

Cooperative Extension System

Annual Report of Accomplishments

2004

University of Idaho Extension  
College of Agricultural and Life Sciences

A. PLANNED PROGRAMS	4
Goal 1. Sustainable and Globally Competitive Agriculture	4
Overview	4
Key Theme – Agricultural Competitiveness	6
Key Theme – Agricultural Profitability	6
Key Theme – Animal Production Efficiency	8
Key Theme – Plant Production Efficiency	10
Key Theme – Other Commercial Crops	14
Key Theme – Invasive Species	16
Key Theme – Home Lawn & Gardening	18
Key Theme – Rangeland/Pasture Management	21
Goal 2 – Food Safety	22
Overview	22
Key Theme – Food Accessibility and Affordability	24
Key Theme – Food Handling	24
Key Theme – HACCP	26
Goal 3 – A Healthy, Well Nourished Population	27
Overview	27
Key Topic – Human Nutrition	28
Goal 4 – Greater Harmony Between Agriculture and the Environment	30
Overview	30
Key theme – Forest Resource Management	32
Key Theme – Integrated Pest Management	34
Key Theme – Nutrient Management	38
Key Theme – Water Quality	39
Goal 5 –Enhanced Economic Opportunity and Quality of Life for Americans	42
Overview	42
Key Theme – Character/Ethics Education	44
Key Theme – Childcare	45
Key Theme – Community Development	46
Key Theme – Family Resource Management	48
Key Theme – Parenting	49

Key Theme – Agricultural Financial Management	53
Key Theme – Workforce Preparation - Youth and Adult	55
Key Theme – Youth Development/4-H	56
B. Stakeholder Input Process	69
C. Program Review Process	70
D. Evaluation of the Success of Multi and Joint Activities	70
E. Multi-State Extension Activities	74
F. Integrated Activities	77

## **PLANNED PROGRAMS**

### **GOAL 1. SUSTAINABLE AND GLOBALLY COMPETITIVE AGRICULTURE**

#### **Overview**

- a. Outputs: during 2004, approximately 73 UI faculty and staff (51 FTE equivalent) contributed to programs associated with Goal 1. Faculty reported delivering 357 presentations, workshops, short courses, field days, and other programs; and producing 239 supporting articles, bulletins, curricula, and other publications. Participating faculty estimated 50,496 customer contacts related to this goal.
- a. Outcomes: UI Extension provided education for a diverse audience of Idaho farmers and ranchers, supporting industries, home horticultural enthusiasts and the green industry. Farmers have learned production characteristics and environmental conditions suited to of new varieties of wheat, barley, forages, and potatoes. They have learned better ways to manage plant pests and diseases in traditional varieties, and about new varieties that are less susceptible to pathogens.

Cattle producers have a better understanding of carcass traits favored by buyers, have learned to use technology to measure those traits, and have learned management practices that improve desirability of their product, including adoption of methods to select their most profitable animals to retain for breeding. Dairy producers and workers have learned how to increase the productivity and longevity of their cows.

UI Extension helped producers learn to use new tools and methods, including GIS/GPS instruments and marketing options. GIS/GPS technologies have also been introduced to weed control interests; and the population of residents concerned about invasive species has been expanded through awareness and weed identification education.

- a. Impacts: Impacts of Extension programs in Goal 1 were measured as knowledge gains, economic gains, changes in practices and policies, and as donated time by Extension volunteers.

One hundred-fifty Latino "milkers" showed a nearly 20% improvement in knowledge following Spanish-language classes delivered by Extension. A follow-up on two dairies that sent their employees to the course found that the operations had an improvement in milk quality and reduced incidence of mastitis. The average scores on tests given to students after participation in Spanish On-Farm Workshops were 73%, compared to 7% before attending.

Ninety-five percent of Northern Idaho cereal school participants indicated knowledge increased by at least 50%, and indicated plans to use the new knowledge in the management of some 287,000 acres of cropland. Students who attended the "Wheat Health" course reported at least 50% increase in knowledge; 80% indicated they applied knowledge from previous years' classes on farms occupying more than 114,000 acres.

Snake River cattle feeders continued to increase acreage planted as high-moisture corn, and continued to improve the contracting power of the cooperative. The sugarbeet irrigation efficiency project protected crop productivity and quality while using 17–25% less water than traditional irrigators. Apple maggot detection and control effort programs resulted in a measurable reduction in infestations.

One beef producer estimated \$8,000 savings in hay purchases after participating in a UI hay-testing program. Growers in southern Idaho were able to produce "normal" yields despite 15–33% reductions in water delivery due to continued drought by using soil water sensors and data loggers as participants in Extension demonstration projects. Teton area landowners saved more than \$ 5,600 by coordinating with Extension to combine orders for noxious weed control.

As a result of UI trials, Idaho alfalfa seed growers were able to retain registration of a valuable pesticide because the apparent risks were much lower than those calculated with the default data. The Boise City Public Works Department reported selling 780 compost bins after an estimated 325 volunteer hours were spent helping train homeowners in Ada County about composting.

In response to UI work analyzing the use of stubble height to manage rangelands, the USFS and BLM in Idaho announced plans to make major changes in their monitoring and decision-making practices, to both improve riparian areas and fisheries habitat and to enable livestock permittees to continue grazing public lands throughout the West.

Some 263 certified Master Gardeners contributed at least 7,890 volunteer hours of direct support to Extension, the equivalent of six full-time employees.

- a. Since developing our 2000-2004 plan of work, University of Idaho Extension has become more focused to address the goals related to agricultural competitiveness. Our plan of work describes outputs (numbers of contacts, classes, publications, etc.) that have all been exceeded, despite a significantly reduced workforce. These outputs are documented in targeted program areas more specific than originally planned.

Our efforts to document success, however, have shifted to measuring outcomes that result because of our programs. In this regard, we are experiencing success not previously measured. Because of changing customer needs and faculty resources, some issues such as animal and plant production efficiencies have received greater attention since the development of our plan of work; while other topics such as farm financial management have become better integrated across the spectrum of Extension programming.

- a. Grants to support Goal 1 included \$1,628,228 from various sources, including CSREES SARE, ARS, and state Commodity Commission sources. **Smith-Lever (3 b,c)** investment in Goal 1 for 2003 was approximately \$872,034. **State** appropriations for agricultural research and extension invested approximately \$3,100,637 in Goal 1, and investment of **County** funds was approximately \$1,047,083. The **total** program cost for Goal 1 was approximately \$6,648,382.

## Key Theme – Agricultural Competitiveness

- a. Canyon County Extension collaborated with the Canyon Agriculture Foundation for Education (CAFE), Agribusiness Committees of the Nampa and Caldwell Chambers of Commerce, and the Idaho Water Users Association to address issues related to the public's perception of commercial agriculture. A Treasure Valley Legislative Tour was conducted to emphasize the importance of agriculture to the local economy and address concerns about the impact of urban development on the agriculture industry. Specifics of the tour included stops at United Water, Ridenbaugh Headworks, and the Nampa City Pressurized Irrigation Station to teach participants about how surface water, typically thought of as agricultural water, is used in a variety of urban settings.

In partnership with the Idaho Bean Commission, another tour was given to the Mexican Trade Mission, on bean production in the Treasure Valley. The Idaho Agriculture Summit focused on issues including the "Right to Farm in America," "What's Happening to Agricultural Land in America?" and "Land Use Impacts on Water Delivery Systems."

Publications included "Using Regional Economic Analysis Tools to Address Land Use Planning Issues" for the *Journal of Extension*, *Impact Statements* on the Treasure Valley Legislative Agriculture Tour and Canyon County's "Code of the West," and as part of a UI Department of Agricultural Economics and Rural Sociology Extension series, an article on the urban-rural clash in Canyon County.

A CAFE-supported agriculture essay contest was organized for Canyon County fourth graders, with winners from each school presented awards. The CAFE scholarship program awarded three scholarships to college students pursuing agriculture-related degrees.

- b. The Extension-led Treasure Valley Legislative Tour Planning Committee raised over \$13,000 in cash and in-kind contributions from 17 sponsors to support the event. As a result, more than 80 Idaho legislators, county commissioners, mayors, planning and zoning boards, and other key decision makers learned about the local agriculture community's perspective on water needs and the impact water suppliers have on the area's infrastructure.
- c. These programs are supported by Smith-Lever (3) b and c appropriations, by State appropriations for agricultural research and extension, and by various grants and contracts.
- d. The programs reported in this section are delivered locally.

## Key Theme – Agricultural Profitability

- a. UI Extension agents reported 2,115 face-to-face contacts resulting from 38 presentations on beef cattle nutrition, production, and other management at beef schools, workshops, seminars, professional meetings, field days, twilight tours, poster sessions, and informal farm and office visits. Other outreach included 54 publications in the form of research reports, proceedings, *Impact Statements*, and popular press

articles such as newspaper columns in the Idaho County Free Press, Clearwater Progress, and Lewiston Morning Tribune, and county newsletters.

The District II Beef Advisory Committee, a collaborative of County Extension educators, UI Animal and Veterinary Science faculty, local veterinarians, allied industry representatives, and area cattle associations collaborated on the agenda for the upcoming winter beef schools.

In response to requests from the Lemhi County Cattle and Horse Growers Association, UI Extension offered classes on heifer selection, weed risk management, forest fire awareness, Idaho water law, and production records at the six-week Lemhi County Cattlemen's Winter School. UI Extension also gave two evening presentations at local community centers in Clark County after being asked by local ranchers for a beef school in their area to address disease prevention and new identification systems for cattle.

Tribal members at the Annual Fort Hall Beef School were assisted with improvements to their management and production techniques, and a culturally-based report was prepared for the Fort Hall Business Council on how BSE could affect traditional hide tanning. The Fort Hall EIRP developed and implemented the Southeast Idaho Multi-County Beef School, and recruited several tribal member beef producers to attend.

The UI Extension Beef Team worked with Brigham Young University faculty and Idaho cattle industry representatives to offer five beef quality assurance (BQA) training and certification sessions throughout Idaho to teach producers how to reduce their losses as identified in two industry-sponsored consumer confidence audits. Areas of focus included safe and wholesome food products, animal wellbeing, and incorporation of BMPs into beef production. Results from BQA program evaluations given to class participants were used to update curriculum materials, including the development of a web-based certification system. A survey on producer awareness and knowledge of BQA practices and principles was sent to every dairy in the state to make further user-specific adaptations.

- a. Participants in this year's UI Extension beef schools learned about new beef production technology and practices and emerging issues related to the beef industry, including information on BSE and Trich outbreaks which helped reduce fears in the ranching community. Beef producers also increased their awareness and knowledge of management tools to select superior animals, trait relationships, and improvements to breeding programs by attending UI Extension presentations at beef schools and other educational events. Several producers are now consistently using data from ultrasound evaluations for bull and heifer selection, including purebred producers through their breed associations.

Ranchers who participated in the A to Z Retained Ownership program reported gaining useful information on enhancing their marketing of calf crops, fine-tuning ranch management, and keeping abreast of changes in the beef industry. The feedlot, carcass, and economic data from feeding trials on more than 270 calves at the Bruneau Cattle Company feedlot were relayed to buyers on satellite and internet marketing systems. From FY 2002 to present, pre- and post-tests given to

approximately 250 beef producers who participated in BQA training/certification sessions have shown an average 45% increase in knowledge.

Nutrient analysis of hay samples from beef operations resulted in a Custer County producer using four fewer truck-loads of hay, which saved approximately \$8,000. Producers gained a better understanding of the effects from pasturing their cattle on or near phosphate mine tailings, and can now recognize the signs of selenium toxicity after Extension performed blood tests comparing exposed and non-exposed animals.

- a. One private grant totaling \$8,250 supported beef quality assurance efforts in the state of Idaho. These programs are also supported by Smith-Lever (3) b and c appropriations and by State appropriations for agricultural research and extension.
- a. UI Extension focused their educational assistance to beef producers in central and south Idaho, as well as through collaborative efforts to reach producers in **California, Nevada, and Utah.**

### **Key Theme – Animal Production Efficiency**

- a. UI Extension faculty made more than 1,800 client contacts related to dairy education and research, in addition to giving 42 presentations and writing 26 articles for publication.

Collaborative efforts included the American Dairy Science Association meeting in St. Louis, Missouri, the DHI-Provo 49<sup>th</sup> Annual Herd Management Conference in Sacramento, California, the National Mastitis Council's 43<sup>rd</sup> Annual Meeting in Charlotte, North Carolina, the 20<sup>th</sup> Technical Conference on AI and Reproduction in Milwaukee, Wisconsin, the Idaho Crop Production Association meeting in Jackpot, Nevada, and the Washington State Veterinary Medical Association Annual Convention. Popular press articles in *Hoard's Dairyman* and the *Progressive Dairyman* had a combined readership of more than 90,800.

In response to needs identified by a dairy advisory board, UI Extension faculty delivered a Spanish language Milker School (Escuela de Ordeño) for Idaho dairy employees. Classes focused on milk letdown, milk quality, food safety, and the role of the dairy industry in Idaho's economy to provide Hispanic milkers with a better understanding of how each step in the milking process affects milk production.

The focus of the 2004 Eastern Idaho Winter Dairy Forum was "Managing Dairy Calves," with presentations on disease prevention and treatment, feeding strategies, housing, sanitation, and where to find information on the web. A producer panel provided highlights of their effective calf rearing programs to minimize disease and optimize heifer growth. UI Extension also gave six presentations to veterinary students on the use of DHI records for herd management analysis.

To determine the benefits of using sand-saving devices with free-stall housing for improved cow comfort associated with increased milk production, UI faculty conducted a field trial funded by the United Dairymen of Idaho that compared Agriweb™ and Sand Trap (donated by the Wisconsin-based Presto Products and local Albers Dairy Equipment, respectively) with conventional sand stalls on a commercial dairy farm in southeast Idaho. Results were summarized and statistically



analyzed for presentation at the 2004 American Dairy Science Association annual meeting and two popular dairy magazines. UI Extension also developed a survey to evaluate the effect of TMR preparation strategies and bunk management practices on herd performance at 15 commercial dairy operations in eastern Idaho.

Another new product demonstration trial was conducted on the effectiveness of the FAST BACK<sup>SM</sup> Breeding Program that uses Eazi-Breed<sup>TM</sup> CIDR<sup>®</sup> to synchronize dairy cows that were inseminated but did not conceive and are returning to heat. Idaho Extension collaborated with Select Sires, Inc. to coordinate an AI school.

Also funded by the United Dairymen of Idaho, a year-long whole farm nutrient balance study was conducted on eight dairies in Gooding and Jerome counties to quantify the inflow and outflow of nitrogen, phosphorus, and potassium in feed, bedding, manure, and milk components. A corresponding feeding trial evaluated the effects on phosphorus levels in manure, milk production, and feed costs.

The UI Dairy Extension team conducted a survey to assess biosecurity risks on Idaho dairy farms using a standardized series of questions for interviews with producers during 36 farm visits and four telephone conversations. Results from the survey enabled Extension faculty to characterize biosecurity practices used during herd expansions and subsequent disease incidence for Idaho dairy herds and to develop and disseminate appropriate biosecurity educational materials to ensure the profitable production of safe, wholesome, high quality milk.

- a. All of the estimated 150 milkers who attended one of 12 Hispanic Milker schools held across southern Idaho earned a certificate of completion at the conclusion of the program. Pre- and post-testing of 54 of these students on various aspects of milking management showed an average 19% increase in scores. A follow-up on two dairies that sent their employees to the course found that the operations had an improvement in milk quality and reduced incidence of mastitis.

As a result of the eastern Idaho feeding trial that reduced phosphorus levels from conventional feeding rates to 2001 NRC recommendations, the amount of phosphorus in manure fell 25–40% and producer income increased by 60%.

An article about the UI Extension sand saver trial published in the Journal of Dairy Science was cited in the Western Dairy Digest, “an association of industry, educators, researchers, and government sharing the common objective of providing objective management information to dairy farmers.”

- a. More than \$130,000 in grants was obtained in support of UI Extension dairy education and research activities, from the United Dairymen of Idaho, UI Extension, and USDA (ADEC and FSIS). These programs are also supported by Smith-Lever (3) b and c appropriations and by State appropriations for agricultural research and extension.
- a. UI Extension agents conducted research and educational presentations on dairy issues with trips throughout southern Idaho, as well as **California, Illinois, Nevada, North Carolina, Missouri, Washington, and Wisconsin.**

## Key Theme – Plant Production Efficiency

### a. Cereals

UI Extension Cereal efforts reached 7,047 individuals with 81 presentations and personal visits, and an even wider audience with 61 publications, at least 26 of which were in popular press media with circulations up to 28,000.

UI Cereal Schools held in Pocatello, Idaho Falls, Ashton, and Preston covered crop insurance, cereal variety updates, insects, wheat quality, weed management, organic production, bio-technology, ethanol production, and cost of production software.

Workshops on the prevention and containment of mealy bugs were conducted during the winter of 2004, with a follow-up field day that summer to harvested study sites.

Small Grains Pest Management Workshop participants were recruited to achieve a balance of disciplines/areas of expertise and geographic locations to create a strategic plan for small grains. The resulting document, which incorporated peer-reviewer comments and editing by the WSU Pesticide Information Center Communications Specialist, was mailed to all workgroup participants and other interested parties and posted on the USDA IPM Centers national webpage.

