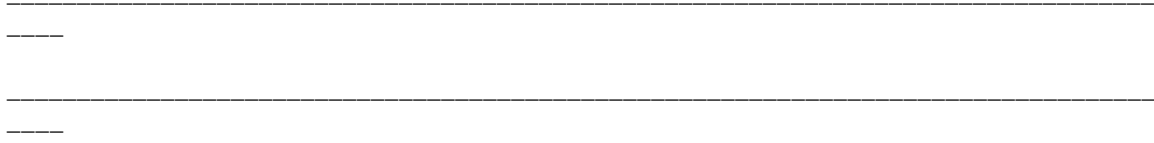
Occupation? _____

Race: Afro-American _____ White _____ Hispanic _____ S.E. Asian _____ Other _____

Your involvement with Cooperative Extension?

Member of a board or advisory committee _____ Participant in educational program _____
Program volunteer _____ Newsletter recipient _____
Program collaborator or partner _____ Not involved _____
Other (identify) _____

Please provide any additional comments you wish about the future of this county's extension programs. Comments on resources or constraints to effective programs would be helpful.



A number of CEDs have also suggested potential groups that you may wish to have staff or volunteers solicit for information. The list includes but is not limited to the following:

- Extension Boards
 - Chambers of Commerce
 - Township supervisors/ planning commissions
 - Local libraries
 - Human Service Coalitions
 - Homeowners - Private Citizens
 - Sewer Authorities
 - Housing Authorities
 - Local Citizens Advisory Groups
 - Businessmen's Associations
 - Environmental Groups
 - League of Women Voters
 - County Commissioners
 - Mayors of cities, Borough managers
 - Local bankers
 - Human Service agencies
 - School administrators
 - Local Government Agencies (Federal-State-County)
 - Local Service Clubs - Lions, Rotary , Kiwanis, Soroptomists, BPW
 - Extension Program participants or those attending meetings or receiving newsletters
 - Participant/leadership of any local needs assessment projects currently underway in the county (such as asset building projects)
 - Selected church groups - (Anabaptist groups who may be significantly represented as participant in extension program efforts) Might have to be done by personal contacts
- Advisory Committees
 - Chamber Leadership Groups
 - Community and Civic Groups
 - HeadStart program
 - Municipal Officials - Township, Borough, County
 - Water Authorities
 - Municipal Authorities
 - Media Groups/Persons - newspaper, radio, TV
 - Industrial Authorities
 - Farm Commodity Groups (Local - Regional)
 - Farm Bureau members
 - USDA agency heads
 - County Planning director
 - United Way Boards
 - Selected real estate agents
 - Council of Churches; food bank
 - Farm Women Groups

About 7,000 citizens participated in the process throughout the Commonwealth.

In addition to the surveys of local citizens by field staff in every county, each of the 12 academic units of the College of Agricultural Sciences met with extension administrators to discuss the needs assessment process and submitted subsequent reports on statewide needs from the perspective of faculty and departmental stakeholder/advisory groups. Suggestions were also solicited from members of statewide advisory groups such as the Penn State Agricultural Council.

A comprehensive decision-making process was initiated in the fall of 1998 to ensure that all relevant current and emerging issues were included as part of the Penn State Cooperative Extension state plans of work. In November, representatives of field and academic units and

administrators met to review and discuss all needs. In early 1999, an intensive session was held for 23 members of the Extension Program Administrators team at Penn State's state-of-the-art Team Decision Center. A set of 25 multi-disciplinary educational programs was identified -- each grounded in a set of needs identified by our stakeholders during the needs assessment process.

As the new Plans of Work are implemented, stakeholder groups such as Pennsylvania Council of Cooperative Extension Associations (PCCEA), the Penn State Agricultural Council, and county advisory groups will provide ongoing review of the educational programs.

Program Review Process

SECTION 3. PROGRAM REVIEW PROCESS

Penn State Cooperative Extension has undertaken a very thorough and comprehensive review process for the Plans of Work which have been developed for implementation beginning October 1, 1999. As discussed in the "Stakeholder Input Process" section, all plans of work are thoroughly grounded in the needs identified during out statewide needs assessment process.

After the needs assessment and program identification process was completed at the close of 1998, each of the identified Plan of Work topics was assigned to an integrated, multidisciplinary POW Management Team made up of field-based extension educators and faculty with split appointments in both extension and research. Team members from the field were chosen to broadly represent all parts of the Commonwealth, faculty members were chosen to represent the research and extension perspectives of all relevant disciplines. Each team has a field-based and a faculty co-chair. In addition, two administrators, one regional administrator and one academic unit administrator, serve in a liaison role to each team and have reviewed each team's plan as it was developed. State Program Leaders have also been involved in providing oversight to the teams.

Draft plans of work were then put up on the College of Agricultural Science web-site for comment and suggestions from all field-based and university park staff, faculty, and administrators. Plans were revised by the teams, reloaded on the web-site, and made available to county staff and faculty to solicit a preliminary indication of how much of their program effort staff/faculty intended to allocate to the various objectives of the plans. All senior-level administrators with responsibility for faculty and staff who develop and deliver Penn State Cooperative Extension programs met in a full-day session (and subsequent follow-up sessions), to review the preliminary buy-in, discuss resource allocation among the programs, and recommend final revisions.

