WASHINGTON STATE UNIVERSITY EXTENSION

World Class. Face to Face.

Annual Report of Accomplishments and Results
FY03

Washington State University Extension

Table of Contents Page Number

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A. PLANNED PROGRAMS

1. National Goals

GOAL 1: An Agricultural System that is Highly Competitive in the Global Economy.
Washington State University (WSU) Extension has once again opted to include all our agricultural programming under ***GOAL 4: Greater Harmony Between Agriculture and the Environment***. This does not suggest a lack of concern for production agriculture, but a change in perspective. Indeed it is because we realize the challenges facing the agricultural community that we do not separate out these two important goals. For agriculture in the state of Washington, competitiveness in the global economy requires that the agricultural community address environmental issues to be accepted by Pacific Rim nations as well as regional constituents.

We recognize that some of our programmatic impacts fit Key Themes identified under Goal 1. Those reports are included in Goal 4 and identified as Key Theme "Other" with the Goal 1 Key Theme identifier in parentheses.

GOAL 2: A Safe and Secure Food and Fiber System. To ensure an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention, and education.

Overview
The goal of Washington State University food safety education is to ensure an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention, and education. We also help Washington residents to obtain knowledge and adopt behaviors that reduce risks of illness from food borne pathogens. We continue to focus on food safety education from farm to table by convening food safety educators, researchers, and regulatory officials from the Pacific Northwest at the annual Food Safety Farm to Table Conference.

Through USDA funded research, Washington State University Extension educators have developed key food safety messages for consumers. Educational programs are directed to address the following four major control factors that enable consumers to reduce their risk of food borne illness:

- Cook foods adequately
- Avoid cross-contamination
- Keep foods at a safe temperature
- Avoid food from unsafe sources

Much of our state's food safety education is targeted to specific groups. Home food preservers are a primary targeted audience. This past year, an audience of 15,127 food safety contacts were made. Of these contacts, 5,045 encountered situations that had the potential to cause food borne illness. In 2003, 183 volunteers contributed 844 hours of outreach to families on both safe food preservation and food handling topics. If valued at $16.54 per hour, the volunteer contribution of time totals approximately $14,000. Those volunteers reached a reported audience of 5,045. As part of their volunteer service, volunteers tested the accuracy of pressure gauges in several counties. Of the gauges tested, only 33 percent were found to be accurate and acceptable to use without adjustment. As a result of their efforts, approximately 29 families avoided the direct risk of botulism by the detection and recalibration of inaccurate gauges.

Extension educators focus much of their time on food safety education for food producers and processors. They have received certification as Hazard Analysis Critical Control Point (HACCP) instructors and are conducting numerous HACCP and sanitation workshops for food processors and processors of seafood,

meat, canned foods and fresh produce. In 2003, contacts with 1,067 commercial and industry training participants were reported.

In summary, the number of participants reported statewide in food safety programming was 15,148 people. Twenty-five Extension educators reported on food safety activities and accomplishments.

Sources of Funding and FTE for Goal 2

FTE Smith-Lever 3b and 3c	=	.40 FTE
FTE Smith-Lever 3d	=	0 FTE
Federal Extension	=	$91,888
Non-Federal	=	$885,092
Other Federal	=	$72,217
TOTAL	=	$1,049,197

Key Theme- Food Handling

a. People are most like to adopt recommended food handling behaviors when the education is targeted specifically toward their needs. Those infected with HIV/AIDS are at higher risk of food borne illness because of compromised immune systems. A second target audience is consumers whose diet includes home cooked thin pieces of meat, such as ground beef patties. WSU Extension partnered with three other universities to pursue funding for the development of food safety education for these audiences. In 2003, the team piloted and published a set of materials called "Now You're Cooking" to address the latter audience. Focused on use of food thermometers, 250 teachers and Extension educators received curriculum kits and in turn reached over 3000 people with the information. The materials were introduced through a satellite broadcast and a video was produced for use by teachers. Distance technology was also used to disseminate the materials developed for the HIV/AIDS population via a distance education course on food safety education for high-risk audiences. Focus groups were also conducted with HIV infected people to evaluate the relevance of print materials (two publications).

b. Impact: Of the 800 people completing evaluations for the "Now You're Cooking" materials, more than half viewed the videos and 80 percent read written materials. Twenty-five percent reported immediately changing practices by using a thermometer when cooking meat patties. Of the 37 students completing the course on food safety for high-risk audiences, all reported significant gains in learning. Since the HIV materials were published in December 2003, most distribution and related evaluation will occur in the 2004 program year.

c. Source of Federal Funds: USDA grant funds: Reducing Risk with Food Thermometers/Food Safety for the Immune-Compromised/Food Safety Education for High-Risk Groups, $140,000; also Smith-Lever Act and state matching funds.

d. Scope of Impact: Multistate Extension—ID, CO, OH, and WA

Key Theme – Food Safety
Key Theme – HACCP
CSREES Focus Area – Food Safety

a. Improper seafood handling and storage by fishermen, processors, retailers, and consumers causes loss of quality, reduced economic value, wastage, reduced sales, and potential safety problems. Poor quality products cost the Washington seafood industry over $4 million annually in lost sales and wastage. Seafood quality continues to be an impediment to increased per capita seafood consumption

in the Northwest. Seafood safety issues are of great concern to consumers, and retail handling of seafood products is poor, which results in low quality products and reduced sales and profitability. Improved temperature control, handling, and sanitation are needed at all levels of harvesting, processing, and distribution to maximize the economic value of the catch, reduce contamination, increase product safety, and improve the marketability and consumer acceptance of Washington's seafood products. New U.S. Food and Drug Administration HACCP regulations are now in effect for seafood processors. Extension educators provided technical assistance and information on HACCP quality control to three seafood processors, and participated in regional seafood safety and quality program development. Extension volunteers used the information and skills to train over 100 consumers in seafood safety and quality issues.

b. Impact: 100 volunteers and consumers participating in training sessions improved their knowledge and skills in seafood safety, quality control, and utilization techniques. Processors, commercial fishermen, and retailers reported improvements in sanitation techniques and temperature control.

c. Source of Federal Funds: Smith-Lever Act, State matching, County

d. Scope of Impact: Multistate Extension – AK, OR, and WA

Key Theme – Food Safety
Key Theme – HACCP
CSREES Focus Area – Food Safety

a. Although the United States food supply is among the safest in the world, an estimated seven million illnesses, 3,000 deaths, and billions of dollars in losses are caused by food borne diseases each year. Educating the food industry and its regulators through food safety training programs is an effective means of reducing food borne illnesses. More than 825 people participated in food safety training directed toward food processors and regulators.

b. Impact: HACCP was implemented in more than 190 operations and more than 140 people attended and successfully passed the Better Process Control Schools (BPCS) examinations. In addition, 85 percent of the successful BPCS participants implemented course principles in their operations.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: Multistate Extension – HI, ID, MT, OR, and WA

Key Theme - HACCP
Key Theme – Other (Goal 1: Animal Production Efficiency)

a. The White Trail Hog Pool Cooperative is an active organization of commercial hog operators and managers from Central Washington. Over 10,000 hogs are produced and marketed annually through this cooperative to the highly competitive Japanese Export market. Educational programs concerning production and quality assurance issues are essential for these producers to remain competitive in this evolving market. Quality assurance awareness and implementation of good management practices is critical for these producers to maintain this premium market. In 2000, a positive drug residue test jeopardized the future of the cooperative.

b. Impact: 50 producers implemented effective record keeping systems to track treated animals and medicated feeds. Producers used carcass data to plan future genetic selection, nutrition management, and marketing system. Of those tested, 67 percent of the carcass hogs were identified as Washington

Hogs of Merit. Three hundred and thirty-five adult and youth hog producers certified at Level 3 of the national Pork Quality Assurance (PQA) program. In addition, packing plants utilized health records in HACCP plans.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

Key Theme – HACCP
Key Theme – Other (Goal 1: Animal Production Efficiency)

a. There are no USDA, WSDA, or DNR offices in San Juan County, and few local resources exist for agricultural and forest producers to access technical or management information other than WSU. Local and regional markets for farm products as opposed to commodity markets are a key factor for profitable agriculture. Limited value added processing and no USDA inspected slaughter facilities existed in the county, accessibility to USDA inspected facilities on the mainland was not cost effective for small producers, and no alternatives existed for transporting livestock to and from the mainland other than Washington State Ferries. Long waits for ferry transportation between the islands and the mainland jeopardized the health and marketability of valuable livestock and impacted the livelihoods of producers. Extension educators provided educational services in marketing, food processing and safety training that supported the development of the San Juan County Mobile Processing Unit (MPU).

b. Impact**:** Since the MPU was completed and given a grant of inspection in early 2002, at least two other communities have received grants and other government funding to develop their own USDA Mobile Livestock facility. A number of other communities are in the needs assessing stages. One farmer is now privately consulting with at least two other communities to assist in design and construction of new USDA Mobile processing units. Retail cuts of local USDA inspected meat were more available at island farmers markets including additional vendors selling locally produced value-added styles like sausage. At least one producer has reported that net profit for livestock sales has increased significantly with the ability to direct market local meat products. The development of the new USDA Mobile facility that led to the organization and operation of the Islands Grown Farmers Cooperative (IGFC) that serves four counties increased its membership by 45 percent which made the coop more economically viable. The Ferry Priority Livestock Loading system for producers, 4-H livestock clubs, and other commercial accounts to transport livestock increased animal safety and saved producers thousands of dollars in potential livestock losses that would otherwise happen due to livestock stress during long waits for available ferries.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

GOAL 3: A Healthy, Well-nourished Population. Through research and education on nutrition and development of more nutritious foods, enable people to make health-promoting choices.

Overview
Washington State ranks fifth in the United States for the percentage of people experiencing severe hunger. Rates of hunger are particularly high for female-headed families with children, in which USDA research documents food insecurity rates exceeding 30 percent. Nutrition education with low-income families with children can have lifetime impacts, making it possible for participants to live healthier lives and be productive members of society. In consideration of the needs and potential impacts, the target audience

for nutrition education in Washington is low-income families, including people receiving or eligible for food stamps and children receiving free and reduced price lunches at school.

At WSU Extension, both the Expanded Food and Nutrition Education Program (EFNEP) and Food Stamp Nutrition Education Program (FSNEP) are branded under the name *Food $ense.* While the number of counties offering EFNEP is stable, FSNEP sites continue to expand. The total FY04 contract increased to a $6.9 million budget (from $4.5 million in FY03).

The *Food $ense* program was conducted in 18 counties and directly reached 29,188 people in 2003. Of that number, 32 percent were adults and 66 percent were youth. Eighty-two percent of those were food stamp eligible, and 78 percent were persons of color. Translators and interpreters are provided on an as-needed basis. Primary educational activities were direct personal contacts with program participants in one or more lessons, though nutrition messages were also disseminated through mailed newsletters and recipe sheets distributed by partnering agencies. The majority of youth were reached through school enrichment programs that averaged nine classroom visits. Over 425 public agencies including county and city governments, local schools and public agencies partnered with extension in program planning and delivery and provided in-kind contributions of staff time, meeting space and equipment to *Food $ense*.

In addition to direct educational contact, another strategy to improve the nutritional status of low-income families was public education to create consistent nutrition messages. The Nutrition Education Network of Washington, a strategic alliance of public and private concerns with leadership from WSU Extension, promoted family mealtimes among low-income families as a primary social marketing message. In 2003, an electronic newsletter called Take 5 was sent to 350 professionals in nutrition-related careers each month. The Eat Better, Eat Together (EBET) Toolkit was disseminated through the Network's website (www.nutrition.wsu.edu). This series of eleven reproducible flyers offered ideas for promoting the EBET theme in communities. The campaign generated considerable state and national attention. The Governor declared October 2003 as EBET month in Washington State, resulting in media coverage on major regional networks. Radio Disney and Chase's also picked up the EBET message in national outlets.