Nine small grain cereal and two fallow crop weed control trials were conducted. The results were presented at two commodity schools, the FWAA Fertilizer and Chemical Conference, were published in the UI Commodity School proceedings, and are used by Extension Educators, crop advisors, and growers to facilitate weed management decisions.

UI Extension collaborated with Bonneville County Grain Growers to sponsor a field day that provided 45 participants with the opportunity to view 15 barley variety trials and interact with County and University Extension faculty. Two spring variety plots were grown on cooperator fields as part of the Caribou County cereal education program, to which 20 farm operations attended a tour. A barley risk management workshop, co-sponsored by the Idaho Barley Commission, also attracted 20 farm operations. Cereal schools were delivered to wheat and barley producers in Nez Perce, Lewis, Idaho, Latah, and Boundary Counties. A series of field tours highlighted variety differences, management, and local availability.

In response to priority needs identified by the UI/Nez Perce County Advisory Committee and private enterprise, 13 presentations were given to 364 people in District I on direct-seed production systems and agricultural technology. Leadership was provided to more than 500 individuals as part of serving on the Northwest Direct Seed Cropping Systems Conference Planning and WSU/ARS Cunningham Farm Advisory Committees. Six programs on using or transitioning to direct seed cropping systems were developed and presented to the Clearwater Direct Seeders Grower Group.

Adoption of high moisture crop enterprises by Snake River Cattle feeders continued into 2004, contracting 2,780 acres of high moisture corn with seven growers. They later contracted an additional 410 acres.

### Potatoes

Based on stakeholder input from local and statewide grower advisory groups, UI made 1,727 contacts through 45 education programs on seed management, cropping systems, harvest, and storage, and produced 82 publications on these and other emerging issues for the Idaho potato industry.

For example, the annual UI Potato Conference provided workshops and seminars on planting, pest control, soil fertility, irrigation, harvest, storage, and economics. Spanish-language workshops covered phosphorous management, soil humic acid, and pesticide safety. Presentations at the Idaho Seed Growers Seminar discussed the economic impact of production management decisions with specific emphasis on the length of rotation and its impact on potato quality. As part of the ongoing Tri-state Potato Breeding Program, UI Extension panelists again tested potatoes in 2004 for color, flavor, texture, and overall consumer acceptance after baking.

### Sugarbeets

UI Extension produced 17 publications and made more than 500 contacts during their five formal presentations and farm visits to share research findings with clientele across the sugarbeet production area of Southern Idaho.

A sugarbeet irrigation efficiency project developed in 2002 and funded by the Specialty Crops Grant Program and Idaho sugarbeet industry was extended through FY 2004 to demonstrate water soil moisture sensors in three additional southern Idaho county grower fields with the objective of achieving irrigation management that minimizes soil erosion and nutrient leaching and maximizes sugarbeet production and quality.

Twenty-three speakers from the Amalgamated Sugar Company, Amalgamated Research Incorporated, ACH Seeds, **Montana** State University, **Oregon** State University, USDA, and an 11-member panel of growers led nine workshops and three general sessions at the Snake River Sugarbeet Conference on topics such as production costs, irrigation management, cultural practices, and sugarbeet processing byproducts. Spanish sessions focused on drip irrigation, sugarbeet diseases, and soil phosphorous management. Twenty-five exhibitors and sponsors funded the conference.

### Forages

There were a reported 1,952 contacts through UI Extension programs on forages, which included more than 75 presentations and inquiries about improving pasture performance, conserving resources, and preventing environmental degradation in commercial and non-commercial settings. Thirty-nine publications ranged from state research reports and proceedings, to newspaper interview articles in *The Progressive Hay Grower*, *The Progressive Dairyman*, *Western Farmer-Stockman*, and the *Times News Ag Weekly*. In addition, three chapters were written for the new *Idaho Forage Handbook* and the *Annual Forages Notebook* was created and distributed.

The four-day hands-on Lost River Grazing Academy (LRGA) was presented twice at the Nancy M. Cummings Research, Extension and Education Center to provide operators and interested agency personnel from around the western US an introduction to the principles of management-intensive grazing of irrigated pastures.

Collaboration with **Utah** State University to plant spring and summer annual forage variety plots was arranged in response to a Franklin County Forage Advisory Committee's request to find spring annual forage that could be planted early and harvested by late June. Preliminary yield and quality data were presented at the 2004 Southeast Idaho Forage School by a USU Specialist, along with other presentations from UI Extension.

The UI Forage Topic Team coordinated the first regional Alfalfa Hay and Forages Conference, covering alfalfa production, annual forage performance trials, the economics of corn silage, triticale in rotation and ration, and brassica forages over 2-days. Ada and Canyon County Extension collaborated with local agricultural businesses and the NRCS to present a 12-hour pasture short course designed to introduce new rural landowners to land use planning and resource sustainability. BYU-Idaho and UI Extension held a Forage Seminar for 68 producers and students.

Research-based data ranging from drought-related basic plant physiology and soil processes to practical solutions for drought management were used to develop curricula and publications on forage and range management during and after a drought, and in workshops throughout Southern Idaho.

Grassland West Company and two growers worked cooperatively with UI Extension to conduct comparative alfalfa variety trials, one irrigated and the other rain fed. Farm tours were given to demonstrate the varieties, and yield results were reported via newsletters, columns in the *Lewiston Tribune*, a UI College of Agriculture Progress Report, educational programs, and a committee meeting.

Two demonstrations of planting pasture and alfalfa using 2, 4-D and glyphosate with a Truax no-till drill obtained with DEQ 319 grant funds in cooperation with the Valley County Soil and Water Conservation District were conducted to suppress existing growth. Year two of the intensive annual forage variety trials was planted and harvested on the UI Research Farm in Kimberly. Gooding County Extension assisted operators in the Magic Valley with the use of annual forages to extend the grazing season and remove excessive phosphorus from soils. The Lemhi Soil Conservation District sponsored the two-day "Dollars and Cent\$ of Forage Management" workshop in cooperation with Lemhi County Extension. A similar presentation, on pricing and marketing, was included in the Idaho Forage School.

a. Cereals

Ninety-five to 97% percent of those responding to Northern Idaho cereal school evaluations indicated that their knowledge increased by at least 50% due to the program and it would be useful in their business or occupation, which spanned 287,000 acres of cropland. Eighty-nine percent of the respondents reported having incorporated the information from previous schools in their management decision-making. Respondents also expressed interest in further Extension variety evaluation and programming on wheat, barley, oats, peas, lentils, and chickpeas.

All 33 students who attended the "Wheat Health" course received UI academic credit or continuing education units. On a post-class questionnaire, two-thirds reported a 50% or greater increase in knowledge, while 80% indicated they would use

information from the class and had been applying information from previous years' classes on their farms, which altogether represented more than 114,000 acres.

### Potatoes

Pre- and post-tests given at the conclusion of UI Potato Conference workshops showed participants' knowledge of the material presented increased by 45–55%. The average scores on tests given to 37 students after their participation in Spanish On-Farm Workshops covering disease management and fungicide resistance were 73% compared to 7% before attending.

As a result of a June 2004 newsletter sent to every potato grower in Idaho on managing potato cull piles for diseases, the percentage of storages with cull piles was reduced to almost half that of the previous year.

### Sugarbeets

Written comments on evaluations of the Snake River Sugarbeet Conference by the 300+ participants emphasized that it is essential for the health of the sugarbeet industry and growers use the information presented in their operations. Student surveys of the Spanish sessions also indicated they would implement what they learned at the conference.

The final year of the sugarbeet irrigation efficiency project in Washington County protected targeted crops from rot based on moisture readings from 2–3 foot sensors that provided growers confidence in letting the top foot of soil dry out to recommended levels, which used 17–25% less water without sacrificing sugarbeet quality. Growers in Power County also learned about new technological tools available to assist them with irrigation scheduling. Four growers who participated in the irrigation monitoring program shared experiences at the 2004 Sugarbeet Conference, including the cost benefits.

### Forages

Participants in Extension workshops, classes and consultations significantly changed their perspective and understanding of ecosystem principles, which led to improved management of irrigated pastures, increased economic sustainability, improved productivity, reduced purchased and fossil fuel inputs, and reduced potential for undesirable impacts on land and water resources. For example, as a result of no-till planting demonstrations in Valley County, cooperators selected an appropriate herbicide to suppress growth before no-till drilling on all pasture and alfalfa planting.

Thirty producers received grants for registration, meals, lodging, and transportation to the 2004 LRGAs from the UI Alternative Careers for Idaho Farmers. Pre- and post-testing of participants indicated that all had learned to evaluate pastures for quality and quantity of soil, plant, and moisture resources and intended to implement their increased understanding of pasture ecosystems and management on their farm or ranch within the next six months. Previous attendees reported greatly improved harvesting efficiency from implementing the principles they learned. For example, because one operator from the Mackay area grazed 86 acres of poorly irrigated ground instead of haying, he earned \$600 more than anticipated. An operator from the Salmon area who reported not qualifying for a loan to purchase hay ended up

saving \$10,000–\$15,000 by stockpiling feed during the summer and rationing it out during the winter.

Annual forage research in Idaho provided data that helped farmers choose varieties with the highest yield and quality potential for spring planting and second crop summer planting, which in turn decreased the need for storing baled dry forages, saved significant amounts of money, and made more efficient use of the land.

Evaluations of the first regional Alfalfa Hay and Forages Conference showed that about 100 producers increased their knowledge of the agronomic and economic characteristics of less traditional forages, the importance of dry matter in silage to generate a high quality feed, and the amount of growth needed before annual forages are ready to be grazed or harvested. Well over half indicated they would grow annual forages, and 73% would change the way they adjusted forage value when buying and selling feedstuffs. Other probable changes to management practices related to water storage, insect pest identification, and GPS technology.

By implementing information learned at UI workshops such as water “banking” and timely irrigation, southern Idaho growers were able to produce “normal” yields despite 15–33% reductions in water delivery due to continued drought. Most of those using soil water sensors and data loggers indicated they would continue. Participants in the “Dollars and Cent\$ of Forage Management” workshop learned how to plan pasture improvements and analyze the financial results.

- a. Grant funding for cereal, potato, sugarbeet, and forage education and research from commodity commissions, private companies, and DEQ totaled \$287,390. These programs are also supported by Smith-Lever (3) b and c appropriations and by State appropriations for agricultural research and extension.
- a. Plant production efficiency programs in Idaho, **Washington**, and **Oregon** have a strong collaborative relationship, much of which is founded in the STEEP project, and limited tillage practices. Other related collaboration included **Montana** and **Utah**.

## **Key Theme – Other Commercial Crops**

- a. UI Extension agents working on “other commercial crop” research and education outreach recorded 260 contacts, 13 presentations, and 16 publications. Venues included farm visits, the **Idaho/Oregon** Winter Alfalfa Seed School, Idaho Alfalfa and Clover Seed Commission Research Meeting, Clearwater Supply and Idaho Irrigation Equipment Dealers Association shows, Impact statements, newsletters, and websites.

UI Extension collaborated with a consultant from Pioneer Hi-Bred International to finish programming for the multi-state alfalfa seed industry website ([www.AlfalfaSeed.org](http://www.AlfalfaSeed.org)) initiated in 2002 after applying for and receiving additional funds from the Idaho Alfalfa and Clover Seed Commission (IACSC). Additions to the site were based on input from a website advisory committee, including practical information on seeding, fertilization, pollination, IPM, crop protection, irrigation, and harvest. Results from local and regional university research and Extension programs dealing with alfalfa seed production issues are also provided, along with meeting notices, minutes, and Commission budgets.

UI Extension also collaborated with the IACSC to develop an Alfalfa Seed Pest Management Strategic Plan for prioritization of research, regulatory, and educational needs. Preparation involved a two-day workshop funded by USDA/CSREES to obtain multidisciplinary input from across the state, followed by incorporation of peer-reviewer comments and editing by the (**Washington**) WSU Pesticide Information Center. Canyon County Extension and the UI Pesticide Program Coordinator developed another Pest Management Strategic Plan for dry bulb onions.

UI Extension faculty from southwest Idaho collaborated with the central **Oregon**-based Clearwater Supply Company on a UI Extension Specialty Crop grant funded project to demonstrate research-driven onion production practices that reduce groundwater contamination by nitrogen and increase water and fertilizer use efficiency while maintaining onion production. Monitoring equipment was purchased and demonstration plots established within Canyon and Washington County growers' fields so they could observe the influence of furrow and drip irrigation methods and schedules on both nitrate movement and onion yield and quality. Throughout the growing season data was collected on soil-water and onion tissue nitrate mineralization to compare the nitrate and water use efficiencies between furrow and drip irrigation. Results were used to make recommendations to each participating grower and then presented at several grower meetings in the Treasure Valley.

Washington County Extension organized informational meetings for the Orchard Pest Review Board on monitoring of apple maggot infestations. In addition, an informational letter was distributed throughout the county, a tour of infested areas was taken with members of the ISDA, and an end-of-season meeting on control measures was organized with the county commissioners and landowners.

A weather station and computer were installed for a fruit grower in the Washington-Payette County area to help predict codling moth emergence and treatment dates.

Two systemic seed treatment trials of newly released fungicides for dry peas were implemented cooperatively with a north-central Idaho grower and private enterprise, including on-farm crop tours to discuss and evaluate the trial, harvest in conjunction with cooperating growers and private enterprise, and statistical analysis to determine product efficacy. Results were presented at the American Society of Agronomy annual meeting in Denver, Colorado; in a STEEP research report (collaborative with **Washington**); and in the USDA Dry Pea, Lentil Chickpea and Winter Legume Breeding Progress Report.

Research on genetic shift of dormancy in alfalfa seed, including a literature search and interviews with alfalfa seed breeders from across the US, was conducted to protect the quality and reputation of Treasure Valley-raised alfalfa seed. Team research by UI Crop Management and Extension Support Specialists on "Crop Variety Response in Direct-Seed (No-Till) and Conventional Tillage" was presented at the 4th International Crop Science Congress in Brisbane, Australia and printed in the respective Proceedings.

- b. The preparatory workshop for developing the Idaho Alfalfa Seed Pest Management Strategic Plan provided a forum for growers to highlight one of their most immediate issues by submitting an updated timeline of pesticide applications and their impact on

workers to EPA for Tier II and Tier III risk assessments. As a result of this "real world data" for the risk assessment of dimethoate, Idaho alfalfa seed growers were able to retain its registration because the new calculated risks were much lower than those calculated with the default data.

In addition, one new pesticide product was prioritized by IR-4 for the 2005 tolerance study year, which will primarily benefit **California** as the only western state in need of tolerance data for food-related pesticide registration. Idaho will benefit from its use on alfalfa hay and direction for future research trials.

Trap results from apple maggot detection efforts indicated that landowner control measures were effective in reducing apple maggot infestations. A field representative from Dairyland Seed Company reported using research posted on the multi-state alfalfa seed industry website.

- a. Funding to support research and education on "other commercial crops" totaled \$23,493 from USDA/CSREES and CCC (Specialty Crop Grant), and the Idaho Alfalfa & Clover Seed Growers Commission. These programs are also supported by Smith-Lever (3) b and c appropriations and by State appropriations for agricultural research and extension.
- a. These programs are delivered statewide, and also in collaboration with **Oregon, Washington, Nevada, and Colorado.**

### **Key Theme – Invasive Species**

- a. UI Extension weed scientists created a website for weed resources in Idaho. At [www.uidaho.edu/weeds](http://www.uidaho.edu/weeds), the site integrates information on noxious weeds with instruction on how to submit samples to the Lambert Erickson Diagnostic Laboratory for identification and control via mapping distribution of invasive plant species.

UI faculty from Plant, Soil, and Entomological Sciences conducted noxious weed law reviews to update public resource management plans. County Extension educators provided seminars, training, and tours to Idaho CWMA (Cooperative Weed Management Area) Advisory Committees and volunteers to help them detect, prevent, contain, and/or eradicate noxious weeds. A crew was administered that surveyed plant populations in the Selway-Bitterroot and Frank Church Wilderness Areas.

To address concerns from the Shoshone-Bannock Tribe about a large infestation of larkspur on a reservation range unit, UI Extension toured the site and gave a presentation to the Tribal Agricultural Resource Management Department on how to develop an effective weed management program on the reservation. A Fort Hall Extension educator worked with the Shoshone-Bannock Range Department to optimize use of tribal rangeland and improve monitoring efficiency by evaluating sites, developing management plans, providing information on range units, calculating AUMs, and assisting cattlemen on a round-up.

An "Integrated Weed Management Project Learning Tree" program was presented to schoolteachers and their students to help them understand weed control requires an integrated approach, including mechanical, cultural, biological, and chemical



methods. A card game and “bio hunt” were designed to tie the concepts together. As a result of the student weed presentation, a science teacher at Salmon Junior High started Noxious Weed Science Days at the UI Cummings center with help from Lemhi County Extension. Collaborators included the Public Affairs Specialist from the Salmon-Challis National Forest, Lemhi County Weed Control members, BLM range technicians, and a couple from “Weed Goats 2000.”

Nine farmers, ranchers, and other landowners, as well as the cities of Driggs and Victor, participated with the Upper Snake River Cooperative Weed Management Area (USRCWMA) and the Palisades Mitigation Program to purchase and release biological control agents for several noxious weeds throughout the Teton area.

