

Annual Report of Accomplishments and Results  
FY02

Washington State University Cooperative Extension

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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) Cooperative Extension has once again opted to include all our agricultural programming under ***GOAL 4: An Agricultural System that Protects Natural Resources 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 foodborne 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 five major control factors that enable consumers to reduce their risk of foodborne illness:

- Cook foods adequately
- Avoid cross-contamination
- Keep foods at 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 11,132 food safety contacts were made. Of these contacts, 7,950 encountered situations that had the potential to cause foodborne illness. In 2002, 171 volunteers contributed 756 hours of outreach to families on both safe food preservation and food handling topics. If valued at \$16.05 per hour, the volunteer contribution of

time totals approximately \$12,000. Those volunteers reached a reported audience of 4,732. As part of their volunteer service, volunteers tested the accuracy of pressure gauges in several counties. As a result of their efforts, approximately 29 families avoided the direct risk of botulism by the detection and recalibration of inaccurate gauges.

The Germ City display reached 4854 youth and adults through direct programming. Thousands more were reached at unmanned public events. The program was delivered at state and county fairs, tribal health fairs, elementary schools and community festivals. Extension has five large-scale Germ City units that are interlocking aluminum frame and pop-up tent units, in addition to the original ABS pipe and fabric prototypes. This allows for statewide program outreach, as well as facilitating the adoption of Germ City by other state extension programs and external organizations such as cruise lines. A multi-state project with five universities, including an 1890 institution, is continuing in an effort to integrate research and outreach through the Germ City approach.

WSU Extension faculty are also engaged in multi-state efforts to provide targeted food safety education to high-risk groups. In a joint project with University of Idaho, Colorado State University and Ohio State University and funded by USDA, focus groups were conducted with immune compromised (HIV/AIDS) audiences. In addition, health care professionals who work with HIV+ clients were interviewed. The resulting data will be used in developing a distance education course on food safety for high-risk audiences.

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 2002, contacts with 1,009 commercial and industry training participants were reported.

In summary, the number of participants reported statewide in food safety programming was 27,701 people. Twenty-two 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	=	\$90,247.32
Non-Federal	=	\$862,431.60
Other Federal	=	\$0
TOTAL	=	\$952,678.92

#### **Key Theme - Food Safety**

- a. A collaboration between the National Science Teachers Association, Washington State University, the University of Idaho, and Albertson's grocery store chain resulted in food safety training for science teachers. A summer workshop was held at WSU with participation from 25 Washington, Idaho and Utah teachers. High school and middle school science

teachers were introduced to the FDA/NSTA curriculum, Science and the Food Supply, and encouraged to incorporate hands-on, science-based activities into existing curricula in their schools.

- b. Accomplishments (Outcomes): A pre and post test indicated that teachers were much more likely to include activities on the 4Cs of Food Safety in their teaching after the workshop (gain of nearly 3 points on a 5-point scale), and also more likely to address food borne pathogens in their teaching (increase of 1.7 on 5-point scale).
- c. Source of funding: State, fees and private sector support
- d. Multi-state Extension: WA, ID, UT

### **Key Theme – Food Handling**

- a. Food Safety Advisors is the master volunteer program for food safety in Washington State. Volunteers undertake a wide variety of outreach activities, including direct teaching, telephone hotlines, information booths at fairs, farmers markets and grocery stores, canner gauge testing, and school enrichment. In spite of its longevity, local Food Safety Advisor programs consistently attract new volunteers when training is offered. Up to one quarter of the volunteers are culturally diverse with the majority of those identifying as Hispanic.
- b. Impact: Of the 22,000 reached, 55 percent demonstrated adoption of recommended food selection and handling practices. Another 38 percent decreased their use of foods likely to be contaminated with pathogens. One county study documented that of Food Safety Advisor contacts, 50 percent were quality-related and the food was not potentially harmful to health. Twenty-five percent of contacts concerned a food that was potentially hazardous and could cause illness. Another 25 percent were significant botulism risks and could cause disability or death. Assuming that these percentages can be generalized to statewide contacts, volunteer education prevented 5,500 foodborne illnesses and another 5,500 severe disabilities or deaths.
- c. Source of Federal Funds: Smith Lever, State, County
- d. Scope of Impact: State specific.

### **Key Theme - Foodborne Pathogen Protection**

#### **Key Theme – Hazard Analysis Critical Control Point (HACCP)**

- a. WSU extension audiences include producers and processors of meat, poultry, milk, and fresh produce; seafood processors; food service managers and workers; and health department inspectors. More than 800 people participated in food safety training directed toward food processors and regulators in 2002, and more than 90 successfully completed Better Process Control Schools (BPCS).

- b. Impact: More than 85 percent of successful BPCS participants implemented course principles in their operations. Among seafood processors and retailers receiving training, 100 percent reported improvements in sanitation techniques and temperature control. HACCP was implemented in more than 150 operations.
- c. Source of Federal Funds: Smith-Lever, State, County.
- d. Scope of impact: Primarily state specific. Some programs are conducted on a regional basis, with ID and OR. Some HACCP training is multi-state, national or international in scope

**Key Theme – Food Safety**

**Key Theme – HACCP**

- 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 160 consumers in seafood safety and quality issues.
- b. Impact: 160 volunteers and consumers participating in training sessions improved their knowledge and skills in seafood safety, quality control, and utilization techniques. Processors and retailers reported improvements in sanitation techniques and temperature control. Four commercial fishermen reported seafood quality improvement.
- c. Source of Federal Funds: Smith-Lever Act, State matching, County
- d. Scope of Impact: Multi-state Extension - AK; OR, and WA

**Key Theme – Food Safety**

**Key Theme – HACCP**

- a. Although the United States food supply is among the safest in the world, an estimated 7 million illnesses, 3,000 deaths, and billions of dollars in losses are caused by foodborne diseases each year. Educating the food industry and its regulators through food safety training programs is an effective means of reducing foodborne illnesses. More than 800

people participated in food safety training directed toward food processors and regulators.

- b. Impact: HACCP was implemented in more than 150 operations and more than 90 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: Multi-state 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: 150 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, 69 percent of the carcass hogs were identified as Washington Hogs of Merit. The testing also identified 2 antibiotic treated hogs not meeting proper withdrawal time prior to marketing. The potential penalty to producers and marketers was about \$12,000 per violation in fines and the negative perception associated with a federal violation, which could have resulted in a strike per violation against NCWJLS. “Three-strikes” against a show results in the show losing their swine market to that particular packer, which is particularly important in the Pacific Northwest, as swine markets are very limited. 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, Washington State Department of Agriculture (WSDA), or Department of Natural Resources (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. This is a county consisting of many small islands, all served by ferry or boat access;

no bridges connect the county to the mainland. 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:** The USDA meat inspectors approved the HACCP Plan and Standard Operating Procedures for the MPU with only a few changes. The MPU now processes local livestock under USDA inspection and provides local meat products for retail sale without hauling live animals to the mainland. The unit has received national recognition, and has stimulated numerous requests for information and presentations from interested parties around the United States. After having the first USDA slaughter facility in San Juan County, the new Livestock Producers Cooperative (IGFC) extended membership to four neighboring counties. The IGFC increased membership by 50 percent, which made the coop more economically viable. Increased fares and a reduction in the Washington State Ferry system underscored the importance of maintaining a Ferry Priority Livestock Loading system for producers, 4-H livestock clubs, and other commercial accounts to transport livestock. Subsequently, this has 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. The revised priority loading list satisfied the request of the Washington State Ferry system so that they will continue to allow us use this beneficial program.
- c. **Source of Federal Funds:** Smith-Lever Act, State matching
- d. **Scope of Impact:** State Specific

**Key Theme – Other (Food Recovery/Gleaning)**

**Key Theme - Other (Goal 1: Urban Gardening)**

- a. Interest and practical need for community and home vegetable gardening is rising. Many low-income residents, anticipating reduced food-stamp benefits, need to become more self sufficient in growing their own food as a supplement to their diets. Members were transported to the gardens one day per week to participate in the community garden practicing hands on gardening techniques, ranging from proper seed sowing, cultivating, weeding and watering. Gleaning of neighboring plots was granted by the Parks and Recreation Department, members harvested salvageable produce. Excess produce was gathered and donated to the Salvation Army and the local food bank coalition.
- b. **Impact:** Crops were harvested upon readiness, members integrated fresh produce from the garden into their diets, and additional produce was donated to the local Salvation Army for distribution. Ninety food bank recipient families were able to supplement their diets with

fresh produce. Fifteen physically and/or mentally challenged adults were able to see results of garden knowledge put directly into application. Crops harvested from this project supplemented their nutritional diets, while the weekly gatherings provided therapy both socially and towards a new or updated skill. Comments from participants included the acknowledgment of the benefits of adding fresh produce to supplement their diets.