WSU Extension faculty also addressed priority health issues in their programming. Diabetes education was a primary state focus in the health arena. Approximately 400,000 Washingtonians (six percent) have been diagnosed with diabetes, one of the leading causes of heart disease, stroke, kidney failure and lower limb amputations. Of people over age 40, approximately 12 percent of whites, 25 percent of African Americans, 50 percent of Native Americans and 30 percent of Latinos in the state have diabetes. One third to one half of people with diabetes are generally unaware that they have it, increasing the risks of long-term complications. The Living Well with Diabetes project was designed to reduce the risk of diabetic complications and to help people learn how to better manage the disease. The target audiences was people who are most at risk of complications, e.g., those who have diabetes but are not currently seeking regular medical care for the disease. In 2003, the number of participants in the program grew about 40 percent over the previous year with 1,025 reached in 14 counties. Of these, 61 percent were white, 5 percent African American, 13 percent Latino, 13 percent Native American, 2 percent Asian and 6 percent Slavic. The average education level was 12 years or more for all groups except Latinos, whose education averaged eight years. The average age was over 55 for all groups except Latinos who averaged 52 years of age. Over 60 percent of the Latino and Slavic groups had incomes less than $11,600.

The Living Well with Diabetes program is one effort included in WSU Extension's Partnership for Diabetes Awareness and Education. External partners include the Joslin Diabetes Center at Harvard University, University of Hawaii, New Mexico State University, USDA/CSREES, Northwest Kidney Center and the American Heart Association. Internal WSU partners are the Colleges of Nursing and Pharmacy.

Sources of Funding and FTE for Goal 3

FTE Smith-Lever 3b and 3c	=	0 FTE
FTE Smith-Lever 3d	=	29.98 FTE
Federal Extension	=	$1,365,188
Non-Federal	=	$3,703,269
Other Federal	=	$14,479
TOTAL	=	$5,082,936

Key Theme – Human Health

a. The Diabetes Awareness Education project began in 1999 in collaboration with Joslin Diabetes Center at Harvard University in Boston Massachusetts. The long-term goal of this project is to reduce the incidence of complications from diabetes. In its third year of implementation, the Living Well with Diabetes program operated in fourteen counties (more than doubling over the previous year's twelve sites). Sites included an inner city urban area with a high percentage of African American residents, communities with majority Latino residents, and a tribal reservation setting. The 1.5-hour initial program includes screening for A1c, blood pressure and cholesterol. Participants learn about the screening tests and what actions they can take to reduce the risk of complications. The initial class is then followed by four weekly sessions on food, nutrition and physical activity. A follow-up evaluation is conducted three months after participation.

b. Impact: In 2003, the post program evaluation results demonstrated that all groups improved their A1c. Forty-three percent had blood glucose values above A1c 7.0 at enrollment, but only 38 percent had values that high after three months. The greatest improvements were in African Americans and Latinos who had the highest initial A1c readings. Blood pressure and LDL cholesterol measurements showed similar declines from enrollment to three months post-program. The evaluation also documented that the program increased people's knowledge about diabetes, their knowledge about what to do to manage their diabetes, their willingness to seek medical care, and their confidence to manage their diabetes.

c. Source of Federal Funds: Congressional appropriation through USDA/CSREES of $100,000

d. Scope of Impact: Multistate Extension—NM, WV, HI, and WA

Key Theme – Human Nutrition
CSREES Focus Area – Nutrition with emphasis on obesity and behavioral issues

a. WSU's *Food $ense* Program (Food Stamp Nutrition Education) provides food and nutrition education for food stamp recipients in partnership with a variety of community-based organizations. In 2003, 18 counties supported projects promoting good nutrition and physical activity, food safety and improved utilization of food resources.

b. Impact: In 2003, total number of contacts made was 187,817. Individuals reached directly totaled 29,188. Of the 4,767 adults who were evaluated after a single-event educational program:
   - 94 percent were motivated to improve food safety practices;
   - 85 percent were motivated to select more nutritious low-cost foods;
   - 90 percent were motivated to increase the variety of foods in their diets (a marker of good nutrition).

Of the 1,319 adults who participated in a series of classes and completed follow-up evaluations:

- 60 percent improved one or more nutrition practices;
- 65 percent improved one or more food resource practices;
- 87 percent improved one or more practices in food safety;
- 45 percent reported that they ran out of food less often.

c. Source of Federal Funds: Smith-Lever Act, County, City governments.

d. Scope of Impact: State specific

GOAL 4: Greater Harmony Between Agriculture and the Environment. Enhance the quality of the environment through better understanding of and building on agriculture's and forestry's complex links with soil, water, air and biotic resources.

Overview

Washington State University Extension has provided education that has increased agricultural profitability and competitiveness while preserving or enhancing natural resources and the rural environment. Multistate programs continue with partnerships in Idaho, Oregon, and other states that have yielded significant improvements to extension programming in risk management, forestry, and in potato production.

We have built interdisciplinary research and extension teams to address Integrated Pest Management (IPM) and potato production as well as extension, research, and teaching partnerships through our Center for Sustaining Agriculture and Natural Resources. That center now has a small farms coordinator and a dryland cropping system specialist. The small farms program has added a "Farmers Market" educator and a pest management educator for small farms. In potato production, Extension educators work with researchers in California, Colorado, Idaho, Texas, and Washington to test the adaptability of new cultivars and extend that knowledge to Washington potato growers.

In sustainable agriculture, 5,500 producers adopted decision support systems that recognize and evaluate the economic, environmental, and social implications of alternative plant and animal production systems. Producers managed approximately 2,600,000 acres under improved sustainable stewardship practices. Natural resource owners and managers attended 400 programs reaching 47,500 people. Over 21,800 people increased their knowledge and skills in sustaining natural resource systems such as forests, windbreaks, range, and wetlands resulting in practice changes that sustained benefits on over eight million acres.

Washington's producers continued to build upon past successes in IPM. One hundred and two (26 newly validated) prevention-based pest management practices for use on targeted cropping systems may reduce the pesticide load in the environment to safeguard human health and the environmental health of Washington State. Approximately 117 public forums involving joint sponsorship or collaboration enhanced multi-party collaborations and the exchange of information among public, private, and non-profit stakeholders in order to foster the development and adoption of IPM strategies and systems among selected audiences. Educational programs to improve the use of IPM strategies and systems increased the range of benefits and opportunities achieved by enterprises and individuals.

Extension is making a difference in the establishment of local food systems that are relevant to communities and enhance the economic, environmental, and social well being of those communities. We have improved our understanding of the value and characteristics of the major components of Washington's existing and emerging agriculture and food systems. This has led to programming that led

to the 182 new venders were added at farmers markets. In addition, 53 new community garden participants, most of whom were low income, facilitated the entry of people into local food production systems, both commercial and non-commercial. Last year, 23,300 people visited 92 farms in harvest celebrations that connect consumers with food producers on their farms.

Extension continues to provide education for the protection and improvement of Washington's water resources including flora and fauna water quality and quantity. Extension provided technical expertise and educational programs in pollution prevention to reduce water resource degradation from contaminants such as failing onsite sewage systems, household hazardous waste, manure pathogens, nutrients, pesticides, and soil erosion. Subsequently, 30,000 Washington residents now have a greater understanding of the interdependence of water resources, human health, and the ecology of their region and 3,300 program participants made changes in practices to protect water resources and aquatic life.

Pioneered by WSU Extension faculty in King and Pierce counties in Washington State 30 years ago, the Master Gardener volunteer concept has spread to every state, Canada and other countries. 2003 marked the 30th anniversary of the WSU Master Gardeners: The Original Master Gardeners since 1973™ Program.

Sources of Funding and FTE for Goal 4

FTE Smith-Lever 3b and 3c	=	6.55 FTE
FTE Smith-Lever 3d	=	2.73 FTE
Federal Extension	=	$1,793,511
Non-Federal	=	$13,441,999
Other Federal	=	$2,377,756
TOTAL	=	$17,613,266

Key Theme – Endangered Species

a. Whidbey and Camano Islands sit in the middle of the Puget Sound waterway traveled by migrating northwest salmon. The shorelines of the islands are major spawning grounds for surf smelt, herring and other fish that play an important part in the diet of migrating salmon. Areas identified as near-shore habitats of forage fish automatically fall under a state law compelling preservation and conservation of those areas. The Washington State Salmon Recovery Funding Board, Northwest Straits Commission, and Department of Fish and Wildlife hope to find out why salmon runs have declined and identify solutions for protecting their waterway.

b. Impact: Extension Beach Watcher volunteers are helping the Island County Marine Resources Committee map the shoreline habitats and spawning grounds of Pacific herring, surf smelt and other fish that are an essential part of the diet of migrating salmon. The volunteers divide stretches of beach into search sections. On their hands and knees they sift through damp sand looking for evidence of tiny fish eggs. If they find any, the sand is bagged and taken to a state lab for closer inspection. About 95 percent of the county's 212 miles of shoreline has been mapped, and 20 additional miles of shoreline have been added that are getting special protections.

c. Source of Federal Funds: Smith-Lever 3(b) and (c), State matching

d. Scope of Impact: State specific

Key Theme – Forest Resource Management
Key Theme – Goal 5 – Jobs/Employment

a. Forests cover 23 million acres in Washington, more than half the state. About 64 percent of the forestland is owned or managed by the federal, state, tribal or local governments. The remainder is privately held. Small forest landowners in economically depressed forest-dependent communities are looking for new products to generate income to support their families and hold onto their land. Special forest products, including mushrooms, medicinals, floral greenery, Christmas greenery, wild edibles, craft materials and native landscape plants are a $313 million industry Washington. As new products are identified, new educational and research programs are needed to ensure the sustainability of the forests to produce the raw materials and give people the skills they need to manage the natural resource and operate the enterprises that benefit from them.

b. Impact: WSU Extension helped create jobs in depressed, timber-dependent communities in Washington. WSU Extension educators worked with the U.S. Forest Service, Makah Tribal Government, Washington Farm Forestry Association, the Washington Forest Protection Association, and the Washington State Department of Natural Resources to develop a plan to integrate special forest products into traditional forestry management plans; thus giving landowners and small business owners the knowledge and skills to manage a sustainable special forest products business. Best management plans were developed for 42,000 acres of Washington State Department of Natural Resources lands. In addition, a total of 1,272 non-industrial forest land managers and three commercial land managers developed forest management plans that include sustainable production of special forest products. Twenty-two new family businesses were organized over the past year. In addition, 11 businesses were started in Alaska, British Columbia, California, Idaho, Montana, and Oregon. The companies have 87 full and 253 part-time employees with a total gross annual income of the firms exceeding $1.9 million.

c. Source of Federal Funds: Smith-Lever 3(b) and (c), State matching

d. Scope of Impact: Multistate—AK, BC, CA, ID, MT, OR, WA

Key Theme – Integrated Pest Management (IPM)
CSREES Focus Area – IPM

a. Farmers and agriculture consultants need new, integrated methods of crop protection to address pest resistance to pesticides; pest resurgence and secondary outbreaks; loss of previously registered pesticides (notably dinoseb, parathion, and mevinphos); and increased public awareness and concern about pesticides usage. Excess pesticides must be disposed of in an environmentally sensitive manner. Extension educators collaborated with the Washington State Department of Agriculture to promote the environmentally safe disposal of waste pesticides.

b. Impact: Over 1.5 million pounds of unusable pesticides was collected and properly disposed of by WSDA statewide.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management
CSREES Focus Area – IPM

a. West Nile Virus (WNV) surprised health officials by its rapid spread across the country since the first case in New York in 1999. It is now considered endemic by the Centers for Disease Control. Still, it is new to Washington State with only four animal cases reported in late in 2002. State and national health officials predicted human cases in Washington during 2003 triggered heightened public concern about human health, wildlife and domestic animal health, and mosquito control.

b. Impact: The WNV educational effort conducted by WSU Extension in 2003 reached more than 400,000 households in Washington State, and resulted in widespread vaccination of more than 62,000 horses. Extension educators helped to create regional and statewide response plans, outreach materials, and programs to reach landowners, horse owners, public officials, and pesticide applicators. Topics included mosquito biology and control, personal protection and human health, animal protection and health, wildlife, pesticide use and safety, integrated pest management, regulatory issues regarding mosquito control, and a Native American story about the origin of the mosquito. There were no human, horse, or wild bird WNV cases detected in 2003 in Washington State.