Five “Community Spray Days” in Lemhi County resulted in 19 landowners and other local stakeholders treating approximately 98 acres for noxious weeds in the Carmen Creek drainage, while 59 private individuals and 16 employees from the BLM, USFS, county, and city treated 92 acres within the Salmon City limits. The Lemhi CWMA provided herbicide, equipment, and manpower. Additional spray campaigns were conducted in Adams County on six weed species, funded by grants that covered the cost of equipment and chemicals. The targeted weed infestations have been reduced.

Participants in CWMA projects learned weed identification, bio-control methods, chemical selection, timing, and effectiveness. Private applicators received re-certification credits and increased their knowledge of weeds and control treatments. Public awareness of invasive weeds has increased through news articles on weed control activities and displays at courthouses and fairs.

UI Extension collaborated with the Blaine County Parks and Recreation District and CWMA on an alternative weed control plan to reduce the use of chemicals on the border of a 27-mile public bike path connecting the cities of Bellevue and Sun Valley. The plan included volunteers who spent numerous hours hand-pulling and bagging noxious weeds.

As a result of Extension work with the Lemhi CWMA, UI Extension collaborated with the Montana State Weed Coordinator and Northern Region USFS Rangeland Management Specialist in a panel at a national conference.

- a. By combining orders for noxious weed control, several counties involved with the USRCWMA saved Teton area landowners more than \$5,600. Additional support from the Palisades Mitigation Program and Teton County resulted in the purchase and release of 81 colonies of insects for a fraction of the actual cost.
- a. The Center for invasive Plant Management contributed \$5,000; Teton County invested \$607, Lemhi County CWMA invested \$23,910, and the Palisades Mitigation program contributed \$1,044 for these programs. These programs are also supported by Smith-Lever (3) b and c appropriations and by State appropriations for agricultural research and extension.
- a. These programs are conducted statewide, and in collaboration with universities, federal agencies, and stakeholders in **Montana, Wyoming**, and other adjacent states.

## Key Theme – Home Lawn & Gardening

### a. Master Gardener Program

To reach more people, UI Cooperative Extension recruited, trained, and supervised new Master Gardeners (MGs) to assist with various community horticultural projects and handle thousands of inquiries from telephone calls and walk-in clientele. Extension educators from both Idaho and **Utah** spent approximately 60 hours on 3–4 month long advanced gardening courses as part of the MG Volunteer Development Program. Topics included plant pathology, biological insect control, and vegetable production.

With financial and educational support from UI Extension, 65 advanced MGs spent a total of 820 hours planning and producing a conference in each district for other MGs and the public to provide gardening education and build participants' ties to the university. Professionals from the green industry, other businesses, government agencies, and other universities collaborated with Idaho Extension in teaching MG classes, including use of their facilities and equipment for training events and covering printing and advertising costs.

Hispanic outreach efforts within the Idaho MG program were presented at the National Association of County Agricultural Agents' Annual Meeting in Orlando, Florida and published in the Conference Proceedings. UI Extension established a certification program for MGs and other volunteers participating in the Idaho Botanical Garden (IBG) to help with community garden maintenance, children's classes, plant sales, and other functions by recruiting IBG representatives, cooperatively developing curriculum, and providing Extension bulletins and other pertinent handouts.

### Consumer Horticulture Education

In response to Idaho's rapid population growth and the related increase in gardeners unfamiliar with the area, almost every county dealt with inquiries involving horticulture education. Formally, more than 150 presentations to 15,446 homeowners were made throughout the state on consumer horticulture topics such as "Basic Botany," "Turf 101," and "Plant Disease and Diagnosis" during 2004. Gardening-related radio and television spots reached an estimated 625,000 listeners, while 82 popular press articles appeared in Idaho newspapers with an estimated readership in excess of 275,000. Several Extension educators also wrote weekly, bi-weekly, or monthly newspaper columns and newsletters. Six issues of the *Focus newsletter* were distributed to 7,000 readers in District III, promoting Extension programs such as garden pest control, organic growing methods, and apple storage. A lawn and tree irrigation website at was developed for information dissemination on urban landscape water and fertilizer issues. Informal outputs included dealing with at least 3,000 phone inquiries, 500 site visits about horticulture-related issues, and consulting more than 3,700 walk-in clients with plant and insect samples.

UI Extension partnered with the city of Twin Falls to conduct an analysis of water usage in 100 randomly selected area homes, and two water conservation posters were developed and displayed in the City Hall. Additional collaboration involved Boise City Public Works and United Water, Inc. (UWI), who helped Ada County

Extension with a seven-week “Water Efficient Landscaping” series. Extension bulletins were used to augment class presentations and demonstration tours. Partnership with Boise City Public Works continued with the organization of a six-week hands-on “Master Composter Volunteer Training Program” to teach homeowners composting principles, as well as obtain certification to train others in the Treasure Valley how to compost.

Nez Perce County Extension Horticulture Advisory Committee teamed with the Lewiston Orchards Irrigation District Board and Lewiston Water Works to identify needs for UI Extension education in water efficient landscaping for the citizens of Lewiston. For the 10<sup>th</sup> year in a row, Nez Perce County Extension worked cooperatively with the Pullman, **Washington** USDA Plant Introduction Center, **Nez Perce** Tribe Food Center, other tribal entities, and volunteers to plant, maintain, husband, harvest, coordinate educational programs, and distribute 500 pounds of fresh produce from the teaching and demonstration garden on the reservation in Lapwai.

Research and demonstration trials on lawn water and fertilizer use and xeriscaping techniques were implemented throughout the state to generate and share new information for consumer landscape decision-making. A Washington County Extension educator prepared a poster display entitled “Homeowners, Are You Over Watering?” for the Weiser Water Quality Fair that stressed protection of groundwater.

#### Reaching the Green Industry

At least 25 presentations were made to educate more than 400 green industry personnel around the state. In Ada County, Extension educators conducted eight workshops and clinics for garden center employees and another eight classes to people involved in the Idaho Botanic Garden. A seminar on worker protection from pesticide applications was given in Madison County. In Boundary County, eight conferences on the latest information about marketing and growing woody plants were provided to nursery stock producers. A regional conference for the green industry was held in Boise. Publications included articles in the Idaho Nursery and Landscape Association’s *The Taproot*, as well as research reports for nursery growers around the state. Evaluation of fir tree seed sources for commercial use was conducted on research-designated land at the Sandpoint R&E Center.

#### a. Master Gardener Program

Out of 292 individuals who received MG program training in 2004, 263 completed all the certification requirements. Combined, these 263 certified MGs contributed at least 7,890 volunteer hours of direct support to Extension, the equivalent of six full-time employees. Pre- and post-testing administered to all southeast MG classes showed an improvement of four points out of a possible 10 (i.e., from 4 to 8).

Three hundred forty people in southeast Idaho learned about the MG program by participating in a Spanish language version of the curriculum, developed by Extension faculty with support from a Critical Issues grant. Experienced MGs sent to and recruited from the 2003 **Oregon** Gardener’s Mini-College gained large-scale organizational and planning skills by holding four district-wide conferences with 48

sessions throughout Idaho in 2004 for 455 people interested in learning more about gardening. The conference planners also gained enthusiasm about continuing in the MG program, including involvement in future conferences annually. Detailed evaluations from MG conference participants indicated that all learned from the experience and planned to implement new knowledge in their own gardens and share it with others.

On a follow-up questionnaire to a MG course in Franklin County, one student reported receiving enough inspiration to complete a bachelor's degree in horticulture and embark on a master's degree in water conservation at Utah State University to apply her knowledge in the Cache Valley. Information provided to MGs on low water use landscapes had a "multiplier effect" as they held summer plant clinics and other educational events, resulting in greater selections of water-efficient plant species at nurseries and increased home xeriscaping.

The Boise City Public Works Department reported selling 780 compost bins after an estimated 325 volunteer hours were spent helping train homeowners in Ada County about composting to keep yard debris and other organic matter out of landfills. The 2004 MG program sponsored informational booths at the Eastern Idaho State Fair that attracted approximately 9,000 visitors with 700 inquiries and another estimated 7,000 people at INEEL's Science and Engineering Expo, where the invited UI Extension exhibit took third place out of 70 entries.

Fifteen women who participated in "The Magic Garden" training series offered by MGs at the Ada County Women's Correctional Center encouraged involvement from their fellow prisoners to maintain a garden under MG supervision. Student evaluations and pre- and post-test exams given to participants in the IBG certification program showed improvements in horticultural knowledge and skills as well as interest in taking additional classes. Collaboration with **Utah** Extension Educators resulted in their adoption of several UI MG curricula.

### Consumer Horticulture Education

Ada County Extension's partnership with UWI on the "Water Efficient Landscaping" series generated 640 participants thanks to recruitment via mass media mailings, posters, and newspaper advertisements, all paid for by the utility. In response to a summer water use survey indicating excessive water use, an Extension conservation awareness program contributed to an overall 15% decrease in Twin Falls summer water use despite significant growth in population and residences. The conservation also saved groundwater and protected water quality by slowing soil water infiltration and potential leaching of nitrates.

One hundred eighty-one citizens, including **Nez Perce** tribal members, from Idaho and **Washington** learned about no-till gardening, local indigenous crops, and integrated pest management during the evening "Banana Belt Horticulture Seminar Series" taught cooperatively by UI and **WSU** Extension, local businesses, and the Nez Perce and Asotin County Educational Advisory Committee. Two classes on Native American gardening specifically designed for **Nez Perce** tribal members

attracted 88 people. According to a post-class questionnaire, 85% of respondents reported an increase in knowledge, while 67% had used information from the previous year's seminar series. Bannock County Extension horticulture education reached 18 Native Americans from the **Fort Hall** reservation.

#### Reaching the Green Industry

Green Industry response to County Extension efforts at modifying plant inventories and landscaping services to minimize environmental impacts indicates an increasing interest as more businesses participate in community educational events, seek plant diagnostic assistance, and increase attendance at nursery conference each year. About 1,325 people visited the nursery extension website during 2004, many from areas outside the Pacific Northwest and even the nation, to find Idaho nursery statistics, cultural practices, research reports, and links to important nursery sites.

- c. UI Extension was able to provide commercial and consumer horticulture assistance in Idaho with the support of \$29,616 from USDA Special Needs and Critical Issues grants and the Idaho Departments of Agriculture and Lands. These programs are also supported by Smith-Lever (3) b and c appropriations and by State appropriations for agricultural research and extension.
- d. These programs were delivered throughout Idaho, and include significant collaborative efforts with **Oregon, Utah, and Washington.**

#### **Key Theme – Rangeland/Pasture Management**

- a. Educational programs, publications, presentations, and one-on-one ranch visits dealt with the economic, social, and environmental impacts that changing demographics are making on grazing management in the Western region.

Eight one- to three-day workshops were conducted on topics such as livestock grazing behavior principles, proper functioning of riparian areas, range weed control, rangeland ecology, BMPs, and forest grazing management plans. Participants included ranchers and employees from UI Extension, IDL, BLM, and IDEQ. Articles on how a shift in public values dictates new sustainable rangeland management strategies such as using goats to combat noxious weeds were published in the *Journal of Range Management*, *PNW Weed Management Handbook*, County Extension newsletters, Impact Statements and Conference Proceedings distributed by Agricultural Experiment Stations.

A UI scientist/specialist at the Twin Falls R&E Center led a team of land management agency specialists and ranchers that conducted a scientific review of USFS and BLM rangeland practices at the request of the BLM State Director in Idaho and Region 4 USFS Forester. The report included recommendations on how the two agencies should use stubble height for management of riparian areas. Idaho Extension range educators provided comments on an amendment to the ESA and a BLM grazing plan for the US Fish and Wildlife Service.

- b. As a result of UI faculty efforts 2,672 private individuals, county and state elected officials, ranchers and their employees, forest owners, agriculture chemical producers, state and federal land agency personnel, and Extension educators have a

better knowledge of livestock grazing behavior principles, how to modify this behavior, and use animal behavior as a tool for better grazing management and weed control. More than 25 Northern Idaho IDL employees who participated in a three-day hands-on workshop on livestock grazing behavior principles learned how to use behavior as a tool for better grazing management and weed control. Several participants requested follow-up workshops for themselves and their lessees.

In response to the UI review of how stubble height was being used by the USFS and BLM in Idaho, both agencies planned to make major changes in their monitoring and decision-making practices to both improve riparian areas and fisheries habitat and enable public land livestock permittees to continue grazing public lands throughout the West. The stubble height report received attention throughout the nation and Canada from publication on UI and land management agency websites.

Grazing management plans were developed and practices implemented that improved the condition of uplands and riparian areas and controlled the spread of noxious weeds on Idaho's private and public rangelands. Advancements in range monitoring were made on the **Fort Hall** Reservation in response to condition assessments on a large portion of the reservation. National Riparian Team endorsement of Extension recommendations for changes to a grazing allotment resulted in a permittee attaining compliance with USFS standards, thus maintaining his grazing operation and livelihood.

- c. Extension range management programs were supported by \$17,500 from Ridley Block Operations, the state of Idaho, and the USFS. These programs are also supported by Smith-Lever (3) b and c appropriations and by State appropriations for agricultural research and extension.
- d. Extension range management activities were conducted statewide, as well as in **Nevada, Montana, Oregon, Utah, and Washington.**

## **GOAL 2 – FOOD SAFETY**

### **Overview**

- a. Outputs: During 2004, 20 individual faculty and staff (12 FTE equivalent) from the UI College of Agricultural and Life Sciences contributed a significant portion of their time to projects reported under the food safety goal. Another 38 part-time paraprofessionals teach the EFNEP and ENP lessons on food safety and resource management. Faculty produced 57 publications and contributed to the delivery of 136 presentations (workshops, field days, or other educational events) and hundreds of EFNEP and ENP consultations. In total, participating faculty estimate the total number of direct contacts with stakeholders at 21,277.
- b. Outcomes: UI Extension provided education about food safety and security to youth, seniors, limited income, business, and traditional audiences. Youth learned the importance of personal hygiene and its relationship to food, food preparation, and human health. Older youth, many who are destined to work, at least temporarily, in food service industries, also learned about sanitation and safe food handling

practices. Limited resources audiences, in addition to the food safety instruction, learned how to manage their finances and their pantries to ensure adequate, nutritious meals for themselves and their families. Skills learned include menu planning, budgeting, reading nutrient labels, and differentiating between foods that are safe and those that need to be discarded. Seniors benefit by learning ways to maintain adequate nutrition, as their metabolism and finances change.

A long-valued service of Extension has been to provide residents information about safe food preparation and storage. For much of this service, Extension has managed a corps of volunteer master food preservers/food safety advisors to reach out to the public, and to answer time-sensitive questions. Extension has taught people about the importance of temperature to reduce risk associated with activities for food storage and food preparation, and has taught them how to manage for desirable temperatures.

- a. Impacts: Limited resource families have learned to reduce the risk of exposure to food borne illnesses because of just-in-time knowledge about food preparation and storage provided by Extension faculty and its corps of master food safety advisors. Hundreds of other families benefit because of classes and workshops about food safety, where measurement of knowledge gain (25-30%) should translate to reducing the risk of food borne illness by 10-15%.

After receiving UI Extension food preservation training, Food Safety Advisors and other Extension volunteers made at least 3,590 contacts through 136 classes and responses to thousands of phone calls regarding food safety and preservation, contributing more than 1,485 volunteer hours. High-school students who took the class *Ready, Set Food Safe* demonstrated measurable improvement in food safety knowledge prior to receiving a food safety and sanitation certificate.

More than 1/3 of the adults and children who visit the *Germ City* exhibit report intent to increase the frequency of washing their hands. Participants demonstrated increased knowledge of safe food practices following a Nutrition and Diabetes Seminar offered to more than 100 North Idaho caregivers in collaboration with the state Department of Health & Welfare.

Idaho's next generation of food service workers are better prepared to protect public health through food safety courses taught in high school. Similarly, entrepreneurs and new food industry businesses have acquired knowledge and skills to reduce risks to public health, the implications of which would threaten the viability of any fledgling business.

- a. University of Idaho Extension has become more focused to address the goals related to a safe, secure food and fiber system. Our plan of work describes outputs (numbers of contacts, classes, publications, etc.) that have all been exceeded, despite a significantly reduced workforce. These outputs are documented in more targeted program areas than originally planned.

Our investment in Goal 2 has been more focused on fewer topics in 2004. Much of the work on food security reported in this section in 2003 has been moved under Goal 5 (Family financial Management) for 2004. Thus, there appears to be a reduction in

effort that is actually an adjustment by faculty to report in a more holistic framework. In any case, activity in goal 2 remains productive, and meets our expected level of productivity.

- e. The total investment in the food security and safety goal is approximately \$731,310. This includes \$116,928 derived from the FNS food stamp nutrition education program; \$37,616 from EFNEP (Smith-Lever 3(d)); \$69,535 from Smith-Lever (3) b,c. State appropriations for agricultural research and extension invested approximately \$364,170 (includes the FNS-match requirement); and \$143,061 from County government.

### **Key Theme – Food Accessibility and Affordability**

- a. UI ENP personnel in each of 28 Idaho counties collaborated with approximately 15–20 human service agencies such as WIC, Head Start, Health and Welfare, Migrant Council, food banks, schools, and job service programs to stabilize families with food and safe shelter and then move them toward self-sufficiency. Approximately 15% of the ENP and EFNEP programming was spent educating and demonstrating proper food safety techniques to low-income adults and their children.
- b. The UI ENP and EFNEP programs benefited low-income adults and children in Idaho, 25% of whom were minorities. Of the 609 clients (with 2,310 family members) who enrolled in EFNEP classes, 57% graduated and 23% continued in the program, while 41% (232 of 585) of the adult participants in ENP graduated and 30% continued. Follow-up surveys of these graduates showed a 69% improvement in food safety practices compared to before their participation.
- c. These programs are supported by EFNEP and Smith-Lever (3) b and c appropriations, by State appropriations for agricultural research and extension, by county appropriations for Extension, and by the Food Stamp Education grant through State Health and Welfare.
- d. These programs are Statewide.