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

d. Scope of Impact: State Specific

See Goal 4

***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 second 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.

After successful development of a brand and logo in the previous year, the 2002 program made progress in marketing both Expanded Food and Nutrition Education Program (EFNEP) and Food Stamp Nutrition Education Program (FSNEP) under the name *Food Sense*. The *Food Sense* logo and name were utilized in the production of marketing items that were disseminated locally to recruit and sustain program involvement. A successful strategic planning session engaged a cross-section of extension faculty and administrators and resulted in commitments for program expansion to at least three new sites in 2003. The total FY03 contract increased 38 percent over the FY02 budget.

The *Food Sense* program was conducted in 18 counties and directly reached 25,560 people in 2002. Of that number, 28 percent were adults and 72 percent were youth. Eighty two percent of those were food stamp eligible, and 53 percent were persons of color. Translators and interpreters are provided on an as-needed basis. Primary educational activities are direct personal contacts with program participants in one or more lessons, though nutrition messages are also disseminated through mailed newsletters and recipe sheets distributed by partnering agencies. *Food Sense* also has three community gardening programs that target very low income participants. One gardening site is on the reservation of the Tulalip Tribe. Eleven Tulalip agencies and schools and six off-reservation agencies collaborate in the gardening project and related programs. For the larger *Food Sense* program, over 180 public agencies including county and city governments, local schools and public agencies partner with extension in program



planning and delivery.

In addition to direct educational contact, another strategy to improve the nutritional status of low-income families is public education that creates consistent nutrition messages. The Nutrition Education Network of Washington, a strategic alliance of public and private concerns with leadership from Cooperative Extension, is promoting family mealtimes among low-income families as a primary social marketing message. In 2002, an electronic newsletter called Take 5 was sent to 350 professionals in nutrition-related careers each month. The Network's website ([www.nutrition.wsu.edu](http://www.nutrition.wsu.edu)) was extensively redesigned, and served as the base for disseminating the Eat Better, Eat Together (EBET) Toolkit. This series of 11 reproducible flyers offered ideas for promoting the theme in communities. The campaign has had national impact. The Boy Scouts of America featured the logo and theme in its Scouting Magazine in October 2002, and Radio Disney produced a Public Service Announcement (PSA) on the EBET message.

Washington State University extension faculty are also addressing priority health issues in their programming. Diabetes education continues as a primary state focus in the health arena. Approximately 400,000 Washingtonians (6 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 is designed to reduce the risk of diabetic complications and to help people learn how to better manage the disease. The target audiences are 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. The number of participants in the program more than tripled in 2002 over the previous pilot year (399 compared to 114). Of these, 60 percent were white, 7 percent African American, 11.5 percent Latino, and 19 percent Native American. The average education level was 12 years or more for all groups except Latinos, whose education averaged 8 years.

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, the University of Hawaii, the New Mexico State University, USDA/CSREES, Northwest Kidney Center and the American Heart Association. Internal WSU partners are the Colleges of Nursing and Pharmacy. The latter partnership produced a legislative initiative that was chosen as a federal funding priority by the University.

#### Sources of Funding and FTE for Goal 3

FTE Smith-Lever 3b & 3c	= 0 FTE
FTE Smith-Lever 3d	= 24.61 FTE
Federal Extension	= \$1,340,817.39
Non-Federal	= \$3,608,456.13
Other Federal	= \$88,934.39
TOTAL	= \$5,038,207.91

## **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 second year of implementation, the Living Well with Diabetes program operated in six counties (expanding by one over the previous year). 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 4 weekly sessions on food, nutrition and physical activity. A follow-up evaluation is conducted three months after participation.
- b. Impact: In 2002, 6 counties were involved in the program. The post program evaluation results demonstrated that all groups improved their A1c, blood pressure and cholesterol measurements from enrollment to 3-months post-program. The evaluation also showed 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. Statistically significant changes in A1c, knowledge and confidence about managing diabetes were most often reported by those who were: white; in the highest income category; had health insurance; and had higher levels of education. However, Latinos also had a significant increase in their confidence to manage their disease and in the self-perception that they were managing better after participating in the program.
- c. Source of Federal Funds: Congressional appropriation through USDA/CSREES of \$100,000
- d. Scope of Impact: State Specific.

## **Key Theme – Human Nutrition**

- a. WSU’s *Food Sense* Program (Food Stamp Nutrition Education) provides food and nutrition education for food stamp recipients in partnership with a variety of community-based organizations. In 2002, 18 counties supported projects promoting good nutrition and physical activity, food safety and improved utilization of food resources.
- b. Impact: In 2002, total number of contacts made was 147,329. Individuals reached directly totaled 25,560. Of the 2,741 adults who were evaluated after a single-event educational program:
  - 88 percent reported an increase in nutrition knowledge;
  - 77 percent were motivated to improve food safety practices;
  - 74 percent were motivated to select more nutritious low-cost foods;
  - 66 percent were motivated to increase the variety of foods in their diets (a marker of good nutrition).

Of the 1,800 adults who participated in a series of classes and completed follow-up evaluations:

- 90 percent improved one or more nutrition practices;
- 88 percent improved one or more food resource practices;
- 75 percent improved one or more practices in food safety;
- 51 percent reported that they ran out of food less often.

b. Source of Federal Funds: Smith Lever, Washington State University, county and city governments.

c. Scope of impact: State specific. In 2002, 18 counties in Washington state were involved in the program.

***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 Cooperative Extension has provided education that has increased agricultural profitability and competitiveness while preserving or enhancing natural resources and the rural environment. Multi-state 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, 5,600 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 3,300,000 acres under improved sustainable stewardship practices. Natural resource owners and managers attended 150 programs reaching 32,000 people. Over 22,500 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 3,159,000 acres.

Washington's producers continued to build upon past successes in IPM. Ninety-four 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 143 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 41 new vendors were added at farmers markets. In addition, 30 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, 33,300 participated in a harvest celebration that connects 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, 16,800 Washington residents now have a greater understanding of the interdependence of water resources, human health, and the ecology of their region and 5,300 program participants made changes in practices that will protect water resources and aquatic life.

#### **Sources of Funding and FTE for Goal 4**

FTE Smith-Lever 3b and 3c	= 6.55 FTE
FTE Smith-Lever 3d	= 3.18 FTE
Federal Extension	= \$1,761,494.07
Non-Federal	= \$13,097,849.21
Other Federal	= \$1,824,374.80
TOTAL	= \$16,683,718.08

#### **Key Theme – Endangered Species**

- a. Chinook salmon and other species have been listed as “threatened” under the Endangered Species Act. Extension educators are needed to provide leadership for on-site organization, instruction, and trouble-shooting in educating the citizenry of Washington State on the life cycle, artificial propagation, and management conditions of salmon. Agency personnel actions and regulations will not alone solve these challenges; therefore, there is a need for increased involvement by citizens in educating the community.
- b. Impact: Educational interpretive tours increased the awareness of 1,500 youth and adults in the biology, management, and cultural importance of salmon in school children K-6, while teenage youth gained leadership skills as tour guides, and chaperone parents gained awareness of topics and insight to their children's learning opportunities. 4-H leaders and members increased motivations for participating in activities that allow them to interact with

their local environment and gained knowledge and appreciation for community educational contribution. Measured by a post-survey, 80 percent of workshop participants and 95 percent of stewards indicated increased knowledge of salmon habitat needs, conservation tools and their potential benefits, and land conservation organizations. Nine landowners who attended workshops applied for a conservation tool program (county current use taxation program), and an additional four who received information about the program in the mail applied for approximately 114 acres of land considered for conservation.

- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

**Key Theme – Endangered Species**

**Key Theme – Wetlands Restoration and Protection**

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

- a. Fully 90 percent of Western Washington's 18,000 livestock farming families are uninformed and/or inexperienced with regard to animal production/management skills, and are polluting their local watersheds, many of which are salmon-bearing streams and wetlands. Extension educators are too few in number to answer the urgent need and demand for on-the-ground, experiential learning education, and demonstration assistance. 20 Extension Livestock Advisor volunteers were selected, trained and certified through a time-tested curriculum involving 12 weeks of classroom instruction, field trips, and a 3-day tour of the WSU animal science and veterinary science facilities. The trained volunteers each returned at least 80 hours of volunteer service in the form of farm visits, telephone answering, research and demonstrations, and teaching.
- b. Impact: 2,000 farm families in Northwest Washington realized a 10 percent savings in production costs—at least a \$40,000 savings. In addition, 20 miles of salmon-bearing watershed were less contaminated by animal nutrient and mud runoff. The volunteers themselves, as part of their payback hours, collected this data through farm visits, emails and telephone calls.

- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

**Key Theme – Forest Resource Management**

- a. Northeastern Washington is one of the most forested and highest non-industrial private land-bases east of the Mississippi River. Statewide surveys of non-industrial private forest landowners indicate a general lack of knowledge in forest stewardship, and fewer than 25 percent have a Forest Stewardship Management Plan. Focus groups show that forest landowners want to manage their forest ground, but those residing in forested areas require forest management tools to aid them in the care and stewardship of their land.

- a. **Impact:** The Coached Forest Management Planning classes graduated 148 land holders and impacted over 100,000 acres of forest ground with 8 individuals finishing management plans while taking the class and another 19 completing their plans since the class concluded. When participants were asked to place a monetary value on having gone through the Coached Stewardship planning process, values ranged from \$100 to \$50,000; one person said, “Priceless.” Survey results show that many participants continue to work on their plan at their own pace and complete plans at a later time. These plans address forestry practices including tree planting, the rehabilitation of wildlife habitat, stream and riparian area protection and timber harvesting.
- b. **Source of Federal Funds:** Smith-Lever Act, State matching
- c. **Scope of Impact:** State Specific

**Key Theme – Integrated Pest Management (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 one 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**

- a. As the major industry supporting the people of North Central Washington, tree fruits generate \$650 million to the economy each year. Approximately 5 percent - 13 percent of production costs or \$22 million are spent on insect, disease and weed management each year. 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. Respondents of an industry advisor survey rated the importance of IPM education as a 9.75 and cherry fruit fly control as a 9.6 on a 1 - 10 scale, with 10 representing highly important. Extension educators made improvements and updates of previously inaccurate Blossom degree development and fire blight models that are now recognized as the new standard.
- b. **Impact:** Australia, Hungary, Italy, and New Zealand recently adopted the Cougarblight fire blight model. Recently registered due to an Extension educator’s research, a new low-toxicity cherry fruit fly control product (spinosad) was applied to 75 percent of Washington

sweet cherry acreage this past season. The rapid rise in popularity of the product was due to its acceptance in the international market as a replacement for diazinon and azinphos methyl. The effectiveness of the Extension educator in addressing this pest was rated 9.2 and the effectiveness of Extension educators in carrying out the IPM educational program was rated at 9.58.

- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

#### **Key Theme – Integrated Pest Management**

- a. Supplying a significant part of the domestic and international sources of carrot, onion, radish and other small-seeded vegetables, the 4,000 acres of the Columbia Basin vegetable seed industry identified disease and weed management, and field isolation to maintain genetic purity as important production issues. Eighty-five seed industry members received pest management recommendations and production information to better operable their farming operations. Carrot and onion seed disease data was provided to industry members to begin an integrated disease management system.
- b. Impact: Aided by the Extension coordinated field isolation system, seed of high genetic purity valued at a minimum of \$4 million to growers was produced.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

#### **Key Theme – Integrated Pest Management**

- a. Pesticides, both from agriculture and homeowner uses, have been found in the groundwater and stormwater in various locations in Whatcom County. 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). Fifteen Master Gardeners in collaboration with the IPM project offered crane fly consultation and management to 78 homes in the Lake Whatcom watershed on the first official ‘Crane Fly Day.’
- b. Impact: This effort resulted in no insecticide applications to participating home lawns. New residents of Lake Whatcom received site-specific IPM education through the Lake-Friendly gardening kit. 56 percent of the recipients surveyed felt that their attitude towards pest management changed and 52 percent now manage pests differently, using IPM strategies.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: Multi-state Extension – OR and WA

**Key Theme – Integrated Pest Management**

**Key Theme – Other (Biological Control)**

- a. Western Washington supports one of the most abundant and diverse vegetable industries in the United States, with 40-plus 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: As a result of many of the program's research and extension activities, savings from potato crop loss due to late blight was estimated at approximately \$20 million. Treatment of potato seed pieces with late blight fungicides to prevent seed-to-sprout transmission and elimination of early within-field sources of inoculum has become common across the region. Approximately 50 percent of fungicide applications were eliminated using late blight resistant germplasm with a reduced fungicide spray strategy; thus saving approximately \$200+ per acre. Section 18 registration of fosetyl-AI for the Western Washington pea industry, affecting 8,000 acres of peas subject to mfenoxam-resistant downy mildew, was obtained. Extension educators submitted two journal reports regarding pathogens identified on vegetable/vegetable seed crops in Washington. One of these diseases, Fusarium wilt of radish, resulted in an entire radish stock seed crop being abandoned, representing a loss of \$20,000 (5 acre stock seed crop valued at \$4,000/acre). Extension recommendations for implementing more effective regional IPM of leaf spot of spinach distributed to Western Washington growers was also distributed among seed growers and companies in the Europe because of the limited information available on leaf spot of spinach and the increasing prevalence of the seedborne pathogens in the spinach industry.
- 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)**

- a. Invasive noxious weeds continue to present themselves as serious impediments to the successful utilization of agricultural and non-agricultural environments by destroying biological diversity, decreasing forage for wildlife and livestock, increasing chances for erosion, and decreasing land values. Millions of dollars are expended each year to minimize



human conflicts with these undesirable plants in agricultural, forest, urban, wetland, and wildland environments. Non-native, noxious weeds infested approximately 460,000 acres in Ferry, Okanogan, Pend Oreille, and Stevens Counties and on the Colville Reservation. Given the magnitude of these infestations, coupled with biodiversity awareness and water quality issues, and the state's declining economic health, biological control represents one of the few, low-cost, and sustainable management options available to private, state, tribal, and federal land managers.

- b. Impact: In 2002, Extension educators provided private, tribal, and government landowners in 20 of the state's 39 counties, plant population suppressants in a cooperative intrastate effort to initiate new management programs against noxious weeds. Over 64,000 insects were released at 160 sites in a form of biological invasive weed control that replaced or supplemented pesticide use to control weeds that threaten native grasslands. This intensive bioagent redistribution program resulted in a substantial reduction of Diffuse Knapweed and is reducing the health of Dalmation infestations. The reduced need for repeated pesticides application on Knapweed has resulted in a substantial decrease in weed control expenditures and improved environmental quality. Implementation of ecologically sound, biologically-based management methods has decreased herbicide inputs into various affected ecosystems by as much as 100 percent. Federal, state, tribal, and private land managers have readily adopted the use of biological control as an essential component of their ongoing integrated weed management program efforts, and every county now targets Class B and C weeds for biological control.
- c. Source of Federal Funds: Smith-Lever Act, State matching, U.S.F.S, Tribal
- d. Scope of Impact: State Specific

### **Key Theme – Natural Resources Management**

- a. The proliferation of rural small acreage subdivisions in Pend Oreille County threatens wildlife habitat and water quality, and complicates wildfire management in forested areas. There is a need for a water quality and soil conservation educational program that engages this growing audience and leads to increased willingness to incorporate Best Management Practices on private property and greater appreciation and understanding of natural ecosystems. The Sense of Place program was initiated in 1999 in response to this need.
- b. Impact: In 2002 the Kalispel Tribe of Indians became a major partner in the Sense of Place Program. Short-term learning impacts indicated that 95 percent of participants listed their satisfaction with these classes as “high” or “very high.” In answer to “What will you change as a result of attending this program?” 75 percent of respondents listed actions such as building bat houses and brush piles to encourage more bats, leaving more snags and brushy areas for birds, and turning some lawn areas into wildlife habitat plantings. A number of research studies established a link between increased understanding and interest in environmental topics and a greater willingness of the landowner to make some sacrifices to protect the environment.