c. Source of Federal Funds: Smith-Lever 3(b) and (c)

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management
CSREES Focus Area – IPM

a. Tree fruits—principally apples, pears and cherries—are the biggest drivers of the economy in North Central Washington, bringing in about $700 million to four counties. Insect, disease, and weed management is a critical component in the production of these fruits. It costs growers in these counties about $28 million annually to control pests. The frequency and amount of product applied often can be reduced by employing the principles of integrated pest management. Timing and selection of methods is critical. Extension educators are needed to assist growers in determining proper IPM control methods and materials to reduce the frequency, expense, and effect of these control procedures.

b. Impact: Web-accessible pest management computer models developed by WSU Extension helped apple, pear and cherry producers improve timing of pesticide applications and contained weather data and the conversion of the data into information useful to growers and advisors. The Web pages receive more than 18,000 hits each year and are unlike others on the web which only report existing conditions in that they enable users to forecast future events and thus more accurately time pesticide applications. Information that calculated insect and disease development using existing or developmental models reduced the number and amount of sprays used to control critical pests and saved growers money. Reducing one spray per season saves local growers more than $3.6 million. The potential savings relative to reduced pest damage losses is at least $7 million for each 1/10 percent reduction in crop damage. Tree fruit pest management meetings and workshops were attended by a total audience of 2618 our of 3000 growers, advisors, and managers—21 percent of whom were Hispanic indicating that this presentation method is popular with that portion of the audience). Registered due to an Extension educator's research, Spinosad previously gained acceptance in the international market as a replacement for diazinon and azinphos methyl. A

form of spinosad that is acceptable for use in organic production was registered in 2003. The Extension educator proved this new form was effective, and that a new bait was both effective and practical for use in both conventional and organic orchards. These new choices greatly improve the effect of cherry fruit fly control in organic blocks, while reducing the cost of organic CFF control by over $1200 per acre.

c. Source of Federal Funds: Smith-Lever 3(b) and (c), State matching

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management
CSREES Focus Area – IPM

a. Washington is the nation's leading commercial raspberry growing state. Whatcom County is the leading agricultural county in western Washington, producing commodities with a farm gate value of nearly $242 million, according to the 1997 Census of Agriculture. Pesticides used by farmers and homeowners have been found in the groundwater and storm water in various locations in Whatcom County. Three federal agencies, including the U.S. Department of Agriculture, the Food and Drug Administration and the Environmental Protection Agency have jointly decreed that the most effective way to protect the environment from pesticides is through the adoption of integrated pest management (IPM).

b. Impact: Eight raspberry growers, with more than 2,000 acres in production, adopted new IPM practices that incorporated monitoring tools and reduced unnecessary applications of an organophosphate insecticide to avoid infestations of the beetle. This acreage represents about a fifth of the state's raspberry acreage. Twelve Master Gardeners in collaboration with the IPM project offered crane fly consultation and management to 43 homes in the Lake Whatcom watershed on Crane Fly Day—the larva of the crane fly feeds on the roots of lawn grasses. New residents of Lake Whatcom received site-specific IPM education through the Lake-Friendly Gardening Kit. In the wake of concern about the spread of West Nile Virus, the IPM program educated Whatcom County governments, private land managers and residents about mosquito management and biology using IPM strategies. Special attention was given to the conservation of water quality and responsible use of pesticides. The crane fly education effort resulted in no insecticide applications to participating lawns. Fifty-six percent of the recipients of the Lake-Friendly gardening kit, felt their attitude towards pest management changed and 52 percent now manage pests employing IPM strategies.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management
Key Theme – Other (Biological Control)
CSREES Focus Area – IPM

a. Western Washington supports one of the most abundant and diverse vegetable industries in the United States, with 40+ processing and fresh market vegetables and vegetable seed crops grown in the region. Mild, marine climate causes a prevalence of plant diseases that negatively impacts yield, quality, and production costs. The juxtaposition of commercial agricultural production within a large urban population area necessitates developing integrated disease control measures to minimize pesticide use. The ever-changing nature of vegetable diseases of both regional and national

significance makes a comprehensive, flexible vegetable pathology research program capable of delivering prompt and practical research results that focuses on integrated approaches in plant disease control essential. The export nature of this industry necessitates production of high quality, disease-free seed; therefore, disease management is critical to the success and viability of the industry.

b. Impact: 1,000 members of the agricultural community learned about new production and marketing techniques, issues related to farmland use, IPM, labor laws, protection of water quality, pesticide safety and registrations, government regulations, available resources, food safety, new organic rules, and ways to contact legislative sources. Potato growers were able to prevent major infestations of diseases and insects, thus saving a potential $50 million in crop losses. Growers, many of whom were not previously aware of the potential impact on farms, were kept abreast of growth management and regulatory issues through grower breakfasts, seminars, and personal contacts. Potato growers continue to work together in a joint marketing organization as a result of agent efforts to promote intra-industry cooperation and communication, thus increasing farm returns by $2-$3 million annually. The vegetable seed industry remained competitive in the face of major global competition and changes in local seed company ownership. Vegetable seed industry growers and seed companies in collaborative efforts were able to maintain needed pesticide registrations, prioritize research needs, and solve industry problems through Western Washington Seed Advisory Committee meetings.

c. Source of Federal Funds: Smith-Lever Act, Hatch Act, State matching

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management
Key Theme – Sustainable Agriculture
Key Theme – Other (Biological Control)
Key Theme – Other (Goal 1: Invasive Species)
CSREES Focus Area – IPM and Invasive Species

a. Northeastern, central, and western Washington counties are facing an invasion of non-native, noxious weeds, including Diffuse and Spotted Knapweed, St. Johnswort, Houndstongue, Orange Hawkweed, Meadow Hawkweed, and Dalmatian Toadflax. About 60,000 acres have been lost so far in Ferry County alone and 400,000 acres in Ferry, Stevens, Pend Oreille and Okanogan Counties and on the Colville Reservation are threatened. Non-native, invasive, noxious weeds decrease forage for wildlife and livestock, threaten biological diversity, increase chances for erosion, and decrease land values. The health of these grasslands is vital for wildlife, livestock, and people.

b. Impact: Biological weed control, in the form of insects, is replacing or supplementing pesticides in northeastern, central, and western Washington as a means to manage invasive weeds that threaten native grasslands in nine counties, two reservations, and the western part of the state. Extension Educators worked with the U.S. Forest Service and county weed-board offices to expand the use of bioagents in northeast Washington to fight invasive weeds. Over 123,650 insects were released at 365 sites in Washington. Characteristics such as soil type, annual precipitation, slope aspect, and size of weed infestation were also recorded for future evaluation. This biocontrol project has resulted in a substantial reduction of diffuse knapweed over thousands of acres in the region. Native grasses and more desirable vegetation can be seen returning at several sites where insects have become well established. There is also a reduction in the application of pesticides on knapweed with a much larger long-term reduction when the rate of spread of the invasive species is reduced. This results in a

substantial decrease of expenditures for weed control and improved environmental quality as bioagents are self-perpetuating and reduce the need for repeated herbicide applications.

c. Source of Federal Funds: Smith-Lever Act, State matching, U.S.F.S, Tribal

d. Scope of Impact: State specific

Key Theme – Recycling
Key Theme – Water Quality
Key Theme – Other (Yard Waste/Composting)
Key Theme – Other (Goal 1: Organic Agriculture)

a. In 1999, WSDA investigators found symptoms of clopyralid damage in plants grown in compost from the Spokane Regional Solid Waste System. Similar symptoms were seen the following year in compost produced at Washington State University in Pullman. In 2001, samples from several composting facilities on the west side of the state confirmed that residues of the herbicide, which is used to control broadleaf weeds in lawns and cereal grains, the source of the problem. The herbicide, which breaks down slowly, was found in yard debris composts and manure-based products in Washington and other states at levels which could cause damage to susceptible plants. The Washington State Department of Agriculture implemented new rules in 2002 restricting clopyralid use. The rules were based in part on information developed by WSU.

b. Impact: WSU researchers launched a major effort to identify clopyralid problems, assess the potential for damage and keep compost users, the composting industry, and agency personnel informed of the latest information. Presentations were given to groups in Washington and Oregon and a Web site was created and updated frequently to provide current information. Researchers conducted bioassays and a garden demonstration trial, and determined the persistence of clopyralid applied to lawns under local conditions. In June 2003, the WSDA reported that clopyralid levels in compost had dropped by 88 percent. More than 300 composters, decision makers, and compost users were provided up-to-date information on clopyralid in compost. Gardeners, farmers, landscapers, educators and composters have scientifically based information on clopyralid in compost and are adopting new practices based on WSU workshops. Because of restrictions on clopyralid use and increased awareness by the composting industry, no problems related to clopyralid in compost were reported in 2003.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: Multistate Extension—ID, OR, and WA

Key Theme – Sustainable Agriculture
Key Theme – Other (Goal 1: Pasture/Rangeland Management)

a. Washington potato farmers are under pressure to reduce pesticide use and improve their stewardship of the land. Mustard green manures have the potential to meet these needs by replacing expensive soil fumigants and improving soil quality. Research was conducted on three farms and included two fumigant replacement trials, a nitrogen fertilizer response trial, a green manure variety trial, a mustard planting date study, and a mustard growth study.

b. Impact: The use of mustard green manures increased from 9,260 acres in 2001 to 23,620 acres in 2003. A majority of these acres will be planted to potatoes in 2004. If farmers replaced the fumigant metam sodium on all of these acres, farmers would save over $1.5 million (~$66 per acre) while improving the quality of their soil. The growers using green manures on these acres should begin to see improvements in their soil quality, their ability to manage soil-borne pests, and eventually increase profits. The success of this project, and the new seed company started to supply the mustard needed for these acres, have stimulated interest in California, Colorado, Idaho, and Oregon. In October, twenty-two seed dealers, crop consultants, and researchers visited our mustard fields and attended the mustard green manure field day. At least four research projects in California started as a result of the recent interest in mustard green manures among farmers there. Finally, an increasing number of farmers are experimenting with the mustard green manures preceding crops other than potatoes, even though we have done limited work in just dry beans and onions.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: Multistate Extension—CA, CO, ID, OR, and WA

Key Theme – Sustainable Agriculture
Key Theme – Other (Goal 1: Animal Production Efficiency)

a. Emphasis on selection of breeding stock is critical to the improvement of reproductive efficiency and meeting the changing consumer demands in size, leanness, safety, wholesomeness, quality, and consistency. In order for the livestock industry to supply consistent high quality meat products, producers must know the carcass and growth performance of their livestock. Providing feedback on these heritable traits allows producers to make better selection decisions, which in turn can make producers more competitive and profitable, and ensure the sustainable animal agriculture.

b. Impact: The top 75 percent of the performance tested bulls were sold through the Washington Cattlemen's Association (WCA)/WSU All Breed Bull Test Sale, which has gained the reputation of being one of the best bull test and sales in the Pacific Northwest and generated $204,800 in gross sales in 2003. Bulls were sold to producers from six different states and two foreign countries. Approximately ten percent of the bulls sold went to seed stock producers as herd bulls. The WCA/WSU All Breed Bull Test results in total returns of over $285,600 to the beef industry and the State of Washington in added performance of the offspring of the bulls, feeding and veterinary costs, commissions, transportation, labor, and sales tax generated.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: Multistate Extension—CA, ID, MT, NV, OR, and WA

Key Theme – Sustainable Agriculture
Key Theme – Other (Goal 1: Animal Production Efficiency)
Key Theme – Other (Goal 1: Invasive Species)
CSREES Focus Area –Invasive Species

a. Goat production is one of the few potentially profitable ventures available for new or small-scale livestock producers in Washington State. Several factors that account for this potential profitability include the introduction of the Boer meat goat breed into the area, a tendency for multiple births, rapid growth rate, relatively low inputs to become established as a producer, low maintenance feed costs, goats' flexibility as browsers and foragers, and increased demand for goat meat by the public. Goat meat is a staple among many ethnic and religious groups, and the population of many of these

groups is growing throughout Washington. Challenges for Washington goat industry producers include poor communication and networking, no centralized markets, few USDA-approved processing plants, and lack of knowledge about consumers and goat production practices.