### **Key Theme – Food Handling**

- a. UI FCS Extension Educators and FCS volunteer assistants answered thousands of phone and in-person questions on how to safely handle, store, and preserve food, many from people with immediate concerns about these issues during their own food preparation. While the volume of calls is not recorded in detail by all reporting faculty, four FCS educators and MFP volunteers tracked 1,551 calls during the past year. To accurately respond to these clients, Extension Food Safety Specialists research questions forwarded by County faculty and address anticipated questions via 43 articles in *The Communicator*, emails, and memos.

Extension Educators taught 34 classes and workshops on a variety of food storage, preservation, and safety practices to 2,757 individuals, almost half of whom were youth and 15% Hispanic. Fourteen publications covered similar topics, reaching audiences up to 15,000 with articles in the *Times-News AgWeekly*, in addition to smaller circulations of county and senior citizen newsletters that often featured related seasonal information.



Canyon County educators and volunteers distributed more than 1,132 handouts, in addition to 65 magnets, 129 recipe cards, and 462 instructional pamphlets on using food thermometers at local county fairs. Nineteen of the 193 copies of *Cooking for Groups* distributed were in Spanish.

UI FCS Extension Educators and high school teachers taught *Ready, Set Food Safe* in 42 Idaho high school Family and Consumer Sciences classes to 1,082 students. The *Germ City* hand washing education programs and/or exhibits were presented 30 times to more than 7,480 individuals at health, county, and regional fairs and elementary and middle schools throughout the state. The program was also used as part of Pesticide Applicator Training to illustrate how pesticides can spread if hands are not frequently washed. A multi-media program was delivered to three Northern Idaho communities, educating 50 consumers about pesticide residues in foods.

Extension Educators offered 15 food preservation trainings to New and Advanced Food Safety Advisors (FSAs and AFSAs) and Master Food Preservers (MFPs). Specific topics included spoilage, pesticides, organic production, dehydration, canning, freezing, and nutritive values. Trainings to Nutrition Advisors were held every two weeks throughout FY 2004, in addition district and statewide ENP/EFNEP Conferences.

- a. After receiving UI Extension food preservation training, FSAs, AFSAs, and MFPs made at least 3,590 contacts through 36 classes and responses to thousands of phone calls regarding food safety and preservation, contributing more than 1,485 volunteer hours.

As a result of classes taught in northern Idaho, FCS County Educators, FSAs, and consumers learned how pesticides are registered, the risks and benefits of food produced with pesticides vs. organically, and proper sanitation measures during pesticide use. Volunteers are now prepared to answer clientele questions regarding food safety and pesticide use.

Fourteen people were recruited to pilot *Preserve @ Home*, a web-based course adapted from UI/WSU Master Food Preserver curriculum that can also be taken via correspondence. Participants reported learning about the science behind canning and drying foods, as well as specific techniques to avoid contamination. The format and ability to work through lessons at an individual's pace and convenience evidently enhanced learning experiences.

People attending the Western Idaho Fair and the Canyon County Fair purchased at least 177 food safety/food preservation publications, including the *USDA Complete Guide to Home Canning*. A canning safety workshop in North Idaho resulted in new guidelines for three county fairs that reflect current recommendations from USDA.

Pre- and post-testing of high-school students who took the class *Ready, Set Food Safe* showed that 90% had significantly improved scores, while 77% received a food safety and sanitation certificate (food handler's card). Of the 73 adults and children who visited the *Germ City* exhibit during Boundary Community Hospital's bi-annual health fair, 26% reported plans to increase the frequency of washing their hands at

planned times identified by the program. Childhood development college students provided Extension with critique for *Germ City* program improvements.

Participants demonstrated increased knowledge of food safety behaviors during questions received after a Nutrition and Diabetes Seminar offered to more than 100 North Idaho caregivers in collaboration with the state Department of Health & Welfare.

- c. These programs are supported by Smith-Lever (3) b and c appropriations, by State and county appropriations for agricultural research and extension, and by various grants and contracts.
- d. These programs are Statewide.

### **Key Theme – HACCP**

- a. The UI Food Technology Center taught eight courses on HACCP, value-added food processing, and food design to startup, new, and established small Idaho food companies. Entrepreneurial education focused on meeting federal, state, and industry regulatory standards and basic food processing skills as a prerequisite for using FTC facilities. Technical assistance was provided to 35 Idaho small businesses for manufacturing or packaging products such as pickled asparagus, sauces, frozen egg rolls, fresh pasta, specialty baked goods, salsa, jams, and coffee concentrate.
- b. As a result of 12 TechHelp projects:
  - A potato flake company implemented statistical process control on their process line that improved product and process consistency and quality.
  - A French fry and potato products company passed an HACCP audit required by its customers. Implementation of the system also reduced manufacturing costs by avoiding product rework, recalls, and regulatory penalties.
  - A refrigerated potato products company reduced distance traveled and improved visual control after Lean Manufacturing training.
  - A tea packaging company increased plant productivity, employee satisfaction, and workplace safety after Lean Manufacturing training.
  - A refrigerated potato products company met OSHA regulatory requirements and reduced overhead costs after receiving microbiology, safety, and Kaizen training.
  - A meat slaughter and processing client was able to continue operations by meeting USDA regulatory requirements
  - A canned salsas company was able to start operations and sell products by completing FDA-required Seafood HACCP training
  - A fresh potato packing client retained key customer sales by completing food security training
- c. Approximately \$598,000 in grants and matching State support was invested in for food safety education and product development, received from the Idaho Department of Health and Welfare, Idaho Potato Commission, U.S. Potato Board, and USDA CSREES.

- d. UI Extension food safety programming was delivered throughout the state, as well as Washington.

### **GOAL 3 – A HEALTHY, WELL NOURISHED POPULATION**

#### **Overview**

- a. Outputs: During 2004, 19 individual faculty and staff from the UI College of Agricultural and Life Sciences reported a significant portion of their time devoted to projects reported under the health and nutrition goal. There are 38 paraprofessionals that administer the EFNEP and ENP lessons on nutrition. Faculty reported 2 publications and contributed to the delivery of 414 presentations (workshops, field days, or other educational events) and hundreds of EFNEP and ENP consultations. In total, participating faculty estimate the total number of contacts with stakeholders at 93,446.
- a. Outcomes: UI Extension provided education about human health and nutrition to youth, seniors, limited income families, parents, working parents, and various targeted audiences. These audiences learned about the dietary guidelines, convenient ways to improve their diets, and the relationships between nutritional intake and certain diet-related diseases including osteoporosis, diabetes, and obesity. Youth learned the importance of choosing what they eat and drink, and the important role exercise plays to ensure a long, healthy life. Older youth learned about body types, the importance of balancing nutrients, and the health benefits of regular meal times. Limited resources audiences learned to read nutrition labels, plan nutritional menus, and to shop from a list prepared to reflect nutritional menus. Parents learned to plan and prepare quality foods and meals that require less time and meet the nutritional needs of their families. Parents of young children learned the importance of nutrition for healthy child development, and how to accommodate children's unique nutritional needs. Seniors learned the value of certain foods, and the importance of meal frequency as their metabolism changes.
- a. Impacts: UI Extension educators assess the impact of programs by measuring 1) increased knowledge (about nutritional quality of foods, dietary requirements, or reducing health risks); 2) changes in behavior to consume a healthier diet; or 3) changes in other health-related behaviors (such as exercise regimen or medical screening). Although data will not be available for many years, improved eating habits can have a significant impact on health care costs for individuals, families, and for society.

Participants in the UI Extension Nutrition Program (ENP) report they now used food labels to make food choices, eat recommended amounts of fruit and vegetables, and deliberately reduce their fat intake. Participants who completed the UI Extension osteoporosis curriculum significantly increased their knowledge of causes and risk factors, bone health, and how to use food labels to plan meals and snacks high in calcium. They report using recipes high in calcium and purchasing foods either naturally high or fortified with calcium, resulting in increased calcium consumption.

Southeastern Idaho students who participated in in-school Extension nutrition lessons reported both learning and behavior changes related to increased consumption of

protein, fat, vitamin A, vitamin C, iron, and calcium. Evaluation of four *WIN Kids lessons* taught to fifth grade classrooms found significant increases in knowledge and changes in behavior for all topics covered, including portion sizes, sweetened beverages, fruits and vegetables, and calcium.

Survey results from the *Healthy Diabetes Plate* program showed that 80 to 100% of participants learned how to plan meals based on their medical condition, 70% or more took eye and foot exams, checked their blood, and got a flu shot. Pre- and post-testing of people who took part in the Franklin County *Diabetes Support Group* showed an 18% higher score on questions addressing risk factors, symptoms, and insulin.

Two hundred twenty-nine volunteers gave time to the EFNEP in FY2004, an equivalent of 1.3 FTE. These volunteers contribute to a powerful network for nutrition education across the State of Idaho.

- a. Since developing our 2000-2004 plan of work, University of Idaho Extension has become more focused to address the goals related to human health and nutrition. Our plan of work describes outputs (numbers of contacts, classes, publications, etc.) that have all been exceeded, despite a significantly reduced workforce. These outputs are documented in more targeted program areas than originally planned.

Our efforts to document success, however, have shifted to measuring outcomes that result because of our programs. In this regard, we are experiencing success to a degree not envisioned in 1999. Because of changing customer needs and faculty resources, some issues, such as nutrition related diseases, have received greater attention since the development of our plan of work; while other topics, such as meal planning, have become better integrated across the spectrum of Extension programming.

- a. The **total** investment in Extension programs that address the human health and nutrition goal is approximately \$1,636,408. This includes \$545,662 derived from the **FNS** food stamp nutrition education program grant; approximately \$131,246 in grants from other sources; and \$175,543 from **EFNEP**. **State** appropriations for agricultural research and extension invested approximately \$545,662 (includes the FNS-match requirement); and \$238,296 from **County** government.

## **Key Topic – Human Nutrition**

- a. UI Extension faculty provided diabetes education to 540 individuals with lesson plans that discussed the importance of controlling the disease by planning and preparing meals with the *Idaho Plate Method*, using sugar substitutes, managing stress by participating in a Diabetes Support Group, tracking blood pressure, and incorporating exercise via the *Diabetes Pedometer Program*. The *Healthy Diabetes Plate* was featured in two journal articles and a twilight tour at the UI Kimberly Research and Extension Center. Collaborating organizations included the Idaho Department of Health & Welfare, Southeastern Idaho Diabetes Partnership, BYU-Idaho, and local hospitals.

During the final year of funding for the tri-state *Wellness IN the Rockies*, UI Extension continued their partnership with the University of Wyoming and Montana State

University to offer educational programming tailored to both adults and youth on healthy eating, exercise, and body image.

UI Extension faculty, in collaboration with local elementary schools, senior citizen's centers, and the Southeastern Idaho Health Department, taught dietary guidelines via four different classes to 1,584 individuals, 69% of which were youth. *Crazy About Calcium* and *Got Calcium?* curricula were delivered at seven North Idaho elementary and middle schools and a Boys and Girls Club to 1,832 youth, 41% of whom were minorities.

Three hundred eighty lessons on healthy eating were given to 131 clients, including four weekly-courses at two different senior centers and a woman's conference. The UI SENP was presented at a Boise legislative poster session, the Joint Conference of the American Society on Aging & the National Council on the Aging, National Priester Extension Health Conference, National Food Stamp Nutrition Education Conference, and National Society of Nutrition Education Annual Conference. Seven articles on healthy food preparation were published in the *Senior Citizen's Communicator*.

UI Extension faculty delivered education on miscellaneous health and nutrition topics to 1,762 individuals throughout Idaho, 25% of which were from minority groups, and 19% youth. One international and seven national presentations were given at health, education, and FCS conferences, while professional journal articles on gaining control of eating behaviors and how to deal with societal messages on ideal body types were submitted to national publications.

- a. Survey results from the *Healthy Diabetes Plate* program showed that 80–100% of participants learned how to plan meals based on their medical condition, 70% or more took eye and foot exams, checked their blood, and got a flu shot. Changes in eating habits were similar to that found for the ENP, in addition to increased milk consumption. Classes on *Eating Healthy with Diabetes* produced graduates that learned how to use the American Diabetes Association's Standards of Care and lower their cholesterol by following nutrition guidelines. Pre- and post-testing of people who took part in the Franklin County *Diabetes Support Group* showed an 18% higher score on questions addressing risk factors, symptoms, and insulin.

Two hundred twenty-nine volunteers gave time to the EFNEP in FY2004, an equivalent of 1.3 FTE. A southeast Idaho EFNEP graduate with four children learned how to cook healthy, inexpensive, and convenient meals from scratch, which led to control of her blood sugar and weight.

On a retrospective survey of their participation in the UI Extension Nutrition Program (ENP), 34–45% of respondents reported they now used food labels to make food choices, ate recommended amounts of fruit and vegetables, and reduced their fat intake. Other implemented course lessons included planned meals, food budgeting, and increased exercise.

UI Extension faculty delivered 447 individuals education on *Meal Time in Less Time*, as well as presenting the curriculum at the National Extension Association of Family and Consumer Sciences Conference in Nashville, Tennessee and writing articles that appeared in *HomeWise* and the *Idaho County Free Press*, circulation 6,000.

Southeastern Idaho students who took school nutrition lessons reported both learning and behavior changes related to increased consumption of protein, fat, vitamin A, vitamin C, iron, and calcium.

Research results on four *WIN Kids lessons* taught to four fifth grade classrooms found significant increases in knowledge and changes in behavior for all topics covered, including portion sizes, sweetened beverages, fruits and vegetables, and calcium.

Survey results from calcium classes taught to North Idaho youth showed that 82–92% learned the recommended number of dairy servings for their age group and what foods this includes and how to identify high-calcium foods using food labels. Thirty to forty percent indicated a willingness to try tofu, almonds, and salmon.

One hundred fifty-eight participants who completed the UI Extension osteoporosis curriculum significantly increased their knowledge of causes and risk factors, bone health, and how to use food labels to plan meals and snacks high in calcium. They report using recipes high in calcium and purchasing foods either naturally high or fortified with calcium, resulting in increased calcium consumption.

Presentations on osteoporosis prevention and treatment were given at both the Hawaii International Education Conference and UI Extension Annual Conference.

A Pfizer advertisement published in *USA Today* referred to the UI SENP receiving the American Society on Aging, Healthcare and Aging Award. SENP participants reported significant increases in their daily fruit, vegetable, and calcium-rich food consumption, as well as learning how to manage their health with specific diet changes identified in the program.

- a. Financial support for the Health and Nutrition program included \$736,330 in major Federal and State grants and matching funds, \$119,963 from CSREES for WIN in the Rockies, \$18,500 in State and local grants, and \$ 6,234 in contributions from the public. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
- a. The Health and Nutrition program is delivered statewide, and includes multi-state collaboration with **Wyoming, Colorado, Illinois, Missouri, Ohio, Tennessee,** and **Utah.**

## **GOAL 4 – GREATER HARMONY BETWEEN AGRICULTURE AND THE ENVIRONMENT**

### **Overview**

- a. Outputs: During 2004, 43 faculty (29 FTE equivalent) and staff reported extension activities in programs focusing on natural resources and environment. Faculty contributed to the delivery of 252 presentations, workshops, field days, or other educational events. Seventy-four publications were reported for this goal, ranging from newspaper stories to scientific articles, and fact sheets to book chapters. Participating faculty estimate the total number of contacts with stakeholders at 63,752.

- a. Outcomes: In the natural resources and environment goal area, Forestry program participants learned to manage private forests for sustainable production, and to harvest timber with minimal environmental risks. Thousands of farmers and home gardeners have learned to monitor and manage plant pests in ways that generally require less pesticide than those who have not attended Extension IPM programs. Specific pest problems including apple maggot, rhizomania in sugarbeets, and early blight, late blight, white mold, pink rot and powdery scab in potatoes have been the subject of focused efforts by UI Extension to create and transfer knowledge to producers that results in more effective treatment options and improved economic returns to the growers. Use of the Treasure Valley Pest Alert Network has improved the management of pests across an agriculture-rich region worth multiple billions of dollars to the state and local economies.

Waste management education was delivered to dairy producers and to waste management planners; with improved access and methods for teaching, knowledge transfer continues to improve. Applied research conducted by Extension has improved our knowledge about the consistency and content of animal waste applied to crops, and improves our ability to protect soil and water resources from excessive nutrient contamination.

Through extension, farmers learned to monitor soil moisture using new technologies, and to adjust their irrigation according to precise data reflecting crop needs. Water quality education has brought new knowledge to people across Idaho, about how to protect their water supplies.

- a. Impacts: Natural Resource-related educational programs improve water, air, or soil quality through the adoption of best practices. Specific outcomes include more efficient and effective use of chemicals; adoption of practices that reduce soil erosion, thus maintaining site potential and decreasing off-site impact; and optimizing the volume of irrigation water, reducing groundwater withdrawal rates, pumping costs, and leaching;

Program evaluations from Extension Forestry education delivered to 398 non-industrial private forest owners of more than 87,000 acres indicated positive behavior changes related to: monitoring for insect, disease, or animal damage, protecting or enhancing wildlife habitat and rare plants, thinning or pruning to improve stand productivity and wildlife habitat. Loggers who attended the 2004 LEAP Update indicated they had improved skills related to: choosing leave trees, assessing the survival of burnt trees, identifying insect damage, building roads, managing logging costs, explaining forest certification programs to landowners.