As the new Plans of Work are implemented, stakeholder groups such as Pennsylvania Council of Cooperative Extension Associations (PCCEA); the Penn State Agricultural Council; and county advisory groups will provide ongoing review of the educational programs on an annual basis to ensure that programs are focusing on priority needs as identified by key advisory groups in the college.

Multi-State Extension Activities

SECTION 4. MULTI-STATE EXTENSION ACTIVITIES

In FY1997, Penn State Cooperative Extension had official cooperating relationships in which we collaborated towards objectives and were involved in the outcomes in the following program areas:

- Lake Erie Regional Center for Grape Research and Extension - cooperating with Cornell.
- MAPP database - Penn State and Minnesota
- Northeast Regional Center for Rural Development - cooperating with Cornell, West Virginia, Maryland, Maryland-Eastern Shore, District of Columbia, Delaware State, Delaware, Rutgers, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine, Vermont.
- Commercial Vegetable Guide - cooperating with Delaware, Maryland, Virginia, and Rutgers.
- Natural Resource, Agriculture, and Engineering Service (NRAES, formerly NERAES) - cooperating with Connecticut, Delaware, District of Columbia, Maryland, Maine, Massachusetts, New Hampshire, Rutgers University, Cornell, Rhode Island, Vermont, Virginia Polytechnic Institute and State University, and West Virginia.
- Regional Apiculture Project - cooperating with New Jersey, Maryland, and Delaware.
- Mid-Atlantic Horticulture Meetings held very February in Hershey, PA in cooperation with the northeast states.

In addition, we participated in the following assessment programs:

- The NASULGC assessment for ECOP
- The National Center for Diversity Assessment
- The Northeast Dairy Practices Council
- Northeast Pasture Consortium
- Northcentral 4-H Curriculum Committee

With the start of the new five-year AREERA Plan of Work on October 1, 1999 Penn State Cooperative Extension plans to continue to cooperate in the above efforts, and, in addition, to enter into formal agreements, letters of memoranda, contracts, etc. with the above schools and with others to jointly collaborate toward objectives and be involved in successful outcomes toward solving problems that concern more than one state. We will monitor these activities to ensure that we are meeting the legal requirement of AREERA to commit two times our FY1997 baseline percentage, as identified in collaboration with CSREES, toward multi-state activities. Our Director of Finance and Administrative Services is working with CSREES Policy and Program Liaison Staff to determine the accounting guidelines necessary to document our multi-state activities in upcoming reports.

Integrated Research and Extension Activities

SECTION 5. INTEGRATED RESEARCH AND EXTENSION ACTIVITIES

Penn State University, under President Graham Spanier, has set a goal of becoming "the premier university in the nation in the integration of high-quality teaching, research, and service." The University's strategic plan, *Academic Excellence: Planning for the Twenty-First Century* states, "We seek a University that is passionately committed to excellence and academic achievement, embraces diversity and rejects intolerance, encourages discovery and the creation of new knowledge, serves the Commonwealth, and leads the nation in the integration of high-quality teaching, research, and service."

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. The College of Agricultural Sciences Strategic Plan Update for July 1, 1997 - June 30, 2002 states:

Research programs contribute to the education and outreach missions of the College by covering a broad range of scientific issues, from questions of fundamental science to the mission-oriented research dedicated to helping people, communities, and industries solve problems. Close integration with the College's cooperative extension program creates a research program that is both relevant and responsive to the needs of society. . . . These ongoing research efforts and related education programs are vital to assuring profitability of American food and fiber systems through internationally competitive agricultural production, a safe and secure food and fiber system, harmony between agriculture and the environment, quality of life of citizens, and well-prepared graduates.

At the Dean's level, each associate dean has responsibility for cross-functional initiatives and activities. The Dean and Associate Deans meet regularly to discuss program initiatives, including thorough review of all faculty appointments and appropriate research/extension appointment assignments. Each of the twelve academic department heads has an appointment split evenly between extension, research, and resident education. All academic department heads, Regional Directors, State Program Leaders, and the Director and Associate Director meet together monthly as the *Extension Program Administrators* to discuss current and future issues in integrated extension and research programming.

As discussed in the section on "Program Review Process," the new Penn State Cooperative Extension State Plans of Work have been developed by integrated, multidisciplinary teams of field-based educators and University Park faculty. These 25 teams, with 115 faculty and field-based educators participating, have provided an additional mechanism for communication and interaction among staff who deliver educational programs in the field and faculty who are conducting research which undergirds the programs.

The majority of faculty with extension responsibilities in Penn State's College of Agricultural Sciences also have appointments in research and/or teaching. These faculty members conduct basic and applied research, along with their colleagues, which inform and shape extension

programs. Field-based staff, with concurrence of their regional directors, have opportunities to take part in applied research projects which enrich local extension programming.

Of 285 faculty and staff at University Park who are supported with extension funds, 216 have split extension and research appointments. Funds supporting the extension portion of these positions total about 20% of our Smith-Lever appropriation. In addition to the integration of extension and research activities in the appointments of faculty and staff, the College also integrates extension with resident education, with 170 extension faculty and staff at University Park having appointments that includes a resident education component.

The integrated work represented by faculty and staff split appointments, along with the extension funds which support integrated research and extension program activities within the state and across state boundaries, should more than meet the 25% AREERA requirement. Our Director of Finance and Administrative Services is working with CSREES Policy and Program Liaison Staff to determine the accounting guidelines necessary to fully document our integrated research and extension activities in the annual reports for this five - year plan.