b. Impact: WSU Extension educators conducted an educational workshop on using goats to control weeds in which more than 80 people attended. Evaluations revealed high educational impact of presentations on grazing, weed control, management and business planning. Many producers reported specific management changes they would make as a result of what they learned. Two producers are pursuing developing new goat grazing business ventures. The goat meat retail survey revealed important information about the central Washington meat goat industry. It will be very hard for local producers to compete with the prices paid for frozen carcasses being imported from Australia and New Zealand. Also, consumers do not seem to prefer fresh, local meat to frozen, imported meat. This information will be used in grant proposals directed at developing markets for locally produced goat products and applied to other research into local goat marketing issues. The meat goat producers' survey revealed that producers face a variety of challenges, including marketing, access to knowledgeable veterinarians, becoming profitable, and other essential issues. WSU Extension Educators are working on programs to address these issues. The Klickitat County Noxious Weed Control Board Coordinator reported positive impacts on noxious weed populated areas after grazing by sheep and goats.

c. Source of Federal Funds: Smith-Lever Act, State matching, USDA-SARE

d. Scope of Impact: State specific

Key Theme – Sustainable Agriculture
Key Theme – Other (Goal 1: Plant Production Efficiency)

a. Production of wine grapes has more than doubled over the past decade making wine grapes Washington State's fourth largest fruit crop. Farm gate value of the grape industry rose from $69 million in 1989 to $133 million in 2001. The Washington wine industry now has more than 250 wineries with an economic impact of $2.4 billion on the state's economy and contributes to the employment of more than 11,000 people. This impact will increase as the wine industry continues to grow. Because of the industry's rapid growth and the migration of growers into grapes from less profitable crops, there is high interest in educational materials dealing with the establishment and production of grapes, and an increased need to raise the educational level of those already participating in the grape industry. As welcome as growth has been, wine grape growers and wineries have struggled to find and keep qualified employees. A 2001 survey of Pacific Northwest vineyards and wineries found that existing Washington vineyards anticipate a need for up to 141 managers and viticulturists and 56 management-level employees with four-year college degrees, 205 crew supervisors with a community college level of training, and 14,998 vineyard workers with less formal training over the next five years.

b. Impact: WSU appointed director of the viticulture and enology program and is in the process of hiring five new faculty and developing new courses including a new viticulture and enology option in its horticulture program. This degree option is unique in the Pacific Northwest and serves the needs of an expanding industry. Articulation agreements have been worked out to provide a seamless transfer of students from Yakima Valley Community College and Walla Walla Community College to WSU to enable the students to complete a four-year degree in viticulture or enology. WSU is expanding non-credit offerings by offering professional certificate programs in viticulture and enology to fulfill the need for

continuing education for field workers, a large audience not satisfied by credit hour programs. All of the educational efforts are being coordinated by the Washington Wine Educational Consortium and administered by WSU.

c. Source of Federal Funds: Smith-Lever Act, Hatch Act, State matching

d. Scope of Impact: State specific

Key Theme – Sustainable Agriculture
Key Theme – Other (Goal 1: Plant Production Efficiency)
Key Theme - Integrated Pest Management

a. In 1998 Washington State Department of Agriculture (WSDA) added Skagit County to the list of quarantined areas for apple maggots. The quarantine prohibits the movement of homegrown fruit out of Skagit County to non-quarantined areas. It also puts into place stringent guidelines for commercial orchards. If apple maggots are found in traps within one-half mile of a commercial orchard, the orchard must have all fruit inspected. If a single maggot is found in the fruit, the fruit from that orchard cannot be moved out of the county unless it has spent a significant amount of time in storage. Since storage facilities are not available, and the industry is not yet large enough to support the building of storage facilities, the situation could cause extreme hardship to apple growers in Skagit County.

b. Impact: As a result of a public relations and educational effort, approximately 5,000 county residents learned about prevention and control of apple maggot, which resulted in a high cooperation from landowners in preventing apple maggot from reaching commercial orchards. Out of 24 sites found to threaten commercial orchards with apple maggot, 15 were controlled by growers using recommended pest monitoring and management techniques to prevent fruit loss. Apple maggot insects were effectively prevented from infesting commercial fruit in Skagit County, thus allowing growers to ship fruit to buyers and maintaining this $1 million industry.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

Key Theme - Sustainable Agriculture

a. Preserving local farmland and farmers requires an awareness by local consumers about the positive impacts of farming on local economies and landscapes. The public is often unfamiliar with farming and unaware of the environmentally sensitive management techniques used. Raising consumer awareness about their local food system will help maintain both local food systems and working landscapes in the urbanizing setting of Western Washington.

b. Impact: The Harvest Celebration event, started with one county in 1998 and grew to 12 counties in 2003, connects residents with local farmers and food systems. Approximately 23,000 people visited 92 farms to participate in organized tours and open houses of area farms, banquets/dinners featuring locally produced food prepared by local chefs, a sheep shearing demonstration, and other activities to celebrate local agriculture, local farmers, and food. Extension Educators leveraged over $40,000 in other resources including at least 1,000 volunteer hours, over $10,000 in donations/cash, and $17,000 of donated in-kind resources. In 2003, the team hired an artist and developed a Harvest Celebration poster sold at the farms. In a Clark County survey, 90 percent of all respondents said they bought local food products, but only 28 percent did weekly or more often. Half of the respondents buy on-

farm, 38 percent from produce stands, and 76 percent from the farmers market. Comments centered on the appreciation for farms in this urbanizing county. In Skagit County, 42 percent of respondents stated that they now buy more local farm products. People in Clark County tended to visit between two and three farms, similar to data from Skagit County. Unlike Clark County, Skagit County's event drew people from many more surrounding counties.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

Key Theme – Water Quality

a. Regulatory issues involving logging, possible threatened species habitat listings and listing of 19 area creeks being on the 303d list of impaired streams for high levels of coliform bacteria has kindled public interest in water quality issues. Volunteer citizen groups asked WSU Extension to partner with them to provide an Extension water quality program to empower citizens and volunteer groups to protect and improve their watersheds; develop a strong communication vehicle to share area water quality efforts, concerns and best practices; and to provide workshops addressing locally relevant issues. Drinking water quality and youth education was also identified as a priority. A four-year water quality education program conducted by Extension Educators, in collaboration with citizen groups, tribal agencies, and the county commissioners has raised the level of public understanding of watershed and water quality issues and has been successful in encouraging many residents who rely on private water sources to take steps to protect those sources from lead, arsenic and bacterial contamination. Eighty-two percent of the 7,000 residents of Ferry County in northeast Washington rely on small or private water supplies and sewage facilities. The nearest certified water testing lab is 123 miles distant, making water testing both inconvenient and expensive. Tribal and county health authorities had little knowledge of the overall quality of private water systems in the county.

b. Impact: A multi-faceted education program, The W.E.T. (Water Education and Training) Project for Ferry County and The East Half of the Colville Reservation, was created to reach every resident of Ferry County through staff and volunteer efforts. Water quality education has become a part of regular classroom curriculum, including stream-monitoring activities sustained by partnerships built through the project. Area residents are taking actions to protect and improve ground, surface and drinking water quality through their land management practices and daily activities. Volunteer citizen groups are launching many new projects to protect and improve water resources. The drinking water test results alerted the community of local drinking water concerns and ways to insure their drinking water sources provide safe, healthy water. Random pre/post assessments of youth programs were rated on a scale of 1 - 5, (5 being the highest rating). Results showed an increase of one point in the sampling average. More impressive is that pre-tests indicated that 69 percent of students understood the concepts and knowledge at levels 1-3, with the majority (46 percent) reporting their level of understanding at 3.79 percent of students reported understanding levels of 4-5 in post-tests, with 61 percent reporting at level 5. Student ability to perform and explain the activities supported these results. With this being the third year building watershed models with classes, impacts have been evaluated at the time of the project and in subsequent years. Post activity evaluations measured perceived pre-post knowledge and/or skills using topographic maps, effects of runoff on water quality, and the importance of vegetation and wetlands to water quality and quantity. Self -assessments of pre-knowledge averaged 56 percent, post knowledge averaged 91 percent. Students were further asked to identify ways to

reduce non-point-source pollution of soil erosion, fertilizers, detergents/chemicals, and animal waste. Responses included a wide range of answers indicating that many solutions were remembered. Students averaged 3.32 out of a possible 4. Teacher evaluations of the program supported student assessment results. Teachers indicated prior knowledge of 1.3, and post knowledge of 4.0. As much as three years following the project, classes were able to identify ways to reduce non-point source pollution of all potential pollutants discussed.

c. Source of Federal Funds: USDA CSREES 406 Water Quality Competitive Grant, State, Smith-Lever 3(b) and (c)

d. Scope of Impact: State specific

Key Theme – Endangered Species
Key Theme – Other (Goal 1: Managing Change in Agriculture)
Key Theme – Other (Goal 5: Supplemental Income Strategies)
CSREES Focus Area – Trade issues including Risk Management Education

a. In August 2002, the President signed into law the Trade Act of 2002. This Act established the Trade Adjustment Assistance (TAA) Program for farmers. Congress directed that any producer, prior to receiving benefits under this program, must receive technical information and advice from an Extension Service agent or employee as to how he or she might adjust to import competition. This program expands the traditional TAA to agricultural producers and fishermen. Once a commodity is declared TAA eligible by the Foreign Agricultural Service (FAS), producers of that commodity may be eligible for technical assistance provided by an Extension employee, cash payments up to $10,000 by the USDA Farm Service Agency (FSA), and education and training support from the Department of Labor. A number of commodities have been TAA certified and the list of petitions grows almost daily.

b. Impact: The USDA Cooperative State Research, Education, and Extension Service (CSREES) selected the Western Center for Risk Management Education at Washington State University Extension to develop technical information and advice and to deliver that information to producers in Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. The Western Center receives questions from across the entire country and has responsibility to coordinate all Extension TAA technical assistance programs in the Western Region. The Western Center has a Trade Adjustment Assistance Specialist to assist in the development of a communication network within our 13 states and the other TAA Regional Risk Management Education Centers; thereby ensuring coordination and the free flow of information about the TAA for Farmers. By coordinating with the CSREES program leader to develop systems applicable across regions, technical assistance package components reach across regional areas in program development and delivery when a commodity is produced in more than one region. The TAA Specialist identifies impacted producers of the certified commodity and works with marketing, farm management, and retraining experts to ensure that a useful Extension technical assistance package is prepared and an appropriate delivery mechanism for farmers is available. In 2003, 7,400 Alaska and Washington salmon fishermen in Alaska and Washington were educated allowing them access to TAA benefits.

c. Source of Federal Funds: USDA CSREES

d. Scope of Impact: Multistate Extension—AK, AZ, CA, CO, HA, ID, MT, NV, NM, OR, UT, WY, and WA

Key Theme – Urban Gardening

a. WSU Extension's trained volunteer Master Gardeners provide horticultural education and information to citizens of the state and offer advice on practices that help protect the environment and foster community stewardship. Volunteers receive between 50 and 60 hours of specialized horticultural education from Washington State University scientists and other experts. In return, they are expected to volunteer a specified amount of time providing horticultural instruction and answering questions from the public. Some volunteers write horticultural articles and columns that appear in local media, including the state's largest newspapers while others maintain home gardening pages on the World Wide Web. More than 55 percent of all WSU Master Gardener projects have a strong environmental theme. Examples include creation of wildlife habitat, selection of native and drought tolerant plants to conserve water and reduction of fertilizer and pesticide use. Master Gardeners also have helped reclaim landfills, and restore urban forests and wetlands. Their work reaches diverse audiences and fulfills diverse needs. For example, Master Gardeners teach Russian immigrants how to grow their own food, provide horticulture instruction to youth at risk for the juvenile courts system, and provide gardening instruction for seniors and the disabled.

b. Impact: Master Gardeners partner in more than 100 community gardens statewide and conduct plant clinics at more than 170 locations. They also network with many agencies to supply produce for food banks. WSU has over 80 volunteers that have served over 20 years each. This past year alone, over 3,100 volunteers donated 66,000 hours of time valued at nearly $1 million in support of the WSU Master Gardeners ™ Program and reached 298,000 adults and 15,000 youth. Of these participants, 58,000 increased their knowledge of horticulture and 19,500 reduced the environmental impact of their gardening practices by reducing pesticides and/or water use. In addition, 18,000 participants improved their well being by actively engaging their minds and bodies in gardening or improving their diet with fresh produce.

c. Source of Federal Funds: Smith-Lever Act, State, County

d. Scope of Impact: State specific

GOAL 5: Enhanced Economic Opportunity and Quality of Life for Americans. Empower people and communities, through research-based information and education, to address economic and social challenges facing youth, families, and communities.