Respondents to a survey indicated the TVPestAlert website was useful to their operations; 51% have increased field scouting to document pest levels before taking a treatment action and 33% found their modified pesticide spray applications were more effective than in previous years. After producers learned to use new chemicals for grasshopper control from UI Extension educators, their 2004 alfalfa and grain quality and quantity increased far above the last three years.

A total of 705 pesticide license credits were awarded to 260 individuals as a result of Extension-provided training. Ninety-seven percent of students who completed

evaluations of "Pesticide Applicator Training and Testing" reported an increase in knowledge. Forty-seven professional pesticide applicator licenses were issued as a result of the class, and 27 participants, impacting more than 190,000 acres, received academic or continuing education credits.

More than 100 individuals from NRCS, ISDA, UI Extension faculty, and private consultants were trained, certified, and re-certified to use "OnePlan" software, which has become the standard for nutrient management plan development that meets NRCS and ISDA requirements.

- a. Since developing our 2000-2004 plan of work, University of Idaho Extension has become more focused to address the goals related to greater harmony between agriculture and the environment. Our plan of work describes outputs (numbers of contacts, classes, publications, etc.) that have all been exceeded, despite a significantly reduced workforce. These outputs are documented in more targeted program areas than originally planned.

Our efforts to document success, however, have shifted to measuring outcomes that result because of our programs. In this regard, we are experiencing success to a degree not envisioned in 1999. Because of changing customer needs and faculty resources, some programs, such as dairy waste management, have received greater attention since the development of our plan of work; while other topics, such as water quality, have become better integrated across the range of Extension programming.

- a. The **total** investment in Extension programs that address the agriculture in harmony with the environment goal is approximately \$3,604,262. This includes \$2,419,237 in total **grant** activity; (including \$174,542 from USDA agencies; the private sector invested \$50,000 in grants for natural resources. Appropriations from **Smith-Lever (3) b&c** total approximately \$597,759. Various pathways directed **Smith-Lever (3)d** funds to support IPM (\$97,733) and RREA (\$54,698). **State** appropriations for agricultural research and extension total approximately \$2,125,415. **County** governments invested \$598,348 in Extension programs in support of this goal.

## **Key theme – Forest Resource Management**

- a. Idaho Extension forest management assistance reached 1,965 individuals. Seminars, workshops, short courses, and field days were organized and presented on forest ecology and structure, conservation easements, landscaping for fire prevention, thinning and pruning, sustainability, silviculture, tree disease, wildlife habitat, recreation, management goal setting, scaling and marketing private timber, and economics. Detailed description of Extension forest management assistance to family forest owners was compiled in *Idaho Forest Stewardship Educational Activities Report: 2003-2004*.

*Woodland Notes*, a forestry newsletter providing advice on forest management, was mailed to over 5,500 Idaho Panhandle forest owners, 26% of whom reside out-of-state or south of Idaho County and rely on the publication for professional forestry updates. Readers can also access archived issues on the UI Extension Forestry website, which includes a database of consulting foresters, links to information about stewardship programs, a calendar of events, more than 140 publications, videos on



water quality, selective logging, and forest tax management, and access to help. Articles written for the Idaho Farm Bureau included sustainable forestry certification, road maintenance, defensible space, and safe methods for cutting firewood.

University of Idaho faculty collaborated with Idaho Department of Lands to teach the Logger Education to Advance Professionalism (LEAP) course, which involved more than 20 hours of training designed to increase loggers' understanding and skills related to forest ecology, silviculture, disease, water quality, and state laws. A two-day LEAP Update for graduates included field days on "leave tree selection." Other forestry programs covered slash management, thinning, and marketing. In total, UI Extension provided 1,775 contact hours of continuing education to Panhandle loggers in 2004.

North Idaho Extension local and national conference presentations, seminars, and workshops reached more than 400 natural resource professionals with a total of 1,168 contact hours. Topics included sustainable forestry, small parcel timber management, Society of American Foresters' (SAF) certification and other logging credentials, strengthening natural resource professional memberships through local and state initiatives, and extending natural resource programming "across landscapes." A workshop for NIPF foresters was held cooperatively with **Washington State University** for the 11<sup>th</sup> year in a row. Three Idaho Panhandle teachers took the forestry short course for credit to help them integrate forest science into their classrooms.

a. Program evaluations from North Idaho Extension educational programs provided to 398 non-industrial private forest owners of more that 87,000 acres indicated positive behavior changes related to the following best practices:

- monitoring for insect, disease, or animal damage
- protecting or enhancing wildlife habitat and rare plants
- thinning and/or pruning that:
  - leaves adequate amounts of coarse woody debris
  - favors species-resistant and superior seed trees
  - completing a plan that specifies these changes
  - spending more time talking to mills about log specs and prices
  - contacting a forester or other related specialist when needed
  - pursuing additional information on conservation easements

Participation in the LEAP program, which has become a requirement for obtaining the Pro-Logger credential developed by a statewide logger education committee and administered through the Associated Logging Contractors of Idaho, increased by more than 100 since 2003. Of the 121 loggers who attended the 2004 LEAP Update, most indicated they had improved skills related to:

- choosing leave trees
- assessing the survival of burnt trees

- identifying insect damage
- building roads
- managing logging costs
- explaining forest certification programs to landowners

An additional 63 loggers learned more about “Current Topics in Forest Health,” “Scaling & Marketing Private Timber,” “Thinning and Pruning,” and “Managing Organic Debris & Slash” from participating in other Extension forestry programs that provided credit toward the Pro-Logger credential.

The 254 natural resource professionals that participated in Idaho Panhandle Extension forestry programs such as "Pruning for White Pine Blister Rust" and "Growing Superior Tree Seed" received SAF continuing forestry education credit. Ninety-six percent of the participants in the NIPF Forester's Workshop indicated they would be able to work more effectively with NIPF owners as a result of the program.

- a. Extension forest management programming was supported by \$17,000 from the Idaho Department of Lands and Northern Region of the USFS, and by \$56,000 from RREA. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
  
- a. Extension forest management education was provided primarily in North Idaho and Northeast **Washington**, with significant collaboration with Washington state University. Programs also reached clients from **Montana** and **Oregon**.

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

- a. An *ascochyta* blight fungicide control trial that involved a farm crop tour and statistical analysis was implemented cooperatively with north central Idaho chickpea growers. UI Extension hosted a radio program on grasshopper control.

### Treasure Valley Pest Alert Network

In response to requests from Idaho agriculture industry members outside the Treasure Valley, five UI Extension educators and faculty collaboratively designed an update of the Treasure Valley Pest Alert Network website ([www.TVPestAlert.net](http://www.TVPestAlert.net)) that now extends to all of southern Idaho. During the 2004 growing season 52 alerts about pest outbreaks in small grains, sugar beets, potatoes, alfalfa seed, sweet corn, onions, and other crops were posted to the website.

### Sugarbeet Pest Management

UI Extension wrote nine publications, made 14 presentations, and contacted 814 individuals about sugarbeet pest management. UI Extension conducted research to expand the understanding of weed management systems in sugarbeets and offered programs to encourage the adoption of improved weed management practices that will maintain both profitability and environmental safety.

Nine sugarbeet weed control trials were conducted on the effect of irrigation amounts following herbicide applications, dissipation and potential carryover of various herbicides from one crop to another, and comparisons of different weed control and crop safety formulations. Results were presented at two commodity schools, the Idaho Sugarbeet Conference, Far West Agribusiness Association Fertilizer and Chemical Conference, Western Society of Weed Science meeting, and published in the UI Commodity School Proceedings.

Field experiments were conducted at the Parma R&E Center on green manure for the management of rhizomania and root and crown rot in three different cropping sequences with 45 test varieties of radish as the green manure. Biomass samples were taken and analyzed for yield, sugar content, and tare. Tests for powdery mildew control were conducted using materials from five chemical companies to determine the efficacy and application timing of several combinations of fungicides.

Diagnosis and management recommendations were made on 40 sugarbeet samples submitted by local growers for disease analysis. Cultivars sensitive to the bacterium *Erwinia carotovora* subsp. *betavasculorum* were identified and placed under resistance screening supported by two seed companies.

#### Potato Pest Management

UI Extension made 3,925 contacts, 31 presentations on television and radio, field days and workshops, and wrote 22 publications that appeared in the popular press as well as refereed journals.

UI Extension worked directly with Potato Growers of Idaho (PGI) staff to develop an IPM standards checklist as part of the EPA PESP. A preliminary checklist was reviewed, and data and references provided for supplementation. The final version was printed, bound, and distributed by PGI.

To address the need for effective post-harvest products for disease control in storage to improve seed potato production and quality, Extension research focused on potential effectiveness of several disinfectants, biological products, and fungicides. Findings were disseminated at grower meetings, professional conferences, and trade journals.

Seed Potato Extension Program leadership and coordination were provided statewide, as well as general support and educational input to potato seed producers, County Agricultural Extension, and industry personnel. Examples are potato late blight Extension activities with special emphasis on management for seed production, the late blight hotline that included preparation of 24 updates during the production season, and maintenance and operation of a potato disease laboratory that performed diagnoses on 59 samples during the last year.

UI Extension educators partnered with ISDA and National Potato Council to provide economic data for Section 18 requests for the herbicides Starane and Outlook.

#### Pesticide Certification

Pesticide safety and IDA certification (and recertification) classes were offered to both Idaho and **Oregon** growers to fulfill state requirements for pesticide application. A

for-credit course in practical plant pathology addressed field problems and state-of-the-art research. Presentations on groundwater protection at the Agriculture Water Quality Workshop for Pesticide Applicators in Ontario, **Oregon** and the Idaho Irrigation Equipment Show in Nampa, Idaho also qualified for recertification credits to audience members. Other trainings worth recertification credits included “Cereal School,” “Forage School,” and a “Crop and Weed Tour.” A Harding County Extension agent taught a recertification class with a Spanish interpreter.

With the cooperation of the Valley County Soil and Water Conservation District and the Valley County Weed Superintendent, Valley County extension sponsored a pesticide recertification workshop directed at management of noxious weeds and undesirable plants in pastures.

Development of the “OnePlan” IPM Planner involved partnerships with the Idaho Association of Soil Conservation Districts and EPA Region 10 on eight meetings with the multi-state, multi-disciplinary IPM Planner Design Team. A planner prototype was created for two potato pests.

- a. After producers learned to use new chemicals for grasshopper control from UI Extension educators, their 2004 alfalfa and grain quality and quantity increased far above the last three years. The north central Idaho *ascochyta* blight fungicide control trial resulted in chickpea growers benefiting from statistically proven on-farm generated science-based information that prepared them to make informed decisions about using standard and newly released fungicides. As a result of the Cereals Pest Management Strategic Plan, one pesticide received a tolerance from EPA and two other pesticides are under EPA review.

#### Treasure Valley Pest Alert Network

The Treasure Valley website continued to increase communication and knowledge about pest outbreaks affecting the local production agriculture industry, allowing growers, field representatives, and university personnel to make informed pest management decisions. All respondents to a survey on TVPestAlert.net indicated the website was useful to their operations, while 51% have increased field scouting to document pest levels before taking a treatment action and 33% found their modified pesticide spray applications were more effective. A related demographic evaluation of subscribers' occupations showed that the website is reaching its intended audience, which is approximately 44% growers and 41% allied industry that have numerous clients and therefore multiply the number of people that receive pest alert information on a timely basis.

Based on the positive reception of TVPestAlert.net, the agriculture industry in other Idaho locations expressed interest in expanding the website. Most recently the news anchor for the Northwest Ag Information Network has approached UI Extension about expanding the website coverage to the entire Pacific Northwest. Accordingly, Pest Alert website subscriptions increased from 267 to 357 during the past year, and visitors from 22,013 to 24,958.

#### Sugarbeet Pest Management

Major losses from rhizomania were avoided due to findings from field experiments on green manures in sugarbeet cropping systems that identified resistant varieties and methods to prolong the development of resistance-breaking isolates. Similarly, results from the screenings of bacteria resistance helped eliminate further losses of cultivars from *Erwinia*, and experiments on the efficacy of fungicides for powdery mildew control led to reduced loss from this disease. The Snake River Sugarbeet Growers Research and Seed Committee used results from Extension weed control trials to approve varieties for sale, and an estimated 90% of Idaho growers used the information in their management operations.

### Potato Pest Management

The IPM standards checklist developed by UI Extension with funding from the Farmland Trust Foundation was provided to growers during a PGI field day, along with demonstrations of its application. Novel Extension research on post-harvest applications of phosphorous acid (*Phostrol*) allowed chemical companies to register this product so growers could combat fields plagued by both tuber late blight and pink rot. *Spartan* and *Outlook* herbicides were approved for use as a result of a Section 18 submission by a coordinated team of UI personnel, the ISDA Bureau Chief, and the National Potato Council CEO.

### Pesticide Certification

The 222 farmers who attended one of four southeast Idaho Cereal Schools received three credit hours towards their pesticide recertification requirements. Attendance dramatically increased after adding the Preston location. The events attracted media coverage from The ICPA, IWC, and IBP. Of the 55 producers who attended the 2004 Southeast Idaho Forage School, 33 received educational credit toward earning their pesticide licenses.

A total of 705 pesticide license credits were awarded to 260 individuals as a result of Extension-provided training. Ninety-seven percent of students who completed evaluations of "Pesticide Applicator Training and Testing" reported an increase in knowledge. Learner evaluations of the Nez Perce County Pesticide Applicator Training and Testing showed a minimum 50% increase in knowledge of pesticides and their application. Forty-seven professional pesticide applicator licenses from the Idaho Department of Agriculture were obtained as a result of the class, and 27 participants impacting more than 190,000 acres received UI academic credit or continuing education credits.

- c. Integrated pest management programs were supported by approximately \$17,000 from the Idaho Department of Agriculture and Idaho commodity commissions representing sugar beet, potato, and alfalfa/clover markets. Sugarbeet pest management research and education was funded with \$117,400 from the Idaho Sugarbeet Growers Association, five chemical companies, and five seed companies. Five grants totaling \$180,577 supported the potato IPM program. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.

- d. Pest management education was extended statewide and throughout the Pacific Northwest with particular collaboration with **Oregon** and **Washington**.

## **Key Theme – Nutrient Management**

- a. Extension projects related to nutrient management reached 2,970 livestock producers, agricultural practitioners, and regulatory agency staff with 109 presentations and fieldwork. Topics included livestock odor control in response to public complaints, wastewater processing, and fertilizer use. Research and publications focused on nutrient flow to maximize feed and land use while reducing nutrient buildup in the soil.

The Extension Nutrient Management Team provided access to the latest information on a variety of nutrient management topics and increased the sharing of related resources among other Extension educators, certified planners, and agencies. Efforts included educational needs assessment, and revision or development of new training curriculum to improve understanding of the nutrient management process based on updated regulations. Two examples are collaboration with ISDA and NRCS personnel to develop a recertification training program for nutrient management planners using “OnePlan” software and holding the *Idaho Nutrient Management Conference* for state and federal regulatory personnel and experienced producers, which featured speakers from multiple disciplines and agencies within the state.

Faculty and staff from the UI CALS, Department of Plant, Soil, and Entomological Science, Agricultural Communications, and Information Technology Services, collaborated to develop online proficiency testing for Certified Crop Advisors to maintain their certification without travel expense. The collaboration involved integrating different software that simplified registration in the Banner system, fee payment, and reporting of earned recertification credits.

A county educator and AVS specialist teamed to conduct a nutrient balance study on dairies in Jerome and Gooding Counties focused on improving the efficiency of protein and phosphorus utilization in a dry lot dairy environment. Data collection from eight dairies with nearly 13,000 cows determined nutrient flow and retention rates, which were presented at the United Dairymen of Idaho annual meeting. The second phase of the study involved fieldwork with producers to help design cropping systems that maximize nutrient uptake and more efficiently use feed and handle waste products, thereby reducing the cost of milk production and lowering the land required for disposal by 25–40%.

Extension programming to bring about more economic and “environmentally friendly” fertilizing methods involved soil and plant testing for southern Idaho irrigated crops, comparing fertilizers and their application, and studying the influence of cultural practices on crop quality.

Support from the new “iSNAP” EPA water quality grant enabled continued regional collaboration among Extension nutrient management professionals from **UI**, **OSU**, and **WSU** initially fostered by the 2003 “Western Integrated Nutrient Management Education” SARE grant to increase the credibility of land grant university

recommendations, improve publication quality, and better use resources to address specific concerns from regional clientele.

- a. The IPM planner project was elevated to the multi-state/regional level with support both in time and money from **OSU**, **WSU**, EPA, NRCS, and USDA, including the identified potential for fulfillment of Farm Bill needs and measurements.

More than 100 individuals from NRCS, ISDA, UI Extension faculty, and private consultants were trained, certified, and re-certified to use “OnePlan” software, which has become the standard for nutrient management plan development that meets NRCS and ISDA requirements. These “graduated” planners were also certified as Technical Service Providers capable of designing plans that meet USDA requirements for cost-sharing programs such as EQIP. Ten livestock producers completed new or updated nutrient management plans as a result of Extension assistance and training to use the “OnePlan” software, and during the process, gained a greater understanding of state, local, and federal regulations and the latest information applicable to their specific management situation to improve implementation of said plans, resulting in a sustainable industry operating with minimal environmental impacts.