- c. Source of Federal Funds: Smith-Lever Act, State matching, EPA 319, 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. There is a need to encourage beneficial use of organic materials from urban and agricultural sources in an economically and environmentally sound manner, as these materials are too often viewed as wastes to be disposed of rather than as a source of nutrients and organic matter. Continued demands for biosolids in agriculture makes protecting groundwater and recycling organic material from a multitude of sources, including dairy and horse manure and nutrients, and yard waste a high priority. In Douglas County alone, more than 20,000 dry tons of biosolids from 5 municipalities are applied to farmland each year. Whatcom County is the sixth largest dairy county in the state, and is in the top 5 percent of all dairy counties in the United States.
- b. Impact: Based in part on research information received from WSU Extension, the Washington State Department on Agriculture implemented new clopyralid rules in compost, more than 300 gardeners, farmers, landscapers, educators, composters, decision makers, and compost users adopted new practices based on the information presented. Intergovernmental agreements between the counties and WSU created the Master Composter/Recycler Program as a means to educate the general public on solid waste reduction methods. Master Gardener and Master Composter volunteers within Thurston and Mason Counties provided information on home composting to over 5,000 clientele, which was instrumental in preventing over 100 tons of garden debris from being deposited in various county landfills. As a result of staff and volunteer training in Clark County, 5,000 people learned how to decrease their contribution to the waste stream through composting household organics. More than 696 Whatcom County residents are now diverting organic solid waste to productive compost in fields and gardens; thus reducing environmental pollution or degradation and reducing human health risks from animal waste by the adoption of safe home and farm composting methods. Masters Gardeners implemented a vermiculture composting school enrichment program in three area schools to 60 fourth grade students. The students learned the importance of recycling through the use of composting worms. As one fourth-grade teacher wrote, *“Our discussion today expressed further evidence that the students learned a lot from the program and those that were hesitant expressed pleasure in staying in the classroom to learn about slimy, wiggly worms. Again, thank you for helping these fourth graders get involved with such an exciting yet powerful learning project. Some students are already planning compost spots at home with their parents so they can take home composting worms in the spring. Keep us in mind when projects come your way.”*

- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: Multi-state 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 20,100 acres in 2002. A majority of these acres will be planted to potatoes in 2003. A Columbia Basin seed company, started in 2001 to serve the mustard green manures needs of the region began growing seed for mustard green manures. In addition to being used in Washington, this seed is also exported to Idaho, Oregon, and California for production of green manure crops in those states. Because of the increase in this practice among potato growers, onion, bean, and carrot growers are also trying it in their cropping systems.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

**Key Theme – Sustainable Agriculture****Key Theme – Other (Goal 1: Animal Production Efficiency)****Key Theme – Other (Goal 1: Pasture/Rangeland Management)**

- a. According to sheep advisory groups irrigated forage management, private property issues, lamb marketing and riparian buffer zone worries rank in the top needs. According to cattle advisory groups, irrigated pasture production, riparian buffer management and research, private property range and elk trespass rank in the top needs. Evaluation results compiled by Natural Resource Conservation Service (NRCS) and USDA indicated pasture and range management educational programming is highly desired by clientele at the county, state, and federal level.
- b. Impact: Successful experiments and studies to extend the grazing season into the fall recorded an average of five additional fall grazing days, which correlates to a savings of \$3.5 million in winter feed for producers in Yakima County. Successful experiments and studies to extend the grazing season in early spring recorded an average of 12 additional spring grazing days, which totals a \$6 million winter-feed savings for Yakima County producers. By keeping cattle grazing 15 additional days, 119 million pounds of manure was deposited and utilized on irrigated pastures instead of being handled within a confined feeding operation. Additionally, 90 percent of health problems occur in confined situations, so a great value of grazing is less chemical use and an increase in herd health.
- c. Source of Federal Funds: Smith-Lever Act, State matching

- d. Scope of Impact: State Specific

**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: 186 bulls from Washington, Oregon, Idaho, and Montana were evaluated for growth performance, carcass characteristics, fertility, and reproductive traits. Over \$91,500 was generated through fees and interest to support the bull test. The top 70 percent of the performance tested bulls were sold through the 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 \$241,800 in gross sales in 2002. Bulls were sold to producers from 8 different states and two foreign countries. Approximately 10 percent of the bulls sold went to seedstock producers as herd bulls. The WCA/WSU All Breed Bull Test results in total returns of over \$260,000 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: Multi-state Extension– CA, ID, MT, NV, OR, and WA

**Key Theme – Sustainable Agriculture**

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

- 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: Fifteen people, many of whom were new, low-income and/or Hispanic producers, attended basic skills workshops to learn essential skills for successful goat owners including how to give injections properly, trim feet, handle animals, and tube feed kids. All

participants mastered the essential skills by the conclusion of the program. All participants received tube-feeding equipment and English- and Spanish-language reference materials.

- 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. Farm gate value of the grape industry in Washington state rose from \$69 million in 1989 to \$133 million in 2001. Because of the industry's rapid growth and the migration of growers into grapes from less profitable crops, there is great 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.
- b. Impact: The Washington grape industry continues to expand. Nursery sales indicate about a 10 percent increase in existing acreage, which translates to a cumulative increase in farm gate income to growers of \$13 million. By adding vineyards to the mix of crops grown, farmers are also diversifying their farming practices and reducing risk of income loss. An extensive evaluation of the nutrition shortcourse indicates that the 104 participants will save \$250 per acre. More importantly, growers indicate an increase in quality would result. Washington wine and juice quality remains a world-class farm product creating high demand and a successful value added commodity. By changing grapes to wine, the farm gate value increases by a factor of eight.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

**Key Theme – Sustainable Agriculture**

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

- a. Commercial crop production in Skagit County achieves a gross value of approximately \$100 million on 60,000 acres of land. Maintaining farm profitability is an increasing challenge due to tighter restrictions on the use of pesticides, increased governmental regulations and reporting requirements, increased pressures from urbanization, loss of commodity processors, and low commodity prices coupled with increasing production costs. To compete profitably, farmers must be able to keep up with the rapid changes and adapt practices to conform to changing regulations, technology, social concerns, market demands, and economic environments. An advisory committee identified that groups of diverse interests should be brought together for solving problems and addressing issues to keep the agriculture community abreast of research, regulatory, legislative, and technical changes.
- 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, 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. Potato growers continue to work together in a joint marketing organization as a result of Extension educators' efforts to promote intra-industry cooperation and communication, thus increasing farm returns by \$2 - \$3 million annually. As a result of Extension educator's assistance, a local processor received \$209,000 in grant funds to expand the consumer base for their value-added products and to conduct a feasibility study to convert cull potatoes to new products.

- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

**Key Theme – Sustainable Agriculture**

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

- a. Washington ranks as the second largest potato growing state with 170,000 acres grown in 2002. Efficiency of production with needs in pest and nutrient management and cultural practices were identified as industry necessities. Extension educational inputs are regularly requested by industry.
- b. Impact: The cost-of-production budget for Columbia Basin potatoes, completed in 2001, was used by growers in contract negotiations with processors for the 2002 crop. According to Dale Lathim, Executive Director of Potato Growers of Washington, WSU research was pivotal in establishing target prices during negotiations and translated into an additional \$15 million paid to the Columbia Basin Community in 2002.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

**Key Theme – Sustainable Agriculture**

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

- a. Whitman County is the leading wheat producing county in the nation with annual seeded acreage near 500,000 acres. Another 500,000 acres are planted in crops such as barley, peas, lentils, hay, canola, and a few other minor crops are the primary crop enterprises. Current and reliable information and training in cropping systems is essential for farmers to sustain their operations in light of economic and environmental pressures. The goal of this ongoing program area is to help farmers achieve profitability in their operations, and also conserve and protect the natural resources of the area.
- b. Impact: The economic impacts of Extension training programs offered to 750 farmers on cropping systems and practices implemented among the target audience are estimated at \$125,000.

- 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: 15,300 people from at least nine Washington counties, two states, and Australia increased their understanding about agriculture in Washington as a result of attending the Harvest Celebration at Family Farms, and growers increased sales as a result of the Festival. One grower whose farm has been in production 20 years wrote: *“It was one of the best days we have ever had at our farm, business wise and fun wise.”* A survey of visitors was conducted. When asked if their attitude about farming changed after visiting the farms, 40 percent said “yes.” Three people decided to try farming themselves. Visitors were asked if they attended the Harvest Celebration in previous years. Of those who said yes, 45 percent indicated they had changed their food buying habits as a result. When asked how their habits changed, 62 percent of the responses showed they are now buying more local farm products, and 28 percent showed they are purchasing more organic products.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

### **Key Theme – Water Quality**

- a. The need for water quality education is vital to area residents both to make educated, responsible decisions about their watersheds, and for the health and well being of residents relying on private water supplies. Volunteer citizen groups identified the need for an Extension water quality education program. State and federal water quality initiatives and regulations prompted rural residents, who rely on private water supplies, to increase their knowledge of water quality issues. Tribal and county health authorities checked public and community systems, but private systems were not tested for lead or nitrate levels.
- b. Impact: Following published reports in “The W.E.T. Look” the past three years, the number of requests for water testing information sharply increased, indicating citizen initiative to take actions to test and protect their drinking water. Evaluation tools used with various youth programs indicate that the hands-on activities provided in and out of classrooms are effective in meeting learning objectives. Area residents were made aware of a potential health risk when youth created graphs of educational domestic water test samples results. The W.E.T.

(Water Education and Training) Project for Ferry County and the east half of the Colville Reservation revealed coliform bacteria presence in samples from private water supplies dropped from 31 percent in 2001 to 16 percent in 2002.

- c. Source of Federal Funds: Smith-Lever Act, State matching, 406 Water Quality
- d. Scope of Impact: State Specific

**Key Theme - Water Quality**

**Key Theme - Other (Riparian Management)**

- a. Increased urbanization leads to loss of fish habitat as well as detrimental impacts from stormwater, including nonpoint source pollution, erosion, stream siltation, flooding, loss of aquatic habitat, and reduced groundwater recharge. The Native Plant Salvage Project was established to involve Thurston County residents in direct response from a call-to-action to protect water resources and improve habitat.
- b. Impact: Over 2,500 plants were saved and used in restoration projects, thereby, saving local community partners over \$8,500. Over 200 volunteers acted as project ambassadors to educate more community members, and 350 people received training to better protect water resources by changing their landscaping practices. Demonstration gardens were used as a long-term teaching tool for residents interested in more earth-friendly landscaping practices, which resulted in over 650 participants learning earth-friendly gardening techniques during tour of local landscapes. Through this effort, over 3,500 plants were salvaged and potted by about 125 volunteers and distributed to 18 re-vegetation sites. Approximately 650 elementary students learned about the role of native plants in protecting water resources and worked together to install a learning landscape at their school. Survival counts were done and maintenance plans were recommended for 8 acres of riparian corridors on two major rivers.
- c. Source of Federal Funds: Smith-Lever Act, U.S.F. W., WA D.O.T., NRCS State
- d. Scope of Impact: State Specific

**Key Theme - Water Quality**

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

- a. One of the largest uses of water for irrigation in the Yakima Valley is 115,000 acres of irrigated pasture. Irrigated pasture is one of the highest and most consistently profitable crops in the state, and ranks at or near the top of irrigated crop acreage in Washington. Mismanaged pasture can contribute to nonpoint source pollution from silt, fertilizer, herbicide and manure run-off. Research-based information demonstrates that well managed pastures are excellent biological filters for polluted water and are a great asset to the environment. All programming was translated to Spanish to reach an increasing Hispanic population.



- b. Impact: Granger, Washington, drain siltation measurements have decreased 67 percent and fecal coliform levels have dropped over 59 percent. More than 500 acres of irrigated pasture property was renovated and is being managed under best management practices.
- c. Source of Federal Funds: Smith-Lever Act, State matching, Centennial Clean Water Fund
- d. Scope of Impact: State Specific

**Key Theme - Water Quality**

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

- a. Livestock production accounts for a significant portion of the agricultural revenue within Yakima County and utilizes approximately 350,000 acres of pastureland and crop aftermath. A systematic approach to managing livestock enterprises is needed to combine stewardship of the resource with economic returns to improve the efficiency, profitability, and sustainability of livestock enterprises through better management and decision-making by farmers and ranchers, while protecting ground water and surface water from livestock waste.
- b. Impact: 84 livestock producers implemented cost saving measures in their operations equal to an estimated \$80,000 in savings. In addition, 135 livestock producers implemented changes in livestock holding facilities and waste management practices to protect surface water and ground water from livestock waste pollution.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

**Key Theme- Other (Pesticide Application)**

- a. Washington State is a major producer of hops used in the production of beer for the United States. Prior to harvest the crop must be desiccated. The current desiccating agents are toxic to the applicator and may have detrimental environmental impacts; therefore, it is desirable to reduce the environmental need of pesticides used to desiccate hops plants prior to harvest.
- b. Impact: Work on hops found that reduced rates of carfentrazone (tradename *Aim*) would effectively desiccate hops if repeated. Higher rates were previously, used but were repeated. The lower rates were as effective if repeated which will result in a cost savings for the herbicide of about ½ to 2/3 of the rate originally thought to be needed. Just using the lower rate of Aim at 0.015 lb ai/A (1 fl oz of product) versus paraquat (tradename *Gramoxone*) at 1 lb ai/A (1 1/3 pints) results in a cost savings of approximately \$2.45 per treated acre and Aim does a better job of desiccating hops. When used versus Gramoxone, the savings to the industry nationwide should be on the order of \$90,000 per application. The savings per application versus Des-I-Cate is \$13.00 per treated acre and Aim does a better job of controlling weeds present. This savings translates to over \$200,000 per application. Probably as important is the cost savings is the pesticide load to the environment, Aim is safer to work with and is used at only 5 percent of the Gramoxone rate (1 oz vs. ~ 20 oz) and 0.04 percent

of the Des-I-Cate rate (1 oz versus 256 oz).

- c. Source of Federal Funds: Smith-Lever Act, State matching
- 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 our youth, families, and communities.

### **Overview**

Washington State University Cooperative 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 Themes- Life Skills** and **Key Theme – Children, Youth and Families at Risk** for details).

2002, the centennial year of the 4-H Youth Development Program, was a remarkable milestone in the history of Washington State 4-H. Governor Gary Locke declared 2002 to be the “Year of 4-H” in honor of our centennial. In honor of our centennial, rather than building a bronze clover statue, Washington State 4-H built a living memorial of public service with 2,643,200 hours of service pledged. From highway clean up to hospital visitations, and all points in between, 4-H fanned out across the breadth and depth of Washington State to positively impact the lives of Washington’s families.

Special centennial activities were held all across Washington State including fairs, conferences, camp and a special note of pride over “Statewide Conversation in Youth”! In a live real-time satellite broadcast 22 sites in Washington were simulcast and developed a blueprint for priority needs of young people and their families all across our state. Washington State 4-H used 2002 for celebrating and reflecting upon its strong past of youth development and positioned itself to step off into the second century of 4-H with a renewed commitment and vision of the needs and assets of today’s young people.