Overview

Washington State University Extension offers a wide array of youth, family and community development programs that impact economic opportunity and quality of life for the people of Washington. Included are programs in the state Plan of Action that address 1) *strengthening life skills for youth and adults;* 2) *workforce preparation*; 3) *character education*; 4) *child care and parenting education;* 5) *building strong communities;* 6) *leadership for public decision making*, and 7) *responding to economic and social change*. In addition, Extension maintains its commitment to ongoing youth and family programs that are both volunteer-based and directly delivered by faculty and staff.

1) *Strengthening life skills* is a common goal of both 4-H Youth Development and Family Programs in WSU Extension. A variety of delivery mechanisms are used to reach youth and adult audiences with life skills education, including 4-H clubs and events, school enrichment, and volunteer outreach programs for adults. The primary audience for adult life skills programs is low-income families, and 4-H outreach includes at-risk youth (see **Key Theme- Life Skills** for details).

2003 marked the beginning of the second century of 4-H Youth Development across our nation. Washington State 4-H Youth Development focused on strengthening the foundation of its 4-H organizational systems for launching into the second century. Building upon our "Statewide Conversation on Youth" a 4-H Strategic Plan was developed in a broad-based consensus building process including stakeholders, staff, volunteers and youth. The product of this extensive process is the Washington State 4-H Strategic Plan which will be the operating blueprint for renewing our vision for and commitment to building a brighter future for our young people (See **Key Theme – Leadership Training and Development)**.

2) *Workforce preparation* and community development efforts are closely linked. The WSU Center to Bridge the Digital Divide (CBDD), with participation from a host of multidisciplinary WSU faculty and staff, moved forward with its mission to assist rural and urban underserved areas to overcome barriers to gaining the economic and social benefits of participating in the telecommunications revolution. Information communication technologies (ICT) including modern telecommunications, computers, software and digital applications represent a powerful tool to improve teaching and learning; economic opportunity, health care access and effective governance. Log on to http://cbdd.wsu.edu to learn about the 4-H youth tech corps and the E-safety, rural telework and high-tech high school programs of the CBDD (See **Key Theme – Jobs/Employment** and see **Key Theme – Workforce Preparation – Youth and Adult**).

3) *Ethics* refers to standards of conduct, standards that indicate how one should behave based on moral duties and virtues, which themselves are derived from principles of right and wrong. The Aspen Declaration on *Character Education* concludes that because the character and conduct of our youth reflect the character and conduct of society, "Every adult has the responsibility to teach and model the core ethical values and every social institution has the responsibility to promote the development of good character. Although the responsibility for developing the character of young is first an obligation of families, it is also an important obligation of faith communities, schools, youth and of other human service organizations." Character development is best achieved when these groups work in concert in entire communities. In order to satisfy the 4-H goal of developing youth to their greatest potential, we cannot overlook the importance of thinking, talking and modeling ethical behavior. Youth leaders are in an ideal position to help develop and nurture ethical character in young people (see **Key Themes – Character/Ethics Education** for details).

4) *Parenting education and childcare* programs in Washington state focus both on parents as a direct audience, but also caregivers and parent educators from a variety of systems. The Parenting Team gives leadership to these efforts, including the organization of an annual regional conference (see **Key Themes-Parenting**). The team also reviews and promotes new parenting curricula and program approaches (see their website http://parenting.wsu.edu for more details). As one example, the Strengthening Families Program is an integrated research and extension program that reduces the risks of substance abuse, violence and other maladaptive behaviors in adolescence (see **Key Themes- Parenting**). Out of School Time professional childcare providers need training and opportunities for professional development. Additionally, they need a forum for peer support and fellowship. In 2003, WSU 4-H contracted with the State of Washington Department of Social and Health Services to provide this professional leadership to child care providers. In 2003, over 2,500 school age care providers were trained, given information and technical support. A six-lesson mini-conference is conducted on a statewide rotating basis. Providers of childcare in Washington State are increasing their skills and knowledge of youth development through the efforts of 4-H professional outreach.

5) In the broader arena of *building strong communities*, Extension educators worked with hundreds of community leaders and organizations across the State on a myriad of projects (see **Key Theme – Community Development**). Examples include:

- Conducted an electronic survey of various rural small businesses regarding business assistance and training needs.
- Exploration of options for a comprehensive, citywide neighborhood commercial business district revitalization strategy in Spokane.
- Continued work with business development associations on possible "customer service center."
- Working with the Slavic community in northeast Washington on the development of new community centers.
- Provided Leadership Development workshops to citizens, volunteers, and board members.

6) *Leadership for public decision making* is enhanced through WSU Extension's Certified Public Officials program (CPO) and the Partnership for Rural Improvement (see **Key Theme – Community Development** and **Key Theme – Impact of Change on Rural Communities** for details). Last year, CPO continued to work with elected and appointed local government officials to provide required and elective training leading to a CPO certificate (see **Key Theme – Community Development** and see **Key Theme – Leadership Training and Development** for details).

7) In *Responding to Economic and Social Change***,** WSU Extension educators delivered educational programs, conducted action research and provided technical assistance across the spectrum of local, state and regional community/economic development. Although local, state and regional leaders may be well aware of the need for better information and analysis of trends and developments in order to diagnose and establish a sound understanding of their economy, how they work, how they are changing, and how they can be changed, they frequently lack the resources or staff trained to know how to access, organize, synthesize, analyze and interpret the pertinent data. Smaller rural and mid-size areas are especially limited in their capacity to initiate and undertake the applied research needed to establish a sound baseline of information and analysis from which to build a broad collective understanding of where they've been, where they are, and where they may likely be going.

To help address these realities, Extension faculty conducted 3,600 social, economic and demographic analyses on behalf of community groups, social service organizations, state agencies, local/regional economic development organizations and private businesses. Two hundred and sixty (260) organizations and individuals reported direct benefits for their work from these analyses. The majority of the analyses were provided through Northwest Income Indicator Project's website http://niip.wsu.edu.

Federal, state, and local natural resource enforcement agencies identify themselves as ineffective in resource protection using primarily enforcement methods. With the National Marine Fisheries Enforcement area leader, a team of Extension professionals is developing a curriculum to train natural resource enforcement officials in collaborative methods. In 2003, two highly successful offerings were conducted with 90 people in attendance.

WSU Extension faculty have established a web site http://www.ruralsoc.wsu.edu/outreach/outreach.htm> to speed access for persons planning local programs to be as current as possible on continually changing local area populations and social trends which often diverge from state or national trends. In addition, planners, agency personnel, and others continually need local information to justify programs and apply for grants. Six presentations, with nearly 2,000 in attendance, were given local agencies, organizations, or businesses requested social/demographic data or analyses to assess the need for programs, plan or implement programs, and write grants. More than 3,800 downloads of presentations located on the web site occurred in 2003.

In this past reporting year, WSU Extension provided businesses with technical assistance, helped in the creation of eight new enterprises and the retention and/or expansion of five businesses. In one notable area, the Extension food processing assistance program continued its work with the State's MEP, the Washington Manufacturing Service (WMS). In partnership with WMS, our food processing specialist worked with 78 different businesses in the Northwest providing assistance in market analysis and development, solving quality problems, regulatory compliance, and resolving food safety issues.

Sources of Funding and FTE for Goal 5

FTE Smith-Lever 3b and 3c	=	8.90 FTE
FTE Smith-Lever 3d	=	.35 FTE
Federal Extension	=	$1,611,195
Non-Federal	=	$9,119,708
Other Federal	=	$2,480,399
TOTAL	=	$13,211,302

Key theme – Life Skills

a. The Life Skills Evaluation System (http://ext.wsu.edu/lifeskills) is a web-based accountability tool used by extension faculty and staff to document the changes in knowledge and skills that result from participation in life skills education. Over the past year, faculty and staff have made greater use of the WSU Extension Life Skills Evaluation System, is a web-based accountability tool that allows the creation of standardized evaluation forms online. It allows local programs to evaluate all of the major (Conference, Forum and Know Your Government) 4-H statewide events. The data are then aggregated on a statewide basis. Significant participant progress is indicated in all eight-focus life-skill areas.

b. Impact: In 2003, 727 participants completed evaluations. About 78 percent reported gains in life skills as a result of program participation. The life skill area in which the largest changes were reported was *decision making*, where respondents scored .63 higher after participating in an extension program (on a 4 point scale). The specific indicator with the largest gain was *thinking about what might happen because of my decision* .71 on same scale) The general life skill area with the next highest level of positive change was *healthy lifestyle choices* (.56 gain on a 4 point scale). The indicator with the most dramatic change in this category was *managing stress positively in my life*, with an increase of .84. Other indicators for which large positive changes were reported were *getting others to share in leadership* in the leadership life skill area (.61), and *settling disagreements in ways that are not hurtful* (.57) in the communication category of life skills.

   In 2003, the Life Skills Evaluation System was used for evaluating the impact of National 4-H Congress. This use of our Life Skills Evaluation System impacted 46 states and Puerto Rico.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

Key Theme – Life Skills
Key Theme – Workforce Preparation – Youth and Adult

a. Research indicates that children who attend high quality after school programs have better peer relations, emotional adjustment, conflict resolution skills, grades and conduct in school compared to their peers who are not involved in after school programs (National Institute on Out-of-School Time Center for Research 2002). Many local youth are not involved in after school sports or other extra

curricular activities, and may be spending unsupervised time in high-risk settings. They likely have not had the opportunity to spend time in a forest setting to learn about forest ecosystems our local forest economy and an appreciation for the environment in which we live. WSU has been providing 4-H youth leadership programs in 16 counties through the Secure Rural Schools Act. Those after school programs teach job skills to youth as part of Forestry education.

b. Impact: Over 3,000 youth are currently enrolled in Secure Rural Schools 4-H programming across Washington. Evaluations indicated youth: 1) Developed self-confidence, communication, teamwork, problem solving and leadership skills among local youth after the WSU Extension 4-H Challenge curriculum; 2) Created a sense of community identity with the local forest industry and economy by involvement in forestry projects with local forestry and wildlife experts; and 3) Learned fundamentals of forest and environmental stewardship.

c. Source of Federal Funds: Smith-Lever Act, State matching, County Secure Rural Schools Act funds

d. Scope of Impact: State specific

Key Theme – Leadership Training and Development

a. Direct impacts of the implementation of the 4-H Strategic Plan include the development of a more collaborative management system and a strengthened professional development system for Extension workers. Funding cuts over the last ten years have depleted the resources available to Extension faculty and staff for professional improvement. Formal in-service professional development opportunities sponsored by WSUE are limited and low travel funds make it difficult for county faculty and staff to attend professional improvement events out of their geographic area. At the same time, WSUE is experiencing a growth in the diversity of staff delivering youth programming. This staff which includes 4-H and FL program assistants, out-of-school time program providers and volunteers (4-H, Master Gardeners, Clothing Textile Advisors), are often educated in specific subject matter but lack knowledge in youth development.

b. Impact: A Professional Development Action Team (PDAT) was created for 4-H professionals. PDAT began implementation of a three-year professional development training cycle based upon 4-H Youth Development Core Competencies. A total of 12 PDAT trainings were offered in 2003 (Effective Use of Technology in Youth Programs to Camp Management). New faculty and staff have reported that the 4-H Orientation increased their knowledge of the 4-H program nationally and statewide, improved their skills in teaching techniques, enhanced their understanding of experiential education and clarified their risk management responsibilities. The Welcome Packets and Points of Contact systems have facilitated the new personnel in increasing their capacity to seek out knowledge and feel a part of the state 4-H program.