Seven of the eight dairies in Jerome and Gooding Counties that were the focus of an Extension nutrient balance study reduced their dry lot operation phosphorus levels in response to research findings that showed numbers in excess of NRC requirements. Ninety dairymen and producers refined their nutrient management plans with the incorporation of Extension-provided P uptake values for various irrigated feed crops.

- a. UI Extension nutrient management education and research programs were continued and further developed with the support of \$86,870 in grants from USDA SARE, ARS, and EPA; UI Extension Critical Issues; and the Idaho Wheat, Alfalfa Seed, and Barley Commissions. \$53,926 from USDA/CSREES Western Region IPMC also supported this program. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
- a. UI Extension nutrient management activities were conducted statewide, regionally in **Nevada, Oregon, and Washington**.

## **Key Theme – Water Quality**

- a. UI Extension water quality education reached 2,174 individuals with 40 presentations. An even wider audience was exposed to water quality information at the USDA CSREES Pacific Northwest Regional Water Program website (a collaboration with **Alaska, Oregon, and Washington**), which was expanded and enhanced in 2004 and linked to the national water quality website where visitors can access an extensive drinking water database. Twenty-four water quality-specific features were added to the site during this reporting period.

Regional expertise directories were developed for UI Extension local, state, regional, and federal partners on six of eight water quality national theme areas. The “*Domestic Water Resource Use Handbook*” was updated to assist in the production of media (i.e., press releases, teaching materials, and presentations) and effectively

answer public inquiries about drinking water quality and water systems using state-of-the-art information. A “paperless” version of the Second Annual Water Quality Monitoring Workshop held in Canby, **Oregon** is now available, including all PowerPoint presentations, handbooks, photos, contact information for future networking, and active links to the various websites suggested by the instructors and participants.

Nineteen of 41 publications on water quality education were posted on the web as **PNW** Updates, a flyer also mailed every two weeks to more than 250 key policymakers and partners within the region and at the national level as part of a communication strategy to publicize Extension. Topics included citizen water stewardship, establishing priority water issues, and marketing the Pacific Northwest water quality program. Other publications explored groundwater protection and the economic impacts of water use.

Extension agents installed soil moisture sensors and took numerous soil, plant, and water samples throughout the growing season to compare the nitrate and water use efficiencies of drip-irrigated and furrow-irrigated onions for the second year of an onion nitrate and irrigation project in the Treasure Valley designed to promote BMPs for the protection of groundwater. Related presentations of data findings and analysis were given at the Idaho Irrigation Equipment Show, Agriculture Water Quality Workshop for Pesticide Applicators, and a local community college agricultural issues class.

A Water Quality Fair in Weiser was organized as part of a technical advisory role to the Washington County Groundwater Committee, including poster displays and participation in a panel discussion. In addition, newsletter articles on groundwater protection efforts in Washington County were written. Increased participation with the Weiser Soil Conservation District involved individual instruction to their field technician and cooperating growers on how to install and use soil moisture sensors and monitors, making a presentation at the Weiser Soil Conservation District Field Day, and gathering and processing soil moisture data for District reports focused on protecting both surface and groundwater quality.

To address the need for 134 animal feeding businesses in Custer and Butte Counties to qualify as compliant with Clean Water Act AFO/CAFO (Concentrated Animal Feeding Operations) regulations, individual and group meetings were held and articles written to help producers develop and implement waste management plans before January 2005.

Meetings with the Water Education Foundation involved fundraising strategies, assessment of ongoing projects, and the development of new projects such as the economic model developed for Magic Valley counties that showed what potential impacts on farming, communities and counties changes in water use would make. Other community involvement included continued work with the Middle Snake River Resource Commission (MSRRC) as an advisor, writing the economic section of the MSRRC Surface and Groundwater Management Plan, and presentation of a poster on the contributions of the agribusiness industry to the local economy at the Kimberly R&E Center Twilight Tour. Two reports prepared for the MSRRC dealt with the



economics of curtailing water use and the general value of agriculture production and processing in the context of a water crisis due to prolonged drought.

A mechanism was developed to hold a formal conference every 16–24 months that actively integrates research, extension, and education faculty dealing with water issues at land grant institutions. More than 200 people attended. At the conference in Stevenson, **Washington** 42 oral and 17 poster presentations were made on the role of TMDL implementation in watershed restoration. An archived video stream of the “Funding Watershed Restoration Projects in the Pacific Northwest” satellite conference was made available at: <http://www.caheinfo.wsu.edu/video/other.html>.

- b. Partly due to Extension water quality education outreach, Pacific Northwest citizens have decreased their water consumption and waste and increased recycling and/or proper disposal of chemicals over the past eight years by approximately 63%. At least 22 livestock feeding enterprises are in compliance with the AFO/CAFO part of the Clean Water Act as a result of Extension efforts. Participation in the Weiser Soil Conservation District Water Quality Project resulted in the installation of 29 sets of soil moisture monitors and sensors for growers, many of which were newly introduced to this technology and its application to irrigation scheduling.

Preparation of the economic section of the MSRRC Surface and Groundwater Management Plan resulted in the education of commission members on water quantity and quality issues. Two reports prepared for the MSRRC on the economic impacts of water use in the Magic Valley made legislators aware of the devastating effect on the community if curtailment of pumping was enforced by legislative decree; the reports were subsequently used to find an alternative solution to the water problem in the area that would incorporate compromise of competing interests.

UI Extension’s partnerships with the USDA National Water Program and EPA Region 10 were strengthened by active participation in Agriculture Sector Team meetings and through a new UI faculty position (supported by Section 406 funds) appointed as a liaison between Pacific Northwest land grant institutions and the EPA Region 10 office. Co-sponsorship of many regional activities strengthened partnerships with state environmental, agricultural, water, and health agencies in **Alaska**, Idaho, **Oregon**, and **Washington**. New partnerships were forged with local watershed groups as Extension focused on community involvement in watershed conservation.

More than 500 Extension faculty and staff, conservation district personnel, city and county planners, and members of watershed groups who gathered at 53 Cooperative Extension sites in **Alaska**, Idaho, **Oregon**, and **Washington** learned about funding watershed restoration projects in the Pacific Northwest.

- c. Water quality education was supported by a new UI faculty liaison funded by a Section 406 grant. A Specialty Crops Grant of \$9,540, supported the project for Drinking Water And Human Health. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.

- d. In addition to our statewide delivery, much of our water quality education is collaborative with **Alaska, Oregon, and Washington**, through our partnership with Region 10 EPA and CSREES.

## **GOAL 5 –ENHANCED ECONOMIC OPPORTUNITY AND QUALITY OF LIFE FOR AMERICANS**

### **Overview**

- a. Outputs: During 2004, 65 individual faculty and staff reported extension activities in programs focusing on goal 5. These personnel contributed to the delivery of 610 faculty presentations, workshops, field days, or other educational events (not including specific 4-H activity). One hundred-fifty one publications were reported for this goal including popular articles to scientific articles, and fact sheets to book chapters. In total, participating faculty estimate the total number of contacts with stakeholders at 194,112.
- a. Outcomes: Through Extension education, families learned to better manage their fiscal resources, to improve their interpersonal relationships, to plan their economic futures after retirement, and to plan transfer of their property before death. A particular emphasis has been placed on older youth, limited income families, and seniors to learn about financial management. New and expecting parents have learned parenting skills from Extension, how to better teach their children, and how to be successful as a single parent.

Childcare providers participating in the PAT childcare pilot reported increased knowledge of child development, the importance of reading to children, and how to help parents be more effective in their parenting. Providers also reported the program had influenced the way they care for children.

Seven hundred seventy-four individuals learned how to create and maintain their own businesses. Fifty participants in entrepreneurship courses learned about planning and research, management, legal structures, marketing, cash flow and budget analysis, interpreting financial statements, ratio analysis, and financing strategies.

Approximately 465 Idahoans who attended the Extension course *Dollar Decision\$* reported their intentions to begin setting financial goals, budget income and expenses, track expenses, and establish an emergency account. These families will benefit from increased financial security.

Eighty-seven percent of EFNEP participants who graduated from a class on food resource management showed improvement on a food economic behavior questionnaire. One EFNEP graduate with four children was featured on the UI *Dollar Decision\$* video after her transition from homelessness to home ownership with the help of financial management education and support from UI Extension and Neighborhood Housing Services, Inc.

The *Parents as Teachers* demonstration project showed that the program was effective in increasing parents' knowledge of child development, abilities to meet their children's daily needs, and confidence in parenting skills. Parents also report that they

read more to their children, do more activities with them, and are better connected with other families with children. Eighty-seven percent of participating parents spend more time reading to their children. Testimony by kindergarten teachers validates that PAT children enter school more prepared to learn than do other children, and are expected to be more successful throughout their education.

*Married and Loving It!* continues to impact the lives of adults in couple relationships. A telephone follow-up of couples that had completed the class 1–3 years earlier found a 27% increase in marriage satisfaction, from 66% before taking the class, to 93%.

Fifteen farm families and 41 individual Idaho producers who completed the two-year farm management education program received certification to meet FSA borrower eligibility requirements. Technical assistance programs for Alaska Salmon fisherman resulted in 12 individuals becoming eligible to receive benefits under the Trade Adjustment Assistance Act.

More than 95% of *Welcome to the Real World* participants indicated the program was useful, over 50% indicated they learned about career choices and educational needs, over 70% learned how to balance income and expenses, and over 40% learned how to balance a checkbook.

Analyses of dislocated farmers who have completed their training indicate an average \$10,250 increase in income from short- and medium-term training programs, contributing a total annual increase of \$984,000 of wage-earner dollars within one year from the beginning of training. Extrapolating these results over the (average future 15-year) career of ACIF participants, this program will return \$14,760,000 in increased personal income to the total \$2,100,000 invested (over 3-years) in dislocated farmers.

The 4-H campaign for program expansion and enhancement has raised \$1.7 million in donations and pledges. Extension efforts resulted in 1,209 more people benefiting from 4-H Youth Development programming than last year, from 9,914 face-to-face contacts to 11,123.

The number of Hispanic youth participating in 4-H projects increased from 18% to 25% over the past year; twenty five percent of the youth now participating in Idaho 4-H day camps are Hispanic. Enrollment in the **Shoshone-Bannock** Tribal horse program has grown from one to thirteen. Two of 19 youth who completed the camp counselor-training program in Bingham County were from the **Shoshone-Bannock** Indian Reservation.

Leadership development programs brought new knowledge and skills to more than 13,000 Idaho youth. Education about natural resource management reached another 1,000. Ninety six percent of the 3,900 students who completed the high-school financial management course called *Welcome to the Real World* reported having learned such skills as balancing a checkbook, tracking income and expenses, and how to make more informed decisions about their educational needs for future career choices.

- c. Since developing our 2000-2004 plan of work, University of Idaho Extension has become more focused to address the goals related to enhanced economic opportunity and quality of life. Our plan of work describes outputs (numbers of contacts, classes, publications, etc.) that have all been exceeded, despite a significantly reduced workforce. These outputs are documented in more targeted program areas than originally planned.

Our efforts to document success, however, have shifted to measuring outcomes that result because of our programs. In this regard, we are experiencing success to a degree not envisioned in 1999. Because of changing customer needs and faculty resources, some programs, such as community development and parent education, have received greater attention since the development of our plan of work; while other topics, such as workforce development and youth at risk, have become better integrated across the spectrum of Extension programming.

- d. The **total** investment in Extension programs that address the economic opportunities and quality of life goal is approximately \$8,690,614. This includes \$2,419,437 in total **grant** activity; {including \$289,206 from CSREES and \$894,150 from other federal agencies; the private sector invested \$453,440 in grants for economic development and quality of life; grants originating from State and local government represent a \$782,641 investment}. Appropriations from **Smith-Lever (3) b&c** total approximately \$1,017,772 plus \$37,616 for food security from EFNEP and \$116,928 from the Food Stamp nutrition program. **State** appropriations for agricultural research and extension total approximately \$3,618,827. **County** governments invested \$1,363,106 in Extension programs in support of this goal.

## **Key Theme – Character/Ethics Education**

- a. Extension’s Civil Society Topic Team is developing an experiential educational program grounded in a historical perspective on human rights issues in Idaho, called “Idaho’s Journey for Diversity and Human Rights”. The program is designed as a multi-day tour to allow older youth and adults from communities around Idaho to visit sites that represent turning points in the history of human rights and inter-group relations in the state. At each site, participants will learn about the events involved and how they contributed to the course of human rights in Idaho.

For this project, Extension has developed a network of interested individuals and organizations. Eleven entities (including the Idaho Migrant Council, Coeur d’Alene Tribe, Idaho Hispanic Cultural Center, and Idaho Black History Museum) are now directing our planning group to promising sites and issues in Idaho relevant to diversity and human rights, and identifying more individuals around the state who are interested in being involved in the project. The first “Idaho’s Journey” is scheduled for July 2005 in northern Idaho.

Extension continued to present a simulation of inter-group relations launched in 2003 called “BaFa BaFa” to adult and youth audiences, providing insights into cultural and human differences. Extension faculty taught “Ethics in the Workplace” at three locations around the state and at a national meeting.

- b. Stakeholders in “Idaho’s Journeys” commended Extension for taking the lead on this project, agreeing that it is needed and could have a powerful impact on program participants. Support for the program has been enthusiastic, and many continue to contribute to the planning process.
- c. Civil Society activities were funded by a \$1,000 grant from the Idaho Humanities Council and a \$5,000 Critical Issues Grant from the UI College of Agriculture and Life Sciences. UI’s Office of Multicultural Affairs contributed \$3,000. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
- d. Civil Society activities were conducted statewide. UI faculty collaborate with others in **Utah, Tennessee**, and nationally.

### **Key Theme – Childcare**

- a. Cooperative Extension recently extended the PAT project to childcare providers working out of their home, which has proved to be an especially effective way to bring information to home-based care providers who are unable to leave during the work day for professional development elsewhere.

The UI Extension pilot PAT program for home childcare providers involved 16 Extension educators who conducted personal monthly visits with approximately 96 children and their families over the year, as well as quarterly group meetings. Parents are reached through monthly PAT handouts.

Several Extension educators, parent educators, and support staff collaborated to develop a set of lesson plans for parent meetings entitled “The Parent Connection: Group Learning for Parents and Young Children.” The curriculum is designed to be used by PAT programs or any other program for parents of young children, such as Head Start, preschools and childcare centers, libraries, schools, etc.

Educational programming is offered through the *Childcare Connections* newsletter, distributed in Boundary County to 12 family childcare providers, an increase of 17% from 2003.

At the request of the Bonners Ferry Mayor, City Council, and Boundary County Commissioners, UI Extension surveyed 3,000 county residents to assess the community perception of childcare needs and quality of childcare in Boundary County. Seventy percent of respondents reported a high need for adequate childcare: 47% thought more regulations were needed, and 50% reported missing an average of seven days of work in the previous 12 months due to lack of adequate childcare.

As a follow-up to the childcare need survey in Boundary County, a community coalition was organized to facilitate a town meeting. Two general conclusions of the meeting were 1) to involve more daycare providers in professional development, and 2) to hold a forum/fair for childcare providers and those interested in starting a daycare.

- b. A survey of childcare providers participating in the PAT childcare pilot revealed that they all had gained knowledge of child development, the importance of reading to children at an early age, and how to help parents be more effective in their parenting.

Providers also reported the program had influenced the way they care for children. As a result of a Boundary County town meeting on childcare needs, two providers joined PAT for Family Childcare Providers and the Boundary County Childcare Organization.

- a. These programs are supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension, and as a component of the \$758,266 parenting grant from Idaho Health and Welfare.
- a. This program is conducted at various locations in Idaho.

## **Key Theme – Community Development**

### a. Economic Development

Idaho Extension collaborated with 35 county, state, and regional organizations to teach citizens about local economic development. A Southwest Idaho Extension Educator taught 16 classes on entrepreneurship, business planning, marketing, financial records, financing options, record keeping, risk management, and legal issues. “*Hometowne Service*,” a two-hour workshop on customer service, adapted by two Idaho Extension educators, was conducted 10 times, with a total of 172 participants.

UI Extension collaboratively taught four business and agribusiness entrepreneurship courses with state and county small business development centers. Each student received 45 hours of formal training over 15 weeks, in addition to networking opportunities provided by local guest speakers. Class results were disseminated in a poster display, impact statement, and journal article. A one-hour workshop on business management costs was presented six times to 246 participants in the LEAP (Logger Education to Advance Professionalism) Update Program. Two economic feasibility studies were conducted and reported to community leaders and state agencies.

A presentation on the value of irrigation water to the economy of Cassia County was made to the Cassia County Commissioners, and a presentation on the importance of enterprise budgeting was given to local grain producers. UI Extension faculty produced three journal articles, six Extension publications, and three county newspaper articles on teaching entrepreneurship and local economic development strategies and efforts.

Extension created and distributed a brochure on Teton County economic trends, including the impact of an escalating Hispanic population, to residents and leaders in Teton County. A Rural Roots grant to support direct marketing education fostered the establishment of a farmer’s market that serves as an economic asset to the local community.

Extension collaborated with Challis Rodeo Improvements, Inc. and a UI architectural faculty member to bring students to this rural community for first-hand professional work experience designing an indoor rodeo facility to contend with long winters and create revenue for the town.