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. In the past year, the Center continued to work on emerging initiatives and facilitating supportive public policy. A \$456,000 grant from the Bill and Melinda Gates Foundation is helping WSU's Center to Bridge the Digital Divide (CBDD) support a 4-H computer technology initiative. 4-H youth are receiving training through a nationally juried 4-H curriculum to build computers from component parts. The training is taking place at six new 4-H computing laboratories being established by the grant and via a mobile 4-H computer training van.

One such emerging initiative is the Rural Telework Project. 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 includes 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. 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.

Washington State 4-H excels at partnership development. In mid-2002, ten Washington counties formed a partnership with Washington State Employment Security through the American-Corps Program. Ten young adults have been hired to specifically to recruit young people into community based 4-h after school programs focusing on workforce preparation. These partnerships, only six months into their inception, have been successful enough by ES to be continued for a second year of funding.

Washington State ranks third in the nation in apparel and textiles industry productivity. Preparing workers is essential for this thriving industry. Teaching knowledge and skills applicable to the industry in our clothing and textile 4-H programming and then encouraging WSU professional studies in apparel can help fill the need for qualified workers. The Clothing and Textiles Team (CTT) of WSU extension professionals also provide leadership and training for the Washington State 4-H clothing program. The nine-member CTT includes academic and extension faculty, specialist, volunteers, and leaders. The goals of the team are to provide communication, programming, and resources to the 1,220 4-H clothing leaders and the 3,089 youth enrolled in clothing and textile projects. A model partnership exists between the Cooperative Extension 4-H and the Apparel, Merchandising and Interior Design (AMID) Department at WSU. Extension has benefited from stronger programming efforts and greater connections for resource development. The department has benefited through increased methods of recruitment, educational outreach and securing state-of-the art equipment for their labs. The Fashion Institute was a weeklong program held on the WSU campus with the purpose of introducing youth and adult leaders to the fashion industry. Twenty adults and youth were involved from Washington and Montana.

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 child care* 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** for details). The team also reviews and promotes new parenting curricula and program approaches (see their website <http://parenting.wsu.edu> for more details). 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 2000 and continuing into 2002, 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 2002, over 5,000 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. Examples include:

- Working to develop the Lewis and Clark regional marketing plan, bringing hospitality services together to attract tourism during the Lewis and Clark Bicentennial Commemoration.
- Promoted the worked class scholars program and facilitated scholarships for underserved populations.
- Working with the Slavic community in northeast Washington on the development of new community centers.

6) *Leadership for public decision making* is enhanced through WSU Cooperative Extension’s Certified Public Officials program (CPO) and the Partnership for Rural Improvement (see **Key Themes – Community Development** and **Key Themes – Impact of Change on Rural Communities** for details). Last year, CPO continued to work with the Department of Justice in a five-state consortium designed to provide police department organizational assessments enhancing the ability of communities to become involved in the co-production of order and safety within their own communities (see **Key Themes – Community Development** and **Key Themes – Leadership Training and Development** for details).

7) In *Responding to Economic and Social Change*, WSU Cooperative 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 3,000 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 fifty (250) 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>.

In its partnership with local governments, Cooperative Extension provided management consultant to Public Works Departments in Okanogan, Douglas, and the Association of Public Works Directors, through the County Road Administration Board. A statewide survey was conducted to assess the needs and performance of the state agency, County Road Administration Board. Ethics, racial profiling, and integrity training was provide to four communities reaching over 120 persons.

Cooperative Extension is developing a curriculum to train natural resource enforcement officials in collaborative methods of problem solving. Through a National Academy, enforcement officers will be prepared to implement alternative dispute resolution techniques to enforcement issues.

WSU Extension faculty have established a website (<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. At least 30 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 200 downloads of presentations located the website occurred in December 2002 alone.

In this past reporting year, WSU Cooperative Extension provided businesses with technical assistance, helped in the creation of 10 new enterprises. 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 237 different businesses in the Northwest providing assistance in market analysis and development, solving quality problems, regulatory compliance, and resolving food safety issues.

Approximately \$700,000 in revenue were saved or generated and 12 jobs were added or retained through this direct assistance.

### Sources of Funding and FTE for Goal 5

FTE Smith-Lever 3b and 3c	=	8.32 FTE
FTE Smith-Lever 3d	=	2.34 FTE
Federal Extension	=	\$1,582,431.93
Non-Federal	=	\$8,886,220.06
Other Federal	=	\$347,158.38
TOTAL	=	\$10,815,810.37

### Key theme – Life Skills

- a. The Life Skills Evaluation System (<http://ext.wsu.edu/lifeskills>) is a web-based 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 Cooperative 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 is then aggregated on a statewide basis. Significant participant progress is indicated in all eight-focus life-skill areas.
- b. Impact: In 2002, 957 participants completed evaluations. About 77 percent reported gains in life skills as a result of program participation. The life skill area in which the largest changes were reported was *leadership*, where respondents scored .62 higher after participating in an extension program (on a 4 point scale). The specific indicators with the largest gains were *using different leadership styles* (.69 on same scale) and *getting others to share in leadership* (.65). The general life skill area with the next highest level of positive change was *healthy lifestyle choices* (.58 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 .70. Other indicators for which large positive changes were reported were *making a presentation* in the communications life skill area (.82), and having control over my personal goals/future (.57) in the self-responsibility category of life skills.
- 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 selected as the site for the 8<sup>th</sup> annual conference in 2002. For the first time, University of Idaho Cooperative Extension and Oregon State University officially co-sponsored the event, strengthening its regional focus. Two keynote addresses, five invited research updates and 34

concurrent sessions created the conference program. The two-day conference was co-sponsored by a number of state government agencies and non-profit organizations. Two hundred seventy six participated in the conference.

- b. Impact: In an eight-month follow-up evaluation, 88 surveys (32 percent response rate) provided the following information:
  - A majority (over 50 percent) of respondents reported increased confidence, ability and skills in providing parent education.
  - 49 percent of program staff became more aware of the impact of brain development research on children's development and parenting practices.
  - 41 percent of parent educators report their programs are using new materials/techniques in existing programs.
  - Over 50 percent of respondents reported increased confidence and satisfaction in their own parenting as a result of attending the conference.
- c. Source of funds: Smith-Lever, plus over \$53,000 in external funds and participant fees.
- d. Scope of impact: Multi-state Extension with primary focus on Oregon, Idaho and Washington

### **Key Theme - Children, Youth and Families at Risk**

- a. Washington State's State Strengthening Project, funded by CYFAR, completed its final year in 2002. Titled "Partners in Promoting Strengths" (PIPS), the project brought together diverse groups of community partners who committed to implementing local projects that benefited youth and families. Three sites (Tenino, Granger and Ephrata) received funding for targeted community projects. An additional fifteen counties strengthened their capacity to deliver programs to children, youth and families at risk by sending extension-led teams to a training program designed to increase their strategic planning, team-building and sustainability skills. Teams and funded sites undertook a wide variety of community building projects including the creation of out of school time programs, school-based tutoring and mentoring programs, youth technology programs, youth-adult partnerships in community coalitions, and community infrastructure improvements (e.g., restoration of parks, new facilities). The PIPS project was honored with the highest internal award from WSU Extension in 2002, being given a Big Cat Award to recognize the program's accomplishments over five years.
- b. Impact: The WSU Extension Life Skills Evaluation System includes data specific to community building programs, including funded PIPS sites and other communities conducting similar programs. Of 321 participants completing surveys, 72 percent were white, 9 percent Latino, 7 percent African American and 5 percent biracial. The remaining 7 percent were Native American, Asian or did not answer the question. According to aggregated data for 2002, about 81 percent of participants reported gains in life skills after completing the programs. The life skill area where participants made the most dramatic positive changes was *leadership* (average increase of .69 on a 4 point scale). The specific indicators with the largest increases from pre to post scores were *organizing a group to reach its goal* (.82 on

same scale) and *getting others to share in leadership* (.86 on same scale). It is also noteworthy that another indicator with a dramatic pre-post change was *having control over my personal goals/future* (.87 on the 4 point scale), part of the self-responsibility scale. The data suggest that PIPS and other community-building programs were successful in preparing local partners, both youth and adults, to embark on community change efforts by strengthening their confidence and skills as leaders.