c. Source of Federal Funds: Smith-Lever Act, state matching

d. Scope of Impact: State specific

Key Theme – Leadership Training and Development

a. A second major effort of the 2003 4-H year was the enhancement of the Washington State 4-H Residential Camping Program. The establishment of resident camps within the 4-H program dates back to the early 30's in some areas. In Washington State, many county and/or district entities have been sponsoring resident camps within their 4-H program for at least 50 years. However, with no clear direction, or oversight, many camps have been delivering a program without the support of

Extension personnel skilled in the area of resident camping. After careful review of the 4-H camping program, it was determined that a statewide effort was needed to ensure safe, fun and education camping experiences for our 4-H youth.

b. Impact: Statewide camp standards were developed, training completed, an operational manual of procedures was developed and a Camp Management Action Team (CMAT) was seated and is operational in its advisory role. As a result, all 28 4-H residential camps in Washington submitted risk management plans and were operated within CMAT operational standards, significantly improving the camping experience for the 906 youth who participated.

c. Source of Federal Funds: Smith-Lever Act, state matching

d. Scope of Impact: State specific

Key Theme – Leadership Training and Development

a. A third major endeavor founded in the Washington State 4-H Strategic Plan was the formation of the Volunteer Development Action Team (VDAT). The Washington 4-H Program boasts 9,286 adult volunteers and 976 youth volunteers. These volunteers are in critical need of orientation and ongoing skill building leadership training. All adult 4-H volunteers need basic knowledge and understanding of the 4-H youth development program in order to effectively serve as leaders of enrolled youth. A body of knowledge exists to support the knowledge and teaching methods 4-H volunteers need regardless of the delivery mode of 4-H in which they participate. Core competencies exist at the national level for 4-H professionals. Limited travel budgets encourage considering alternative distance delivery methods for training 4-H professionals and volunteers. Duplication of effort occurs because similar 4-H volunteer training is conducted in nearly every county. Appropriate distance delivery methods may reduce the duplication that now occurs and allow county 4-H professionals time to pursue other tasks.

b. Impact: To increase the effectiveness of volunteer training, the VDAT developed seven training modules and these modules are available online. Statewide training events have been conducted for professional faculty and staff and a uniform training methodology is being implemented across Washington. In 2003, 2,627 adult volunteers and 630 youth volunteers participated in training at the county/district/state levels and were direct recipients of the VDAT work. Better-trained volunteers are better prepared to meet the needs of an increasingly diverse and challenged youth population.

c. Source of Federal Funds: Smith-Lever Act, state matching

d. Scope of Impact: State specific

Key Theme – Children, Youth and Families at Risk

a. Agencies serving youth grades five through twelve are in agreement that their students/clients present a set of needs significantly different than those of 15 years past. A survey of school counselors, agency staff and ministers yields the following as causes for lack of success in school that need to be addressed; problems related to alcohol and drug abuse, teen pregnancy, low self-esteem, poor skill levels in communication and decision making, as well as a deterioration of family bonds. The Washington 4-H adventure education program, 4-H Challenge, is a complex system of 11 site based challenge courses, many portable challenge programs, two active rock climbing programs, a pilot long boating program, flat water canoeing, and backpacking.

b. Impact: 2003 saw the implementation of a 4-H Rights of Passage Program focusing specifically on using experiential education into successful adulthood. Over 11,500 Washington youth participated in Challenge activities in 2003. Typical outcomes included:
   - Safer schools and positive school climate are sited as outcomes of the Challenge program in two Mount Baker School district elementary schools. In Bellingham's Kulshan Middle School Crew program (200 youth) observe that incoming 6th graders are more connected to the school and feel there is amore positive school climate as a result of Challenge programs at the beginning of school A Kulshan Middle School service learning program used team building activities that resulted in a safe climate and improved teamwork among 400 students.
   - Meridian Primary School used a nine-month series of challenge activities with 400 students in grades K-3 to develop character and promote a safer and more positive school climate.
   - Whatcom Middle School staff used a day of Challenge activities to build teamwork within the school and develop improved networking among teachers.
   - The experiential educator playday improved the skills of professional educators, developed new professional connections and enhanced their skills working with youth.

c. Source of Federal Funds: Smith-Lever Act and private donation

d. Scope of Impact: State specific

Key Theme – Jobs/Employment

a. The WSU Center to Bridge the Digital Divide (CBDD) helps people, communities and institutions successfully access and apply information communication technologies to achieve these and other learning and development objectives. Specifically, CBDD facilitates collaborative partnerships, provides educational outreach, research and policy guidance resulting in:
   - Expanded access to necessary telecommunications infrastructure and critical information technologies among underserved populations.
   - Advancement of priority learning and development objectives within communities, regions and nations through knowledge of ICT and its potential applications.

b. Impact: The Rural Telework Project was completed in the fall of 2003. This project, funded with a grant from USDA, offers training and technical assistance to facilitate "win-win" business arrangements between urban-based employers and rural communities desiring to host job sites linked to urban employer needs through the use of telecommunications. The project included intensive efforts in three regions of Washington state as well as focused curriculum development and training projects in collaborations with four other states. Project staff have worked with more than 50 employers in the Seattle area to explore the concept of expanding their operations into rural Washington and have been successful in creating over 30 living-wage jobs in rural Washington. This project has saved one employer 20 percent in labor cost over Seattle, where it is headquartered and 55 percent in facilities costs.

c. Source of Federal Funds: USDA CSREES Rural Telework Project

d. Scope of Impact: State specific

Key Theme – Youth Development
Key Theme – Workforce Preparation – Youth and Adult

a. The Bill and Melinda Gates Foundation in 2002 funded the development of six new computer labs across the state and a mobile computer lab. This grant created the foundation for the Washington 4-H Technology Team and the resources for the expansion of the overall statewide program. In February 2003, a group of Extension educators, volunteer adults and teens sponsored a Statewide Techs conference. During the weekend conference, a visioning workshop was held with Washington youth (many involved in 4-H club programs and 21st Century 4-H after-school Programs). The youth identified service learning activities to take part in 1) teach people how to use and put together computers, 2) become a resource for everyone, 3) provide computer classes to ESL students, 4) repair seniors computers and build computers. They identified the following life skills as the most important skills developed through their technology work: teamwork, critical thinking, creativity, accepting differences, empathy, resiliency, character and imagination.

b. Impact: A county Request for Proposals (RFP) process was designed and sent out to Washington counties to apply for the funding to start a 4-H Computer Lab. After the six counties were selected, the project advisory team explored the suggestion of conducting a Computer Build workshop as a part of the program, instead of purchasing assembled computer. All six computer labs are open and are offering educational opportunities to youth and adults in their communities. A total of 52 computers have been built by young people and placed in the six labs.

c. Source of Federal Funds: Smith-Lever Act, State, County

d. Scope of Impact: State specific

Key Theme – Youth Development
Key Theme – Workforce Preparation – Youth and Adult

a. Another exceptional 4-H Workforce Preparation partnership has been the Collaborative Workforce preparation Program with AmeriCorps in three rural Washington counties. USDA Western Center for Risk Management predicts as many as one of five family farms will not survive the 2000-2005 agricultural crisis. Rural school districts report a net out migration of students. The shrinking rural economy has closed community businesses. Entire families will need to learn and relearn work and life skills to be prepared for a different workforce. The social infrastructure indigenous to the community needs strengthening to support its people's need to learn workforce skills. Employment Security and Washington State University recognize the disconnectedness of rural pockets of families, youth and community citizens from workforce preparation opportunities.

b. Impact: Through AmeriCorp 4-H staff members were recruited and trained a series of workforce preparation education seminars (Grant, Adams and Lincoln Counties). In 2003, 383 youth participated in training and 75 of those were successful in finding employment.

c. Source of Federal Funds: Smith-Lever Act, State, County, and AmeriCorp funding

d. Scope of Impact: State specific

Key Theme – Youth Development
Key Theme – Workforce Preparation – Youth and Adult

a. Workforce preparation is a strong theme in urban areas of Washington as well. The Thurston County 4-H Teen Works Program is one such urban example. Program content included career exploration sessions in: Camcorder operations, Computer Technology, Environmental Sciences, business, and Television Video Production. Six educational field trips were completed. Fourteen adult volunteer staff were recruited and trained.

b. Impact: Sixty-two middle/high school Youth enrolled in the program; 48 successfully completed the program and received "Completion and Recognition" certificates – an increase from 24 the year before. Approximately 30 percent of program teens were from underserved families; approximately 20 percent are learning disabled or had other barriers to academic success. Three students earned tuition credit at WSU through the Teen Works/4-H Five Star program.

c. Source of Federal Funds: Smith-Lever Act, State, County

d. Scope of Impact: State specific

Key Theme – Character/Ethics Education

a. Through observation and experience and youth interviews, it has been found that teens from a variety of socio-economic backgrounds have difficulty with decisions when faced with character/ethics related situations in school and out of school relationships with others. This is especially true when facing decisions related to role modeling to others and in rule following circumstances when friends are involved. Washington State has used the Character Counts curriculum as a training base. Animal science projects continue to attract the largest single segment of 4-H membership. In 2003, 39,094 4-H members were enrolled in one or more animal science projects (Equine 16,200), dairy, goat, beef, sheep, llama, swine, poultry, rabbit, dog, cat, cavies and assorted other small pets). Producer Quality Assurance educational programs are becoming even more important as meat packing plants are being held accountable for physical, chemical, and antimicrobial hazards found in carcasses. Many of these hazards are a result of management and care given to animals before they reach the packing plant. Therefore, meat packing plants and consumers are holding producers (both youth and adults) responsible for supplying humane produced animals that are free of drug or chemical residues and physical hazards. To achieve this goal, producers must practice proper animal care throughout production. Youth producers must learn that there are economic incentives, as well as moral and ethical responsibilities, to humanely produce wholesome, high quality food products for consumers. Because youth project show animals sometimes receive less than optimal care, they may have higher incidence of disease, and be more likely to contain illegal residues than other meat animal. Therefore, it is important to educate both youth and adult volunteers about proper care and management and its impact on product quality.

b. Impact: A uniform Animal Quality Assurance program and reporting system has been implemented across Washington State for all 4-H youth producing livestock that will enter the meat system. This program includes signing the Exhibitor Code of Ethics. One hundred percent of 4-H youth who exhibit market animals at Washington Fairs signed an Exhibitor Code of Ethics. This document requires members, parents, and leaders to sign-off that the members have taken responsibility for the proper care and treatment of their animals, the production of wholesome food, and the development of sound ethical behavior in themselves and others. 4-H youth demonstrated their skills in raising a market animal project that meets or exceeds consumer expectations for high quality, safe food product.

c. Source of Federal Funds: Smith-Lever Act, State matching

d. Scope of Impact: State specific

Key Themes – Parenting
Key Themes – Child Care

a. The Northwest Regional Parenting Conference is an event targeted to reach professional and volunteer parent educators and caregivers. Washington State University Vancouver was again the host site for the 9th annual conference in 2003. University of Idaho Extension and Oregon State University Extension Service co-sponsored the event with WSU. The two-day conference was also supported by a number of state government agencies and non-profit organizations. Three hundred seventy one people participated in the conference.

b. Impact: In an eight-month follow-up evaluation conducted online for the first time, 61 surveys (16 percent response rate) provided the following information:
   - Eighty-three percent of respondents reported that they adopted new materials/techniques and increased their ability to provide parenting education as a result of conference attendance.
   - Eighty-seven percent of respondents reported that they used new research information on parenting in their work.
   - Seventy-three percent reported that they had incorporated information on emotional intelligence into their work with parents.
   - The majority (56 percent) incorporated conference information into staff training.
   - Over 50 percent of respondents reported changes in each of the personal change areas: increased satisfaction as a parent; improved communication with children; increased ability to do emotional coaching; and more effective in using appropriate guidance and discipline.

c. Source of Federal Funds: Smith-Lever Act, plus over $53,000 in external funds and participant fees.