### Social, Organizational, and Physical Infrastructure Development

UI Extension made contact with more than 2,100 individuals through learning events and collaborated with 16 different citizen organizations and community development agencies at local, state, and regional levels on infrastructure issues.

Extension planned and implemented training for volunteers to conduct a survey of Valley County residents to determine their support of county-wide library services. Extension also consulted with federal and state control program coordinators and six landowners in Gooding, Camas, and Elmore Counties about alternatives to fight a grasshopper and Mormon cricket buildup.

The Western Rural Development Center (WRDC) coordinated Extension faculty from Idaho, **Washington, Oregon, Montana, Utah, and Hawaii** to develop a 12-hour train-the-trainer curriculum called "Facilitating Strategic Management: Tools for Organizational Change," from which attendees presented a four-day strategic planning workshop for Extension staff at their own university.

#### b. Economic Development

Seven hundred seventy-four individuals learned how to create and maintain their own businesses, and ways to expand tourism and other local industries.

Fifty participants in entrepreneurship courses learned about planning and research, management, legal structures, marketing, cash flow and budget analysis, interpreting financial statements, ratio analysis, and financing strategies. The *Bonner Daily Bee* newspaper publicized UI Extension involvement in Bonner County business development, including sponsorship from the Greater Sandpoint Chamber of Commerce.

As a result of participating in the UI-directed entrepreneurship training in Valley County, 63% of 22 students reported a change in business practices. Participants reported feeling more confident about customer service issues after taking the OSU-adapted "Highlighting Hospitality," and plan to recommend the course for other supervisors.

### Social, Organizational and Physical Infrastructure Development

Outcomes include increased awareness of Extension and other community development services in the state, increased awareness of best practices in community development, and increased community development activity.

About 49,000 acres over a three-county area were protected from grasshopper and Mormon cricket buildup thanks to a UI Extension-coordinated federal program and local action. The UI Extension-WRDC training provided Extension faculty with expertise, resources, and networks to help them accomplish their goals.

- c. Community development funds totaled \$386,500 from the Idaho State Department of Lands, Library, and Regional Substance Abuse Authority, and private organizations including the Snake River Sugar Company, Canyon Company Farm Bureau, and Northwest Area Foundation. These programs are also supported by Smith-Lever (3)

b and c appropriations and by State and county appropriations for agricultural research and extension.

- a. UI Extension community development activities involved collaboration across the state of Idaho and Western region, including **Arizona, Oregon, Montana,** and Wyoming. Western Rural Development Center training came from as far as **Hawaii, Oklahoma, Washington** state, and **Utah** Extension specialists also contributed.

## **Key Theme – Family Resource Management**

- a. Idaho Extension professionals made approximately 1,227 contacts with educational programs about how to manage on limited incomes, use credit wisely, and get out of debt. The *Idaho Statesman* newspaper and Idaho Extension collaborated on a five-part series of articles published as “*Surviving on a Shrinking Paycheck*,” focused on changing behaviors to stretch income, become “financially fit,” and avoid credit card debt. They also co-sponsored two sessions of two financial management courses.

Extension faculty offered the course “*Dollar Decision\$*” to teach individuals and families money management. Participating EFNEP clients were then required to take a food resource management class. Teaching methods included using case studies, record-keeping simulation, and PowerPoint presentations.

Two Extension faculty were quoted seven times in the *Idaho Statesman* from late July to early September 2004, informing the public about wise financial management and related Extension activities offering additional assistance. Another eight Extension articles were published in various newsletters. Eleven scholarly-reviewed Extension Bulletins on financial management were produced, as well as 11 public slide presentations and four conference poster displays attended by 625 individuals.

Idaho Extension professionals held almost 50 identity theft workshops for 873 people, teaching them how to avoid becoming victims by monitoring their credit report and restricting to whom they give personal financial information. The course “Guard Against Identity Theft” was taught 15 times to 354 participants throughout the state.

- a. The *Idaho Statesman*-UI Extension series “*Surviving on a Shrinking Paycheck*” was deemed “an unqualified success” by the newspaper’s business editor, who also hosted classes on “Gaining Financial Fitness” and “Taking Control of Debt,” to which 188 community members attended in response to several press releases.

Approximately 465 of the 500 Idahoans who attended the Extension course “*Dollar Decision\$*” reported in a state-wide retrospective of before and end-of-class evaluations they would now:

- Set financial goals
- Budget their income and expenses
- Decrease expenses and/or increase income
- Regularly track expenditures
- Establish an emergency savings fund

Out of 260 EFNEP participants, 101 graduated from a class on food resource management; 87% of these showed improvement on a food economic behavior



questionnaire. An EFNEP graduate with four children was featured on the UI *Dollar Decision\$* video after her transition from homelessness to home ownership with the help of financial management education and support from UI Extension and Neighborhood Housing Services, Inc.

As a result of Idaho Extension identity theft workshops, more than 500 participants showed a 99% increase in understanding how the crime works and ways to avoid becoming a victim, stating they would be more careful to whom they gave personal financial information and obtain and check a copy of their credit report.

- a. Grant funds from CSREES-USDA of \$5,000 supported the above-described activities. In addition, a \$3,000 Mildred Haberly grant was obtained to translate the course “*Dollar Decision\$*” into Spanish. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
- a. Family finance programs are statewide.

## **Key Theme – Parenting**

- a. UI Extension educators collaborated with approximately 15 different state and private organizations, made 7,082 contacts, 2,578 personal visits, and 158 group meetings on issues related to parenting. Extension faculty taught 103 classes, made four conference presentations, conducted 11 workshops, and produced seven publications on early childhood education.

### Parents as Teachers

UI Extension coordinates Idaho Governor Kempthorne’s “Parents as Teachers” (PAT) program in 13 counties throughout the state, developing advisory committees, hiring and supervising parent educators, and overseeing data collection necessary to evaluate the success of the program.

Trained parent educators conducted 1,251 one-hour home visits with over 300 families and 500 children, in addition to holding parent group meetings once a month and two developmental screenings per year that help detect any developmental delays and initiate any necessary referrals. One bilingual educator serves Spanish-speaking families. AmeriCorps volunteers from the community and a high school home economics club assist with several of the programs.

Extension educators are currently engaged in evaluating to what extent PAT contributes to children moving successfully into the school environment, as well as measurement of parents’ understanding of what it means for children to be ready for school, and what roles they can take to support their children’s learning in school.

The UI “Survey of Parenting Practice” was developed to measure change as parents self-report the impact of PAT on their parenting practices after being involved with the program for one year. This survey instrument is available in both English and Spanish. More than 30 state programs purchased the implementation toolkit. UI Extension is now analyzing data on a fee-for-service basis.

A collection of Extension and parent educators collaborated on a publication of parent meeting lesson plans that has been reviewed and field-tested by others within the UI

PAT project. This publication is now in the peer-review process. A tentative title is "Parent to Parent: Meeting Plans for Parents of Young Children."

### Basic Parenting

UI Extension taught general parenting classes such as *1,2,3,4 Parents!*, *Parenting 101*, *Parenting Apart*, *Active Parenting of Teens*, and *Manners Mishaps*. *Manner Mishaps* was taught six times this year to high school students. A PowerPoint presentation, *Etiquette Hotline* video, and a game similar to *Jeopardy* were used to teach the information. An impact statement about the *Manners Mishaps* program has been submitted for publication.

A relationship is being developed with North Idaho Migrant Headstart to offer parenting education. Five classes were held for 18 migrant parents and four staff members. An Extension educator worked with the local Latino community to translate parenting handouts into Spanish and build a strong and trusting relationship with migrant parents.

A two-page monthly newsletter was distributed to about 300 limited resource families through ENP in District 1, and six news articles were published in the bi-monthly Extension newsletter that reaches 827 county homes.

### Grandparents as Parents

Extension made 592 education contacts related to parenting grandparents. An Extension publication of the book *Grandparents: Raising Our Children's Children* was an initial step in serving these families. Collaboration with the Idaho Office on Aging, Idaho Department of Health and Welfare, the Idaho Kinicare Coalition, and AARP helped make possible various support groups, tip sheets, PowerPoint presentations, and a set of brochures (11 English, 6 Spanish) on some of the challenges grandparents face in raising grandchildren.

An Extension educator worked with the local chapter of AARP to raise community awareness of grandparents raising grandchildren in Boundary County by placing posters in local doctor offices, schools, the health and welfare office, senior center, and community businesses. Extension continues to raise the awareness of grandparents as parents with professionals, paraprofessionals, and volunteers at state and national conferences. Two national Extension satellite conferences on grandparents raising grandchildren were downlinked around the state, and Extension educators gave poster presentations at conferences in Idaho, as well as Arkansas, Illinois, and Tennessee.

Extension educators worked with the University of Illinois to revise a set of handouts for grandparents raising grandchildren for use in Idaho, and are now marketing these materials to relevant organizations and agencies in Idaho. In response to an Extension poster in Boundary County on community awareness of grandparents raising grandchildren, an Extension educator mentored two grandparents who began raising five grandchildren unexpectedly, including connections with community resources and referrals for services.

### Married and Loving It

A Bonneville County Extension educator developed a curriculum called *Married and Loving It!* to identify ways for married couples to maintain strong relationships and avoid separation and divorce. The course includes sections on communication, finances, and problem solving. Several Idaho Extension educators have collaboratively offered this program around the state, and it is also used in other states. Because demand soon exceeded the initial supply of only five copies of the *Married and Loving It!* curriculum, it was revised and made available on a CD.

The evaluation of this workshop series curriculum is now being strengthened to qualify as a program that could receive federal funding under recent welfare reform legislation to expand its availability. Efforts include developing a stronger evaluation plan, including delayed follow-up of couples that have taken the course.

The results of a telephone survey on *Married and Loving It!*, conducted during the summer of 2003 were presented as a poster display at an annual conference in Boise, through concurrent sessions at the National Extension Association of Family and Consumer Sciences in Nashville, Tennessee, and at the Smart Marriages Conference in Dallas, Texas.

a. Outcomes

Parents as Teachers

Over the past year, the University of Idaho *Parents as Teachers* (PAT) demonstration project has served over 300 families with more than 500 children. Statewide, the PAT program has served more than 2,200 children.

The first stage of evaluating the UI PAT demonstration project showed that the program was effective in increasing parents' knowledge of child development, abilities to meet their children's daily needs, and confidence in parenting skills. Parents also report that they read more to their children, do more activities with them, and are better connected with other families with children.

Results from the assessment of how the PAT program fit with Idaho communities showed that it is a unique resource. Few of Idaho's counties have programs of any kind for parents of young children, and there are no other programs in the state that offer such parent education and support on an ongoing and predictable basis.

Thirty-five participants from the Power County Extension PAT program completed the *Survey of Parenting Practice*; 15 more than the minimum required for the data to be statistically significant. Ninety percent rated the helpfulness of PAT as 5–6 on a 6-point scale, with 71% attendance at group meetings. Parents also reported positive change in knowledge, confidence, and reading behavior after being involved with PAT.

Evaluation of the UI PAT program reveals that 87% of participating parents spend more time reading to their children. Testimony by kindergarten teachers validates that PAT children enter school more prepared to learn than do other children, and are expected to be more successful throughout their education.

Basic Parenting

Participants in *Active Parenting of Teens* classes reported increasing their confidence in communicating with teens and in themselves as parents. A typical parent response: "This program, along with the excellence and knowledge of the facilitator, has given me more tools and resources to build up the knowledge that I will need to help parent my children, help them learn and grow to become active, responsible, respectful adults."

Participants in the Boundary County *Parenting Apart* program rated their workshops as very helpful, pledging they would work together to figure out a plan. Students who took the class *Manners Mishaps* showed a 32% increase in understanding of the information presented, from 64% to 96%. The number of Hispanic parents who attended the North Idaho Migrant Headstart program was doubled from past years.

### Grandparents as Parents

Extension workshops on grandparents raising grandchildren are well received. Four Idaho support groups requested copies of the *Empowering Grandparents* program presented at the October 2003 *KinCare* Conference. Fifteen educators attending NEAFCS requested the PowerPoint presentation and handouts for *Addressing the GAP: Grandparent As Parents* to use with their clientele.

An Extension article entitled *Grandparents Raising Grandchildren, an American Tradition* was featured as the cover story in the October/November issue of the *Agricultural/Family and Consumer Science Newsletter*.

### Married and Loving It!

Evaluation data on the *Married and Loving It!* project has been very positive, with couples reporting that the course has benefited their relationships. Participants in the class given in District III reported enjoying the experience and that one of the most important topics learned was on communication skills and getting along with in-laws. Extension educators reported a 40–50% increase in awareness of new communication tools as a result of attending *Married and Loving It!*.

Sixteen copies of the *Married and Loving It!* electronic curriculum were sold as a result of its presentation in South-Central Idaho, and the CD has now been distributed to 31 states and two foreign countries. *Married and Loving It!* continues to impact the lives of adults in couple relationships. A telephone follow-up of couples who had completed the class 1–3 years earlier found a 27% increase in marriage satisfaction, from 66% before taking the class, to 93%. The November 2004 issue of *Family Relations - Interdisciplinary Journal of Applied Family Sciences* cited *Married and Loving It!* in an article titled *Cooperative Extension Initiative in Marriage and Couples Education*.

- c. Grants exceeding \$173,000 were obtained from the Idaho Department of Health and Welfare, Idaho Public Television, and the Parents as Teachers National Center. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
- d. Parenting programs were conducted statewide, regionally, and nationally. Grandparenting conference presentations were made throughout Idaho and to share

program knowledge and experiences with colleagues in **Arkansas, Illinois, Missouri, Tennessee, and Washington** state.

## **Key Theme – Agricultural Financial Management**

- a. UI Extension educators made 2,945 contacts through 70 presentations and one-on-one assistance with farm management inquiries. One hundred eight publications addressed budgeting, profitability, and production costs.

Year one and two classes on topics such as risk management, employee relations, goal setting, planning, GPS resource inventory, accounting, and marketing were provided as part of the farm management education program to southern Idaho producers, including copies of material presented in class and other extensive reference material. Extension agents updated the agenda for 2004 with new PowerPoint slides to emphasize financial ratio analysis.

Thirteen farm management workshops on using the UI AERS Crop Enterprise Budget Worksheet software to calculate production costs were held in conjunction with various commodity meetings, including the Snake River Sugarbeet Conference, UI Potato Conference, Eastern Idaho Cereal Schools, and the Idaho Barley Commission's Risk Management Workshops, for a total participation of 478.

A farm management workshop co-sponsored by UI Extension and the Idaho Cattle Association featured a demonstration by the Land and Livestock Advisory Service, LLC on the effects changes in basic management would make on a Lemhi County ranch operation. Producers received one-on-one assistance on how to make management changes on their own operations, along with a personalized Excel spreadsheet.

UI Extension provided an intensive two-day course adapted from the *Surviving Ag* curriculum developed by the Western Farm Management Extension Committee that included training on software for record keeping and budgeting. Extension gave individual assistance on farm business management record keeping to **Shoshone-Bannock** tribal members on the Fort Hall Indian Reservation. AERS Extension faculty provided continuously updated market outlooks with help from the National Livestock Marketing Information Center and other sources to address consumer alarm after the discovery of a BSE-infected cow in Washington state.

UI AERS Extension specialists revised and published 90 crop enterprise budget bulletins and compiled crop input cost data that was published as an AERS staff paper and provided to all counties and survey participants. The "Potato Cost of Production" project report for three major growing regions of southern Idaho was presented to the Idaho Potato Commission Research and Education Committee. Reports were made available on the AERS website. Presentations were also given to the Southern Idaho Potato Cooperative and Potato Growers of Idaho on the costs of potato production, including the impact of increasing energy prices on irrigation pumping and potato storage.

The UI CALS Dean presented *The Financial Condition of Idaho Agriculture* to the Idaho Joint Legislative Economic Committee, and copies were provided to all members of the Idaho Legislature and Ag Summit participants. Farm and Ranch

Management Extension Team members gave interviews to television, radio, and newspaper reporters requesting information on the general economic situation of agriculture, impact of energy costs, and markets for specific crops.

District Extension educators conducted a 12-hour in-service education program for the Farm and Ranch Management Extension Team that included highlights from farm management education programs conducted in northern and eastern Idaho.

Teaching materials from previous workshops and AERS curricula were incorporated into new local farm management programs and provided to all participants on a CD.

- a. Fifteen farm families and 41 individual Idaho producers who completed the two-year farm management education program received certification to meet FSA borrower eligibility requirements. The students also learned how to use FINPACK financial planning and analysis software to develop financial statements, business and marketing plans, and analyze their farm operations to make informed management decisions and meet their goals. One program participant reported renewed farm management stability after years of losing money.

A **Shoshone-Bannock** tribal member received tribal funding that allowed him to participate in the FSA Borrower Training Program as a result of Extension assistance.

Technical assistance programs for Alaska Salmon fisherman residing in Idaho resulted in 12 individuals becoming eligible to receive benefits under the Trade Adjustment Assistance Act. The 10 Extension Educators and two specialists who participated in an in-service education program increased their knowledge of personnel and risk management.

On program evaluations, participants in both the 2004 Idaho Potato Conference and Snake River Sugarbeet Conference reported a better understanding of how to develop production cost estimates, and obtained new management skills they intended to use on their farms. Pre- and post-surveys showed that participants in financial management workshops conducted around the state learned the importance of knowing the financial position of an operation and using that information to make better decisions regarding expansion or major changes. Respondents also reported plans to prepare a complete set of financial statements with their new understanding of net cash flow versus net income and detailed record keeping.