- c. Key Theme –Source of funds: Smith Lever; CSREES-CYFAR funding \$150,000
- d. Scope of impact: State

### **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 28<sup>th</sup> year, the Partnership for Rural Improvement (PRI) is a consortium of five community colleges and WSU Cooperative 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:
  - Identification of manufacturing businesses in a four county area who needed assistance to become more competitive in a world market, this included training, assistance with ISO certification, development of marketing and business plans, loan proposals and identification of financial resources.
  - Working with local foundations to complete and submit articles of incorporation and write by-laws to form a non-profit corporation.
  - Facilitating community college meetings with Native American tribal members to develop programs for native language teachers.
  - Serving on a work group to create a fiber optic network in northwest Washington.
- c. Source of Federal Funds: Smith-Lever, State, County
- d. Scope of Impact: State

### **Key Theme – Community Development**

#### **Key Theme – Leadership Training and Development**

- a. WSU Cooperative Extension’s Certified Public Officials program continues to work with the Department of Justice in a five-state consortium designed to provide police department organizational assessments enhancing the ability of communities to become involved in the co-production of order and safety within their own communities. Six assessments were



conducted, involving over 600 individuals, including 60 local government officials, 30 tribal government officials, 70 law enforcement officers, and 40 local non-profit community groups.

- b. Impact: Community and police department recommendations were made to departments and communities in the states of Washington, Idaho, Montana, South Dakota and Wyoming. Recommendations led to outcomes including domestic violence prevention programs, school resource officers, community-based drug awareness programs, and youth involved policing advisory committees where previously none existed.
- c. Source of Federal Funds: Smith-Lever, State, County
- d. Scope of Impact: State

### **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 then facing decisions related to role modeling to others and in rule following circumstances when friends are involved. Using the grant provided curriculum, Character Counts, and a volunteer experienced in working with teens in decision making situations and environments, a pilot program was developed around activities and instructions to increase decision making around trust, respect, citizenship and loyalty issues. The goal was to build skills to be used in teen environments requiring trust and respect in decision-making. A collaboration with Bremerton Consolidated Housing and Twin Lakes 4-H Camp volunteers was created to provide the audience needed.

Three different groups were created to provide audience diversity: 1) Bremerton Consolidated Housing Authority low-income housing complex teen audience made up of mixed race young adolescents in a community program environment; 2) Twin Lakes Camp Teen Counselors, required to provide role modeling to youth; and 3) Youth attending District Teen Rally, a leadership development retreat bring teens of five counties together. Activities were provided in a workshop method, sports activity method and class film and discussion method.

- b. Impact: Of the 182 teens participating, 76% reported learning a new idea or skill they would use in their life with friends and school situations. All youth participating reported identifying with the situations provided, the issues discussed and the information provided. Some youth offered situations of personal experience, sharing conclusions drawn from the skills learned that would provide improved comfort in decision making in the future.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

## **Management Goal: Multicultural and Diversity Issues**

### **Overview**

In 2002, 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 21<sup>st</sup> Century Program. The Puyallup Tribal nation reported in the June 2000 survey of Chief Leschi's general student population (grades 7 – 12) that 43% had committed a crime; 31% had been arrested; 59% had been suspended from school and 27% had failed at least one year of school. Couple these statistics with the 64.8% unemployment rate for Puyallup Tribal members, and young people, there is little value in education or hoe in finding fulfilling employment. Over 75% 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 2002, WSUCE 4-H successfully partnered with the Puyallup Tribal Nation to acquire a 21<sup>st</sup> Century grant for the creation of an After School Program which focuses on strengthening the academic performance of the youth enrolled. The program began in August 2002 and attracted 227 Native American youth which indicates a participation rate of 24% of the total (7 – 12) enrollment. The program focused on team building and cooperation. Of the 227 students participating in the 4-H After School Program, each reduced their classroom absenteeism by 2 days as compared to their non-participating classmates.

Not including migrant workers, the number of Hispanic residents in Washington State is approximately 300,000 and the fastest growing population in the state (see **Key Theme – Multicultural and Diversity Issues** for details).

Washington State continues to see dynamic growth in its Hispanic youth population. In the overall Washington 4-H Program 11% is Hispanic with Hispanic youth representing our largest minority population. Specific outreach to Hispanic youth has included the creation of a care of Hispanic teens trained to facilitate groups. 125 Hispanic youth were trained in leadership, teamwork, and communication skills. 90% of the participating youth expressed greater feelings of self-worth and self-esteem from realizing that they had gained valuable skills.

We are continuing our efforts to develop an ongoing relationship with the 1994 land-grant, Northwest Indian College (NWIC). This is a unique college in that it does not serve only the reservation on which it is located, but considers its responsibility extends to the three-state Pacific Northwest. Most of the Tribes in the area, however, do not consider NWIC "their" college. Additionally, the NWIC is in the extreme NW corner of the state of Washington, while the Pullman campus, the main campus of WSU, is in the extreme SE corner of the state. Despite our geographic separation, we collaborated on some grants a few years ago and there is some local interaction in youth education programming, but in general the geographical distance from Pullman and our lack of personnel have limited our interactions. However, we recently reinitiated discussions with the newly appointed NWIC President about collaboration with WSU Extension.

## Key Theme – Multicultural and Diversity Issues

- a. An increasingly responsive radio communications network fans out across the map and busy people listen to some seven Spanish FM stations and another five AM stations daily in central Washington alone; at work, at home and at leisure. Prominent among these is Radio KDNA (Radio Cadena) in Granger, Washington. Radio KDNA 91.9 frequency covers a 100 mile radius which includes eight counties including their cities and towns in southeastern Washington and north central Oregon. It is the only full time Spanish language educational public radio station in Washington and is licensed to the Northwest Communities' Education Center, a non-profit corporation. Traditionally, estimates have indicated that Radio Cadena reaches 150,000 listeners. However, recent census figures and estimates of migrant workers causing those working targets to nearly double brought Station Director Ricardo Garcia and WSU Extension rural sociology specialist together to rethink certain outreach strategies. It has been ascertained that radio is a one-to-one medium and that it is extremely culturally compatible with the Hispanic milieu. It relates to the listener on a personal level. Radio moves with the listener, according to Radio Cadena, unlike any other media. Hispanic people are mobile. Much time is spent on wheels and the radio travels along 24 hours a day. Ninety-five percent of cars have radios and seventy-four percent of adults are in cars every week.
- b. Impact: Thirteen (13) hour-long talk show format programs were broadcast entirely in Spanish on primetime 5-6 p.m. on each third Friday once monthly. Subjects covered included cross-cultural outreach, Hispanic student recruitment, nutrition education, 4-H youth programs, animal health, plant quarantine, viticulture/enology, youth development, pulse crop research and community development. Nineteen (19) extension educators, researchers, students and associates were involved in this valuable extension education effort. Surveys show that nutrition education received high marks among the listeners.
- c. Source of Federal Funds: Smith-Lever Act, State matching
- d. Scope of Impact: State Specific

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## SUMMARY

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

FTE Smith-Lever 3b and 3c	= 15.27 FTE
FTE Smith-Lever 3d	= 30.13 FTE
Federal Extension	= \$4,774,990.71
Non-Federal	= \$26,454,957.00
Other Federal	= \$2,260,467.57
TOTAL	= \$33,490,415.28

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## **B. STAKEHOLDER INPUT PROCESS**

Washington State University Cooperative 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. This process identified the priority programming areas in the college. Since that time, stakeholder input has been an important part of updating these programs. During this year (FY 2002) the College's citizen advisory council has given input to plans. This council is made up of representatives of the agriculture industry, county government, 4-H volunteers, families and businesses. Nominations for vacant positions are sought from agencies and organizations that represent the people of the state. Consideration is given to cultural and gender diversity. Expenses for the council to meet are paid if needed.