d. Scope of Impact: Multistate Extension – OR, ID, and WA

Key Theme - Parenting

a. The Strengthening Families Program for Parents and Youth 10-14 Years (SFP_ has become a priority family program for WSU Extension. In addition to directly reaching families with the program, Extension has nationally certified trainers who prepare facilitators from communities across the state to conduct the program. Extension faculty collaborated with a prevention researcher in the WSU Department of Human Development to insure that SFP program evaluation adequately documented impacts on both youth and parents, as well as tracked fidelity of implementation of this best practices model program. In 2003, programs were offered in 11 counties as a result of new trainings. Partnerships were also begun with three state agencies to support training and evaluation efforts.

b. Impact: In follow-up evaluations, adult program participants (n=100) reported statistically significant improvements in their communication skills, ability to manage their tempers and to discipline calmly, and enjoyment of family time. There was also a significant increase in the number of parents who reported speaking regularly and specifically with their children about expectations regarding substance use. Youth program participants (n=115) also reported a statistically significant increase in their parents' ability to manage temper. In addition, they reported a significant increase in their own knowledge about stress management and about parents' expectations regarding drugs and alcohol.

c. Source of Federal Funds: Smith-Lever Act, plus $10,000 in grant and registration fees.

d. Scope of Impact: State specific

Key Theme – Community Development
Key Theme – Impact of Change on Rural Communities

a. Through its activities in Leadership Development for Public Decision Making, WSU Extension provided education to community members and leaders across Washington. Notable ongoing Extension programs include the Partnership for Rural Improvement and the Certified Public Officials program.

b. Impact: Now in its 29th year, the Partnership for Rural Improvement (PRI) is a consortium of four community colleges and WSU Extension. The consortium's mission is to bring the resources of participating institutions to bear on issues and opportunities of importance in Washington communities. Impacts of the Partnership for Rural Improvement include:
   - Conducting an electronic survey of various rural small businesses regarding business assistance and training needs.
   - Exploration of options for a comprehensive, citywide neighborhood commercial business district revitalization strategy in Spokane.
   - Continued work with business development associations on possible "customer service center."
   - Working with the Slavic community in northeast Washington on the development of new community centers.

c. Source of Federal Funds: Smith-Lever Act, State, County

d. Scope of Impact: State specific

Key Theme – Community Development
Key Theme – Leadership Training and Development

a. Last year, the Certified Public Official (CPO) Program continued to work with elected and appointed local government officials to provide required and elective trainings leading to a CPO certificate. Approximately 458 participants, in 37 counties and 7 organizations, completed 294 courses. Over 20 individuals received certification, which includes 16 hours of required training and 16 hours of electives.

b. Impact: Elected and appointed local government officials are better prepared to deal with: policy decision making; financial planning; making human resource decisions and save on law suites and union grievances; assist with growth management decision and conflict issues within their county.

c. Source of Federal Funds: Smith-Lever Act, State, County

d. Scope of Impact: State specific

Management Goal: Multicultural and Diversity Issues

Overview
The 4-H Youth Development Program continues to make excellent strides in serving the increasingly diverse youth of Washington. In 2003, fully 30 percent of the youth enrolled in 4-H were youth of color

(22 percent statewide population base). Participation by Hispanic and Native American youth continued to increase most significantly of the identified groups.

Specific grant funded outreach efforts were made by the 4-H Program to the Native American Nations in Washington State. One example of 4-H's community effectiveness with the tribal nations is the Chief Leschi Schools for the 21st Century Program. The Puyallup Tribal Nation reported in the June 2000 survey of Chief Leschi's general student population (grades 7- 12) that 43 percent had committed a crime; 31 percent had been arrested; 59 percent had been suspended from school and 27 percent had failed at least one year of school. Couple these statistics with the 64.8 percent unemployment rate for Puyallup Tribal members, and young people believe that there is little value in education or hope of finding fulfilling employment. Over 75 percent of Chief Leschi students come from single parent families. Parents have a low connection to school and are not active support units for their children's educational efforts. In 2003, WSUE 4-H continued its successful partnership with the Puyallup Tribal Nation through our 21st Century grant for experiential 4-H Afterschool Program which focuses on strengthening the academic performance of the youth enrolled. The Chief Leschi School is considered a "last chance" school attracting many youth who have failed in other academic setting. Over 80 percent of all of Chief Leschi's student body qualify for free or reduced lunches. Approximately 74 percent of the youth come from non-traditional single parent or blended families. The grant supports one full time 4-H Program Assistant who is housed at the school. Over 790 Native Youth have participated in activities ranging from Tobacco Awareness, to 4-H garden projects, to cultural awareness and community service activities. Youth are self-reporting increasing skills in: responsibility, leadership, healthy life style choices, wise use of resources and communication skills.

In another Tribal collaboration with the Colville Confederated Nations, 4-H education includes delivery of 4-H Horse Clinic, West Nile Virus, 4-H Club programming increasing membership and participation among Tribal youth and volunteer leaders in the 4-H Program. Results of programming are that reservation residents have learned ways to help prevent and minimize horse exposure to the West Nile Virus and 4-H Programming has helped to build better goal setting and leadership skills among Tribal youth.

Not including migrant workers, the number of Hispanic residents in Washington State is approximately 300,000 and the fastest growing population in the state. In the overall Washington 4-H Program 15 percent is Hispanic with Hispanic youth representing our largest minority population. Specific outreach to Hispanic youth has included development of the Spanish language "Our World Rich in Diversity" – a four part cultural activity curriculum; a multicultural summer day camp outreach for 30 urban Hispanic youth; development of the 4-H meat goat project and exhibition activities. Hispanic youth have indicated increased skills in accepting differences, leadership, communication, respect, teamwork, discipline, healthy choices and decision-making.

Additional outreach efforts included programming for people new to their communities. Culturally diverse youth and families are often relatively new arrivals to the communities in which they live. As a result, they may be marginalized from the mainstream of community life, and may have limited access to the full range of resources available to local residents. Cultivating Community Strengths Together (CCST) is designed to engage culturally diverse communities in projects and partnerships that strengthen local youth and families. By focusing on leadership and life skill building, extension mobilizes teams of youth and adults who work together to bridge disconnections across age, income and cultural groups in their communities.

Two project sites Mason (Latino) and Spokane (Slavic) have been identified for statewide capacity building. Both CCST sites are modeling best practices for engagement of diverse cultural communities by hiring staff from those communities (Latino and Slavic) and giving them major responsibilities for partnership building

and participant recruitment. The project is integrating research and outreach by engaging Dr. Nicole Werner from the Human Development Department as the Project Evaluator. Dr. Werner is establishing evaluation protocols using methods and measures that are well grounded in research. Their application will eventually extend beyond CCST sites to other Extension youth and family programs. In the first of five years of CCST programming, local and state staff have worked together to identify common outcomes across sites. Those include community involvement, ethnic identity, school attachment (medium term) and acculturation, family wellness, and increased community understanding enrichment (long term). Individual sites are also measuring changes in leadership and other life skills, career aspirations, language proficiency, self-esteem, healthy lifestyle choices, and family bonding. Validated self-report measures and data collection will begin early in 2004. Currently 150 community residents are participating.

4-H offers a unique experience in Global Education by providing opportunities for youth/families to host an international student for short-term summer home stays, long-term year long high school students from Japan and former Russian Bloc countries, also with IFYE International Youth Exchange program. Annually, 60 families participate in this exchange program; hosting youth aged 12 through 24 for 3, 4, or 6 weeks during the summer. We also have opportunities for Washington youth traveling to Japan for a 4-week home stay, with Labo or UTREK organizations, two of our Japanese partners.4-H has been offering international exchanges of over 35 years. Outcomes are shown through an evaluation which shows growth in Accepting Differences, Communication and Concern for Others. Nearly all host families maintain contact with their family member over the years. Impacts take the form of greater tolerance of others and interest in a different culture, making a difference in how these youth look at the work.

Youth with disabilities are actively participating in the 4-H Youth Development Program. Walla Walla and Chelan counties have horse camps for youth with disabilities. Thirty-seven youth participating demonstrate increased physical mastery, increased confidence and self-esteem. Parents/caregivers report longer attention spans, and better listening/communication skills of the youth who participate. Physicians and physical therapists report increased balance and muscle tone in riders.

We are continuing our efforts to develop an ongoing relationship with the 1994 land-grant, Northwest Indian College (NWIC) and the other tribal nations not in close proximity to the NWIC. “Washington Tribal Nations and Washington State University Extension: A Summary of Activity”, http://cru.cahe.wsu.edu/CEPublications/misc0525/misc0525.pdf, is the first ever report on WSU Extension’s programs and activities with a number of tribal nations in the state. The report highlights activity across program areas, including youth development, nutrition and health, agriculture and natural resources and information technology.

SUMMARY

Sources of Funding and FTE for Goals 1, 2, 3, 4, and 5

FTE Smith-Lever 3b and 3c	=	15.85 FTE
FTE Smith-Lever 3d	=	33.06 FTE
Federal Extension	=	$4,861,782
Non-Federal	=	$27,150,068
Other Federal	=	$4,944,851
TOTAL	=	$36,956,701

B. STAKEHOLDER INPUT PROCESS

Washington State University Extension’s planning process was built from a major initiative in 1998 when four task forces were formed to help shape WSU’s role in addressing significant issues facing the state. A

strategic planning process took place around the opportunity to approach the state legislature for new funding for a "Safe Food Initiative." Input from the entire agricultural community was obtained in an extended and thorough process to identify the programs and positions that would be sought. Since that time, stakeholder input has been an important part of updating these programs. During this year (FY 2003) the initial steps have been taken to identify a new major state funding initiative with input provided by the College of Agricultural, Human, and Natural Resource Sciences' citizen advisory council. This council is made up of representatives of the agriculture industry, county government, 4-H volunteers, families and businesses.

Many of the programs and program teams in extension have their own advisory committees made up of constituents and collaborators. An example is the two Extension Indian Reservation Programs that have strong advisory committees helping them plan and execute their work.

All county offices have an advisory system. Most have formal advisory committees that meet regularly, and all have been encouraged to do so. These committees represent the makeup of the constituents in the county, with specific efforts to obtain input from typically under-represented groups. When it is difficult to obtain formal input from such constituents because they do not want to participate in a committee, then a system of informal input is used. The county chair obtains input by personal contact, from other agencies and organizations and through the use of key people in that community.

In addition to this standard stakeholder input, the entire university completed a strategic plan. Each unit within WSU Extension also completed a strategic implementation plan and provided implementation reports on six-month intervals to the university administration and to the Extension faculty, staff and supporters.

In 2004 WSU Extension launched the "Friends of Extension" Information Network**,** http://ext.wsu.edu/ce.cahe/administration/FriendsofExtension.pdf, to build a cadre of local clientele who are willing to express to decision makers support for Washington State University and for WSU Extension when they are informed of pending decisions that can positively or negatively affect the ability of Extension to deliver educational, research-based programs. Over one hundred individuals have been named and will be engaged in a stakeholder input process in 2004-2005.

C. PROGRAM REVIEW PROCESS

No significant changes in the program review processes since the 5-Year Plan of Work. The Plan of Work Update requests a desire to continue with the current approved Plan of Work, with modest changes to Goals 1 through 5. Plans are underway to begin the 5-year plan of work process in 2005. We will wait for guidance from CSREES for the next plan of work, 2006 – 2010 and make adjustments to our Program Review Process at that time.

D. EVALUATION OF THE SUCCESS OF MULTISTATE AND JOINT ACTIVITIES

Washington State University made significant progress toward its planned activities in the areas of multistate, multi-institutional, and multidisciplinary activities, and joint research and extension activities. In Washington, budget cuts have forced the Agricultural Research Center to focus its support on food and systems. So, although our human sciences programs are based in research from both WSU and other

universities, many are grant-funded and joint research while extension programs supported by CSREES formula funds are almost entirely in the agricultural arena. These activities address issues critical to the sustainability of agriculture in the Pacific Northwest. Planned programs occurred in Risk Management, forestry, potato production, conservation tillage systems, IPM and sustainable agriculture through the Center For Sustaining Agriculture and Natural Resources (CSANR).

In the area of risk management, WSU Extension has collaborated with University of Idaho, Oregon State University, USDA/Farm Service Agency, USDA/Risk Management Agency, WSDA, and Wenatchee Valley College. WSU Extension is the host for the Western Region Risk Management Center. The Western Center has a Trade Adjustment Assistance Specialist to assist in the development of a communication network within our 13 states and the other TAA Regional Risk Management Education Centers; thereby ensuring coordination and the free flow of information about the TAA for Farmers. By coordinating with the CSREES program leader to develop systems applicable across regions, technical assistance package components reach across regional areas in program development and delivery when a commodity is produced in more than one region. In 2003, 7,400 Alaska and Washington salmon fishermen in Alaska and Washington were educated allowing them access to TAA benefits.

Diseases, pests and marketability are all problems identified by potato growers that affect the sustainability of their operations. Research and extension participants of the trial and industry at an annual meeting select potato clones and cultivars for inclusion in either the Tri-State trials of the Western Regional trials. This program is a cooperative effort between the county and state extension faculty instate and across seven potato producing states in the western United States including personnel from Oregon State University, University of Idaho, University of California, Colorado State University, Texas A&M University and USDA/ARS in WA and Idaho. Cultivar use has changed significantly, i.e. use of Russett Burbank the standard cultivar ten years ago now makes up less than 50 percent of the acreage, over 40 percent of the remaining acreage is made up of cultivars that have been demonstrated as acceptable for use by the cultivar evaluation program.

WSU Extension has built interdisciplinary and multistate teams to address Integrated Pest Management (IPM) and potato production. In potato production, Extension educators work with researchers in California, Colorado, Idaho, Texas, and Washington to test the adaptability of new cultivars and extend that knowledge to Washington potato growers.

Washington lags behind the Midwest in the adoption of conservation tillage systems, especially direct seeding. There is an intense resurgence of interest in this topic, led by researchers and extension personnel in the Pacific Northwest. The PNW Web site and new PNW Direct Seed e-mail/web list server are helping meet the expanding PNW demand for computer access to technologies for direct seed cropping systems developed through the PNW STEEP (Solutions to Environmental and Economic Problems) program and related northwest research programs, and provide an improved communications network.

The Center for Sustaining Agriculture and Natural Resources (CSANR) was active in several cross cutting issues. Teaching, research and extension faculty collaborated to plan programs in organic agriculture. The Washington Sustainable Food and Farming Network as a priority for their upcoming legislative effort have picked up the organic farming program proposal. They were successful, in adding a position to the WSDA that works closely with the CSANR. WSU CSANR hosted a nationally broadcast satellite conference in the spring of 2003 on organic agriculture standards (http://ext.wsu.edu/noas/).

In a multistate effort, the CSANR has helped develop and support The Food Alliance (TFA). TFA approved growers are experiencing direct and indirect benefits from their affiliation. Growers for whom extension conducted the evaluation are accessing new markets and in some cases getting price premiums.

Extension faculty have been featured in several articles about The Food Alliance that have exposed the public to a positive story about agriculture. TFA is sought out as a national leader on food ecolabeling.

In the area of 4-H Youth Development, Washington State University Extension has also made remarkable progress in its goal of empowering people and communities, through research-based information and education, to address economic and social challenges facing our youth, their families and communities by effectively implementing multistate, multi-institutional and multidisciplinary efforts.

Washington State 4-H Youth Development has joined with 25 other states in the 4-H Curriculum Consortium System in collaboration with the National 4-H Council. The resulting curriculum development system has provided up-to-date, relevant and leading edge curriculum for youth.

The Northwest Regional Parenting Conference has been held for the past nine years. Initiated by the WSU Parenting Team, the planning group now includes representatives from Oregon and Idaho. The conference's primary audience is professionals in parent education and care giving roles, though it also attracts parents. The conference has been very effective in reaching its goal of providing professional development and networking for parent educators, as well as reaching interested parents who wish to improve their own skills. The 2003 Conference evaluation indicated that the majority of parent educators who attended reported increased confidence, ability and skills in parent education as a result. The conference attracts a diverse audience and addresses parenting from a number of cultural perspectives. Workshops are offered in Spanish.

E. MULTISTATE EXTENSION ACTIVITIES
(See Appendix C Multistate Extension Activities Form CSREES-REPT (2/00))

Although this narrative report covers many multistate extension activities and we certainly do a great deal of work in collaboration with Oregon and Idaho, **we have requested a waiver for this year and will not be reporting any auditable activities.** The impossibility of tracking Federal and State funds which we use very flexibly, and the lack of clarity on how to auditably separate the time faculty spend on multistate as opposed to state-specific programs is preventing us from taking credit for the work we are actually doing that meets the intent of Congress.

Forestry: To better serve WSU and Oregon State University extension clientele on both sides of the Columbia River in the east end of the Columbia River Gorge, WSU Extension provides Forestry Extension Agent expertise from Skamania County to woodland owners in Hood River and Wasco Counties in Oregon. In return, OSU Extension Service provides Horticulture Agent expertise to apple and pear orchard and vineyard managers in Skamania and Klickitat Counties in Washington. This successful arrangement has been in place for more than 14 years. Close working relations have developed between the Hood River County, OR, and Skamania County, WA, Extension offices as a result.

Impacts from the forestry program include more than 60 woodland owners trained in writing management plans and more than 400 trained in various individual aspects of woodland management. Program evaluation consistently indicates that participants come away with knowledge, skills and abilities that help them get what they want from their woodland properties. The total woodland acreage under management by program participants is estimated at about 35,000 acres.

More recently, Extension agents from both Washington and Oregon increased the level of cooperation in Extension programming for small acreage farmers in a five-county area along the Columbia River by developing newsletter for small acreage farmers and coordinating workshop and field day planning.

Also, a National Fire Plan grant funded one WSU Extension FTE for two years to enhance fire fighting capacity in rural volunteer fire districts and teach interface dwellers fire wise home maintenance and landscaping in four Washington and Oregon Columbia Gorge counties.

PNW Risk Management: In the area of risk management, WSU Extension has collaborated with University of Idaho, Oregon State University, USDA/Farm Service Agency, USDA/Risk Management Agency, WSDA, and Wenatchee Valley College. WSU Extension became the Western Region Risk Management Center, serving 13 western states.

Potato Program: Potato clones and cultivars are selected for inclusion in either the Tri-State trials or the Western Regional trials by participants of the trials and industry at an annual meeting. Results are printed for all locations in an annual summary and provided to the participants. Trial results are presented at annual conference in most if not all the participating states. In Washington, the trials are used to host field days in all production areas. County faculty in all locations are involved in the selection of the cooperating grower trial and in the field days. Idaho, Oregon, Colorado, California, and Texas are the participating states. Each participates in the committee that is responsible for coordinating the effort; each state carries out the trial and reports the results. Industry participation is excellent in the annual tour of some of the trial location to make selection of early generation material to be included in subsequent trials. Part of the salary of the team leader will be paid from Smith-Lever Funds.

Conservation Cropping Systems: The major component of this program is the Pacific Northwest (PNW) STEEP III (Solutions to Environmental and Economic Problems) program. Grants from USDA-CSREES to this multidisciplinary program in Washington, Oregon, and Idaho provide operational funding for research and education projects on conservation cropping systems to control soil erosion, increase profitability, and enhance cropland productivity and environmental quality. Activities include the Northwest Direct Seed Cropping Systems Conferences and Trade Shows; PNW STEEP III Extension Conservation Tillage Update, a newsletter; PNW Conservation Tillage Handbook and Handbook Series; PNW Internet Home Page (http://pnwsteep.wsu.edu); Cropping Systems Research and Educational Project on Direct Seeding Spring Grain Legumes; PNW No-till Case Study Project to enhance Northwest grower adaptation of no-till systems through the development of grower case studies as PNW extension publication, and incorporation of them into conferences and workshops to facilitate grower to grower learning; PNW Coalition for Direct Seed Cropping Systems Research and Extension with representatives from the U.S. Dry Pea and Lentil Council, WSU, UI, OSU, ARS, PNW commodity organizations and commissions, and other Ag related agencies and groups to expand and coordinate research and educational efforts on direct seed cropping systems. Smith-Lever Funds will pay WSU's portion of the coordinator's salary.

F. INTEGRATED RESEARCH AND EXTENSION ACTIVITIES
(See Appendix C Integrated Activities Form CSREES-REPT (2/00))

A great deal of integrated work is going on in Washington. Joint appointments between extension and the Agricultural Research Center are common, the specific purpose of those appointments being to integrate the missions seamlessly, making research projects focus on real problems, and bringing research-based information and education programs to the people of the state. We have begun giving joint appointments to county-based faculty also, where appropriate. Integrated teams of faculty address issues in both agriculture and human sciences. Extension faculty are members of multistate research projects and multistate coordinating committees. However, the need to keep Federal and State funding of positions flexible and the resultant impossibility of providing an auditable report to reflect all this work has required us to ask for a waiver of the report this year, and to underreport our actual work on the auditable forms.

Integrated Pest Management: WSU Extension conducts educational programs to maintain and improve agricultural production and a healthy environment by promoting pest management practices that provide adequate pest control while minimizing the potentially adverse effects of such practices upon people and the environment. Researchers and extension faculty throughout the state work together in this program. Part of the IPM Coordinator's salary will be paid out Smith-Lever 3b/c Funds and Hatch Funds.

Center for Sustaining Agriculture and Natural Resources: In response to rapid and complex changes facing the state, in 1991 the state legislature established the Center for Sustaining Agriculture and Natural Resources (CSANR) at WSU. The mission of the CSANR is to develop and foster agriculture and natural resource management approaches that are economically viable, environmentally sound, and socially acceptable. WSU Extension and the Agricultural Research Center jointly provide financial support.

The CSANR acts as facilitator to bring together interdisciplinary teams, both within WSU and in partnership with other organizations. It has a stakeholder advisory committee with representation form a broad spectrum of interests. The CSANR provides education on emerging issues through conferences and workshops, on-farm testing and applied research, informational materials, a World Wide Web site, satellite broadcasts, resource library, and personal consultation. Examples of current areas of focus are alternative farming systems, small-scale and urban agriculture, energy and agriculture, organic farming systems, role of biotechnology, integrated pest management, soil and water quality protection, and farmland preservation. Part of the director's salary is paid from Smith-Lever Formula Funds. Part of the director's salary and the CSANR's operating funds is paid from Hatch Funds.

Potato Program: The Washington potato industry, although the most productive in the world on a per unit basis, must continue to increase productivity and quality and/or reduce cost of production to maintain competitiveness as it utilizes practices that assure sustainability and protect the environment. These objectives can in part be addressed by the use of new cultivars that require low input of resources or produce more with the same inputs.

Cultivars and clones that are available from potato breeding programs throughout the world are being assessed for their adaptability for production. When viable material is identified, the cultural practices that have been successfully used by the industry are evaluated for producing the new cultivars and clones. Special emphasis is given to material that gives economical returns to the producers and is acceptable to the market (primarily frozen potato product processors) while being adaptable to lower input of nutrients, pest control materials, and water.

This program is a cooperative effort between the county and state faculty in Washington as well as across seven potato-producing states in the western United States. Part of the salary of the team leader will be paid from Smith-Lever Formula Funds. Part of the salaries of faculty and support staff and some operating funds will be paid from Hatch Funds.

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Appendix C

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

Institution: Washington State University
State: Washington

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

Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Center for Sustaining Ag and Natural Resources				$58,599	
Research and Extension Potato Program				$43,987	
Total				**$102,586**	

Target: 2 percent of federal funding = $95,448.68

Michael J. Tate **April 1, 2004**
Director **Date**

Form CSREES-REPT (2/00)
Appendix C continued

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

Institution: Washington State University
State: Washington
Check one: X Multistate Extension Activities
____ Integrated Activities (Hatch Act Funds)
____ Integrated Activities (Smith-Lever Act Funds)

Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Potato Program				$10,997	
Conservation Cropping Systems				$49,076	
Risk Management				$15,992	
Water Quality				$18,055	
Forestry				$21,148	
Total				**$115,268**	

Target: 2 percent of federal funding = $ 95,448.68

Michael J. Tate **April 1, 2004**
Director **Date**

Form CSREES-REPT (2/00)