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. These positions were filled during FY 2000 and the people hired are now implementing the work based on stakeholder input.

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 Cooperative Extension also completed a strategic implementation plan. Locally, input from stakeholders was used to shape the strategic implementation plan. The strategic plan is the foundation for staffing plan and for future budget requests within the university.

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## **C. PROGRAM REVIEW PROCESS**

No significant changes in the program review processes since the 5-Year Plan of Work. Plans are underway to begin the 5-year plan of work process in 2003. We are waiting for guidance from CSREES for the next plan of work, 2004 - 2008.

#### **D. EVALUATION OF THE SUCCESS OF MULTI-STATE AND JOINT ACTIVITIES**

Washington State University made significant progress toward its planned activities in the areas of multi-state, 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 fiber. 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 Cooperative Extension has collaborated with University of Idaho, Oregon State University, USDA/Farm Service Agency, USDA/Risk Management Agency, WSDA, and Wenatchee Valley College. During 2001, WSU Cooperative Extension became the host for the Western Region Risk Management Center. Washington programs continue to work with the apple growers and expanded to work with vegetable producers.

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 in state and across seven potato producing states in the western United States including personnel from Oregon State University, University of Idaho, University of California, University of Colorado, Texas A and M University and USDA/ARS in WA and Idaho. Cultivar use has changed significantly, i.e. use of Russett Burbank the standard cultivar 10 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.

In the area of IPM and potatoes, growers have become more knowledgeable concerning the biological and environmental conditions that favor late blight. Number of calls on the potato late blight information line was 1,116 and accounted for approximately 56 hours of information. Growers that followed management recommendation from the information line successfully managed the disease and had no tuber rot problems in storage.

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 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 will host a nationally broadcast satellite conference in the spring of 2003 on organic agriculture standards (<http://ext.wsu.edu/noas/>).

In a multi-state 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 Cooperative 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 multi-state, multi-institutional and multidisciplinary efforts.

Multi-state programs and projects, in the broader 4-H network, have strengthened and reached new levels of collaboration. Because many Western states are small in terms of staff numbers, we sometimes do not give new 4-H faculty enough training or early enough in their careers to succeed with the 4-H club program. 4-H clubs are the core of Extension's youth development mission. Yet, this is the part of their work that will often "make or break" new agents. Knowing how to work with volunteers, deal with 4-H leader's councils, recruit and train new club leaders, and other aspects of the 4-H program are critical to anew agent's success.

In 1998, the Western region recognized an opportunity to form a multi-state collaboration to address the issue of "strengthening the neighborhood/community 4-H club". The club program remains a vital part of most of our states' youth development work, which make it, perhaps, more important to this part of the nation. In November 1999, state 4-H program leaders in the West approved a proposed initiative to strengthen 4-H clubs.

Six specific goals were proposed by a multiple-state steering committee:

- 1) A regional training institute for new faculty with any 4-H responsibilities.
- 2) Establish a new award in NAE4-HA for excellence in 4-H club support. (Implemented in 2000).
- 3) Master 4-H Volunteer Curriculum (under discussion)
- 4) Master's degree in Youth Development (Great Plains IDEA)
- 5) Survey of 4-H professionals – what it takes to be successful.
- 6) More proactive advocacy with upper administration for 4-H professionals and what they do.

The Western 4-H Institute grew out of the first goal. The priority was to strengthen the 4-H club program by providing an intensive, multi-state training for relatively new Extension staff with 4-H responsibilities. The content of the Institute training was diverse, but everything focused on enhancing the professionalism of agents and strengthening the 4-H club program.

This report provided the first summary of Evaluation data collected from 69 participants at the Western 4-H Institute held in April 2002 at the campus of Utah State University. The report provides a snapshot of information about relatively new Extension staff in the Western region and strongly supports the value of training new staff and educators within the first several years of their employment. Through such training, we can enhance the skills of the youth development professional and strengthen 4-H club program management.

The Institute also accomplished something that many in-state training events are not able to accomplish – cross-state dialogue and learning. One of the benefits of conducting a regional training of this nature was to create peer communication and networks among new Extension staff that would not happen in traditional in-state training programs. All participants in the Institute are linked via a “chat room” where information and inquiries can be shared without intrusion by administrators or supervisors.

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.

Washington State has been a regional leader in the Western Regional Teen Task Force collaborating with New Mexico, Utah, Arizona, Oregon, Idaho, Montana, Wyoming, Colorado, and California in conducted specific leadership training for teens in the Western Region who serve in identified statewide leadership roles. For Washington State, these state teens are forming the core Task Force for the reorganization of the 4-H Ambassadors program.

The Northwest Regional Parenting Conference has been held for the past eight 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 2002 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. In 2002, over 300 people attended from 8 states and British Columbia, Canada.

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## **E. MULTI-STATE EXTENSION ACTIVITIES**

**(See Appendix C Multi-state Extension Activities Form CSREES-REPT (2/00))**

Although this narrative report covers many multi-state 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 multi-state 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 Cooperative 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 12 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 proposal is being written for submission March 15, 2002 to fund one WSU Extension FTE for two years to enhance fire fighting capacity in rural volunteer fire districts and teach interface dwellers firewise home maintenance and landscaping in four Washington and Oregon Columbia Gorge counties.

PNW Risk Management: In the area of risk management, WSU Cooperative Extension has collaborated with University of Idaho, Oregon State University, USDA/Farm Service Agency, USDA/Risk Management Agency, WSDA, and Wenatchee Valley College. During 2001, WSU Cooperative Extension became the Western Region Risk Management Center, serving 13 western states. Washington programs continued to work with the apple growers and expanded to work with vegetable producers.

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 which highlights new technologies from STEEP and related programs, new educational materials and upcoming events; PNW Conservation Tillage Handbook and Handbook Series, highlighting important research findings from the STEEP and related research programs (handbook accessible through the Internet); PNW Internet Home Page (<http://pnwsteep.wsu.edu>); Cropping Systems Research and Educational Project on Direct Seeding Spring Grain Legumes to develop direct seed cropping systems for establishment of spring rain legumes and the subsequent winter wheat crop—a critical high erosion crop sequence in the annual cropping region of the Inland Northwest (project includes 6 grower on-farm tests in Washington and 6 in Idaho, plus university research center trails in both states); 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.

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## **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 multi-state (formerly called regional) research projects and multi-state 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: Cooperative 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. Cooperative 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 from 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.

FOX C/mydoc/csrees/Annual Report/2002 Federal Report 030803  
March 8, 2003



Appendix C

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

**Institution:** Washington State University

**State:** Washington

Check one:  Multi-state 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
<u>Center for Sustaining Ag &amp; Natural Resources</u>	_____	_____	\$57,269	_____	_____
<u>Research and Extension Potato Program</u>	_____	_____	\$48,658	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>Total</b>	_____	_____	<b>\$105,927</b>	_____	_____

**Target: 2% of federal funding = \$95,448.68**

\_\_\_\_\_  
**Mike Tate**  
**Director**

\_\_\_\_\_  
**March 8, 2003**  
**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  
 Multi-state Extension Activities and Integrated Activities  
 (Attach Brief Summaries)**

**Institution: Washington State University**

**State: Washington**

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

**Actual Expenditures**

<b>Title of Planned Program/Activity</b>	<b>FY 2000</b>	<b>FY 2001</b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>
Potato Program _____	_____	_____	\$18,247	_____	_____
Conservation Cropping Systems _____	_____	_____	\$31,104	_____	_____
Water Quality _____	_____	_____	\$18,377	_____	_____
Forestry _____	_____	_____	\$20,256	_____	_____
Risk Management _____	_____	_____	\$12,822	_____	_____
Risk Management _____	_____	_____	\$4,250	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>Total</b>	_____	_____	<b>\$105,056</b>	_____	_____

**Target: 2% of federal funding = \$ 95,448.68**

\_\_\_\_\_  
**Mike Tate**  
**Director**

\_\_\_\_\_  
**March 8, 2003**  
**Date**

**Form CSREES-REPT (2/00)**