The demand for "The Financial Condition of Idaho Agriculture," an annual report published as a tri-fold brochure that forecasts Idaho farm cash receipts, net farm income, and government payments, required three separate printings.

- a. Grants supporting farm business management totaled \$102,095, from the Idaho Potato Commission, American Farm Bureau Foundation, WSU TAA, UI CES, and USDA (RBCS and RD). These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
- a. Much of this work was done in Southern Idaho, but includes collaborations with **Oregon** and **Washington**.

## Key Theme – Workforce Preparation - Youth and Adult

- a. A career fair at Teton High School in March offered 428 students the opportunity to meet with 26 professionals in 24 various fields who presented insights about their work. The students could attend three 45-minute presentations of their choice, held in individual classrooms where they were able to ask pointed questions related to possible career choices and get direct answers from professionals with experience.

The fourth year of the month-long Notus Summer Day Camp focused on providing teenagers workforce preparation with volunteer opportunities in the surrounding area, as well as hands-on learning activities for youth grades K-6<sup>th</sup>. Eight teens, teamed with six adults, were hired, trained, and employed as leaders at the camp; another two teens volunteered more than 150 hours. Trainings covered child development, learning styles, lesson planning, teaching, leading 4-H projects and clubs, leading with games and songs, and how to deal with positive and negative behavior.

### Alternative Careers for Idaho Farmers

The *Alternative Careers for Idaho Farmers (ACIF)* is a federally funded pilot program, managed through the University of Idaho Extension in cooperation with federal, state and local agencies, designed to increase the employment, earnings, retention of families in rural Idaho communities, or occupational skill attainment of incumbent and dislocated farmer/rancher participants who receive services.

Of 773 inquiries about ACIF to date, the program has enrolled 363 dislocated and incumbent Idaho farmers and ranchers. In FY 2004, this transitional support and training program assisted 187 farmers/ranchers and their families who are unable to generate a reasonable income through their farming activities, and farmers/ranchers who are improving existing operations as a result of training specific to the needs of their business.

- a. Following the Teton High School Career Fair, 53–57% of participating students reported the experience had been valuable, including helpful information given during the various presentations and a better understanding of career options. Parents also noted changes in their children as a result of attending the Notus 4-H Summer Day Camp, including new skills related to problem solving, teamwork, setting goals, communication, and self-expression.

To evaluate work force preparation at the Notus 4-H Summer Day Camp, the teens were interviewed and asked specific questions related to the camp experience. From these interviews we learned that teens gained an understanding of the importance of teamwork and leadership by participating in challenging activities to get to know one other and work together; learned how to deal with behaviors, organizational skills, and safety issues; and mastered the use of digital cameras and imagery.

More than 95% of *Welcome to the Real World* participants indicated the program was useful, over 50% indicated they learned about career choices and educational needs, over 70% learned how to balance income and expenses, and over 40% learned how to balance a checkbook.

### Alternative Careers for Idaho Farmers

- Of all persons who have received financial support for training and education, 55 percent completed their selected course of study, and only 3% have withdrawn from the program;
- Of the dislocated participants completing a course of study, 88 percent obtained employment in the field in which they were trained within six months;
- Of the incumbent participants completing a course of study, 72 percent supplemented their farm income with improved operations or an additional on-farm enterprise.

Analyses of dislocated farmers who have completed their training indicate an average \$10,250 increase in income from short- and medium-term training programs, contributing a total annual increase of \$984,000 of wage-earner dollars within one year from the beginning of training. Extrapolating these results over the (average future 15-year) career of ACIF participants, this program will return \$14,760,000 in increased personal income to the total \$2,100,000 invested (over 3-years) in dislocated farmers. In addition to individual family benefits, the value to society and to the community resulting from increased family income is expressed through increased tax receipts, reduced costs of bankruptcies, increased local purchases and other multiplier benefits, and reduced potential public costs (for example, health care for the indigent). An estimate of secondary benefits from ACIF is at least 33% of those benefits accruing to the family. The combined annual return to families and communities of the ACIF program will likely exceed the total investment by 30%.

- a. The ACIF project is supported by an \$ 894,150 grant from the US Department of Labor. These programs are also supported by Smith-Lever (3) b and c appropriations and by State and county appropriations for agricultural research and extension.
- a. Workforce development programs are delivered locally.

## **Key Theme – Youth Development/4-H**

### **a. 4-H Organization**

Idaho state 4-H staff continued to simplify and convert all 4-H record books and administrative support materials into electronic format so they can be retrieved from the Idaho 4-H website. Five trainings on the new system were held for 4-H leaders and members. The *Idaho Project Requirement Handbook* was updated and posted on the Idaho 4-H website. Sub-teams compiled a list of county projects, which were then reviewed and compiled into one state project list. New record books were evaluated and Codes of Conduct for members, volunteers, parents, and staff were added to the Idaho 4-H Policies and Procedures. Extension provided professional development training for 4-H coordinators in Idaho counties.

Ada County Extension conducted strategic planning sessions based on the Western Rural Development Center (WRDC) model with the Idaho Child Nutrition Program, and the District II Youth Development Committee transferred the county 4-H style review from office management to volunteer, combined the 4-H interview evaluation process into one system, and created the Leader's Association fundraising program.

### **Enhance 4-H Programs & Reach New Audiences**

Extension expanded 4-H enrollment and adapted the program to better reflect the changing demographics of rural communities by writing several articles promoting,



explaining, and clarifying misconceptions about the program for local newspapers, preparing and distributing brochures, giving presentations in schools, talking about National 4-H week activities on a local radio program, advertising on TV, participating in local organizations, forming 4-H Promotion, Expansion, and Outreach Committees, inviting community families to an “open house” at the Extension office, offering a four day youth overnight camp for non 4-H youth, sharing 4-H CCS curriculum for course development at area schools, and responding to interested individuals with calls and visits to further explain the 4-H mission and purpose.

Targeted efforts at new minority involvement in 4-H included stressing the program’s opportunities for families to Hispanic adults, recruiting Hispanic staff, and working with an Hispanic volunteer club leader to implement ideas relevant to Latinos. A flyer, printed in both Spanish and English, invited Hispanic families to participate in the Minidoka County Fair. Projects completed by more than 70 Hispanic children were displayed to encourage more Hispanic families to attend and participate in future community events.

UI faculty collaborated with county 4-H educators to create the Latino Cultural Arts Cooperative Curricular System (CCS), and Gooding County Extension hired a Hispanic 4-H school mentor as a tutor in the local school for youth who need help with English. The mentor has also organized a bi-lingual 4-H club.

In response to concern from **Shoshone-Bannock** Tribal elders and community members, Fort Hall Extension started a program for tribal youth to reintroduce traditional values related to horsemanship. Additional outreach collaboration has included the UI State 4-H Diversity Task Force, city, state, and federal government, local businesses, commodity and trade associations, libraries, and home school groups. A UI audit for compliance with affirmative action and civil rights laws found that Idaho 4-H records were complete and outreach numbers acceptable.

UI Extension presented results of the Idaho 4-H Impact study at the Western Region 4-H Leaders’ Forum in Alaska, published and distributed the data to community groups and Idaho state and federal legislators, and submitted an article to the *Journal of Extension*. The Impact study has helped communicate how 4-H makes a difference for youth.

UI Extension campaigned to raise \$2 million for the 4-H Youth Development Program. The Idaho 4-H Endowment Board, made up of representatives from business, youth, volunteers, and Extension educators, continues to meet on a regular basis to raise funds.

Idaho offered more than 100 different 4-H project areas and over 50 local, state, and national events or activities in 2004. Skill-a-thon activities were expanded district-wide from livestock programs and adapted to other areas of 4-H. For example, in Minidoka County a Family and Consumer Sciences (FCS) skill-a-thon was held as part of the Mini-Cassia Achievement Day. Youth were taught critical and logical thinking skills to facilitate effective decision-making. Presentations about conducting skill-a-thons were given at the State 4-H Leaders’ Forum and Western Regional 4-H Leaders’ Forum.

Idaho Extension 4-H partnered with seven northeastern counties in **Washington** state, sharing personnel and financial resources to enhance the quality of educational opportunities and expand their reach.

### Leadership Development

Extension faculty, staff, and volunteers collaboratively created a *4-H Volunteer Leader Handbook*, which was presented at the statewide training; the complete version has been posted on the Idaho 4-H website and made available on a CD. County Extension educators throughout the state provided youth and adult volunteer leaders both technical and process training on becoming proficient at working with young people. Specific training included conflict management, 4-H policies and procedures, and record keeping.

An evaluation process was created to train and assess youth camp cabin leaders on a yearly basis (i.e., determine measurable outcomes). Components of team building and *leading with soul* were built into two regional presentations developed for the Mountain Plains Adult Education Association and Chatcolab's Northwest Recreational Leadership Laboratory.

Idaho JMG team members collaborated with teachers and the State Department of Education to correlate gardening curriculum with state achievement and exiting standards. Mentoring took place with District II Youth Development Committee members, Chatcolab board members, JMG team members, and three graduate students. UI Extension also coordinated the pairing of inexperienced youth development workers with mentors in the YDPA national program, conducted in cooperation with NAE4-HA and the US Department of Labor, and delivered mentoring programs at the District II 4-H Mini-Forum. A journal article was written for the Mountain Plains Adult Education Association that encapsulates key concepts presented in more than 20 mentoring workshops.

Fifteen youth and five adults worked in partnership to plan and implement the weeklong Idaho 4-H Teen Conference on how to take advantage of real-life opportunities to develop socially and emotionally. The workshop entitled "Youth in Action" taught youth how to work effectively in their communities. Similarly, the Know Your Government Conference, National 4-H Congress, and Nation Citizenship Washington Focus Conference were held to help youth develop leadership skills and be productive, contributing members of their communities.

The planning committee for the Idaho State 4-H Leaders' Forum came from 12 counties and worked for over a year on program development and promotion. Thirty-seven workshops delivered training in a variety of 4-H project areas, as well as development of skills to work with youth. Major sponsors included Simplot, CAL Ranch, Heinz, L&A Concrete, and Coca Cola.

State ambassadors planned the teen track at the State 4-H Leaders' Forum, which included workshops on job preparation, "guiding your 'life boat,'" and stress management. Extension delivered three new leader training sessions in Canyon County. Process evaluations from the 84 participants after each session were used to improve subsequent training sessions.

Idaho Extension recruited technology teams of teen and adult 4-H volunteers from Canyon and Owyhee Counties for training at the international Environmental Systems Research Institute (ESRI) Conference on how to use both GIS and GPS. At a subsequent "GIS Day" organized by Extension in partnership with a volunteer ESRI employee and county and city GIS personnel, the technology teams were given opportunities to meet GIS specialists from several different professions.

Fifteen youth and five adults worked in partnership to plan and implement the weeklong Idaho 4-H Teen Conference on how to take advantage of real-life opportunities to develop socially and emotionally. The workshop entitled "Youth in Action" taught youth how to work effectively in their communities. Similarly, the Know Your Government Conference, National 4-H Congress, and Nation Citizenship Washington Focus Conference were held to help youth develop leadership skills and be productive, contributing members of their communities.

The planning committee for the Idaho State 4-H Leaders' Forum came from 12 counties and worked for over a year on program development and promotion. Thirty-seven workshops delivered training in a variety of 4-H project areas, as well as development of skills to work with youth. Major sponsors included Simplot, CAL Ranch, Heinz, L&A Concrete, and Coca Cola.

#### Strengthening Families & Communities

In Ada County 4-H team members contributed quarterly to HC\*HY (Healthy Communities/Healthy Youth) Community Council Meetings by incorporating the 40 key building blocks identified by the Search Institute to help kids succeed in planning youth and adult programs. As a part of the partnership with HC\*HY, Ada County 4-H included two county-wide presentations of "Ideas for Parents" based on the Search Institute's research as presented in 10 4-H newsletters.

More than 15 lessons of "Creative Solutions for Youth Development" were prepared and used in support of county and district training on all aspects of 4-H, youth development, child protection, and youth empowerment.

Implementation of a recent Critical Issues grant included recruiting speakers and conducting marketing throughout the Western Region for the March 2005 "Positive Youth Development Institute." The 4-H Core Team submitted a second Critical Issues proposal to cover the cost of speakers for the Institute.

Idaho 4-H and the Idaho National Guard and Reserves designed the *Operation Military Kids* project to reach youth whose parents have been deployed to military duty out of state. As part of this effort, a "boot camp" was held at the National Guard Armory to increase kids' awareness of what Mom or Dad are going through in the military. In *Speak Out for Military Kids*, youth are trained with team building and trust activities to prepare them as leaders of outreach activities for military youth and families. To encourage community involvement and support for the program, displays were set up at the Eastern Idaho State Fair and 4-H Leaders' Forum to answer questions about the program. A \$1,500 grant request was submitted to help sustain the program for 2005.

#### Youth Natural Resource Management Education

UI Educators collaborated with the US Fish and Wildlife Service to prepare wildlife management field and classroom curricula for natural resource workshops and conservation field days. UI Extension teamed with the Idaho Association of Soil Conservation Districts and Natural Resources Conservation Service to sponsor a summer natural resources workshop for youth and schoolteachers.

The Washington County Conservation Field Day taught youth and teachers about several resource management issues including forestry, noxious weeds, water quality, and wildlife. UI Extension collaborated with the Pacific Northwest Direct Seed Association on the Clearwater area Farm and Forest Fair to educate youth about natural resource industries such as farming and forestry.

UI Extension educators developed the JMG Wildlife Gardener Curriculum to teach youth about backyard habitat for wildlife, and after successful initial implementation, secured a Critical Issues Grant to extend the program. A BPW (Boise Public Works) representative taught composting classes to children for the Junior Master Gardener Program. Four Extension educators presented a free Wildlife Habitat Evaluation Program (WHEP) Fun Day at the Deer Flat Wildlife Refuge in Canyon County to 18 adults and 13 youth. More than 20 schools participated in two day-long FFA Range Judging Contests.

UI Extension and the Idaho Water Education Foundation support several camps each year to enhance the understanding of K-12 teachers regarding the hydrologic cycle, the economic importance of irrigation, and how irrigators, dairymen, and aquaculture producers are using and protecting our water resources. The camps provide training, classroom materials, and field trip suggestions for teachers.

#### Out-of & In-School Programs

Extension educators and 4-H leaders cooperatively taught a variety of school enrichment, after-school, and summer school activities throughout the state. Some of the many topics covered were healthy eating, Idaho history, and learning outdoors. An effectiveness survey was mailed to local elected officials, community organization leaders, and business owners in six rural communities where after-school and summer enrichment programs were delivered.

Nez Perce and Asotin Counties cooperated on a youth activity camp to offer 10 classes on topics ranging from aerospace to the *Wonders of Nature*. Latah County 4-H offered summer and after-school classes to the rural communities of Troy, Deary, and Bovill using *Eco-Wonders* and *JMG* curricula, exposing youth to different foods, emphasizing the importance of eating fruit and vegetables, and demonstrating ways to preserve food.

The EFNEP Youth Program reached 2,714 youth with special interest 4-H projects and activities. Five youth attended 4-H Camp on scholarships. Extension Food Safety Advisors and volunteers ran a booth at the Minidoka County Fair featuring Master Food Preserver and Germ City programs that provided information on healthy eating, safe food preservation, and effective hand washing.

In cooperation with the Gate City Sport Shooting Association, a group of trainers from across Idaho organized and conducted two trainings hosted by the Oregon Trail

Range to certify instructors for the mobile shooting range and various 4-H clubs and camps. In addition, 15 hours of training in rifle and risk management were provided to Idaho youth.

#### 4-H Agricultural Education & Experience

The horse program has the largest 4-H enrollment of any project in the state. Highlights include camps, contests, and clinics. Six educational clinics were held during the District II 4-H horse Camp, as well as supervised trail riding time, and riding activities. Several new clinics were offered at the State Horse Contest and added to local agendas.

At the Eastern Idaho State Fair Working Ranch Horse Show, efforts were placed on developing teams to supervise specific assignments such as numbering and sorting cattle, arena and panel set up, dismantling, and event stewards. Blaine County Extension collaborated with the Silver Springs Ranch to present a District Horse Show.

Latah County Extension prepared for the County Fair and Horse Show by expanding the knowledge of 4-H members, parents, and leaders in the livestock area via numerous workshops, field trip opportunities, carcass contests, and an exhibitor report card system based on quality and yield grades.

Five Extension educators, with input from local 4-H market animal committees, developed the curriculum for a 4-H livestock day camp run by volunteers and 4-H program coordinators. An evaluation instrument was written to gather information about the usefulness of the day camp, as well as a paper describing how to conduct each of the program activities.

Nez Perce County put on three livestock field days in cooperation with the Asotin County (WA) Extension office that covered animal selection, feed and health issues, and judging for community members in five Idaho and three **Washington** counties.

Extension educators and state 4-H specialists from Idaho, **Utah**, and **Wyoming** teamed together for program planning and delivery of the Intermountain Livestock Judges Training. Nationally recognized judges gave presentations on topics such as live animal and carcass evaluation, showmanship, marketing, breeding, and ultrasound technology. Participants got hands-on experience by judging classes in each species. Local livestock producers provided animals for the judges training, which will be extended via live videotape of the workshop for more in-depth comparisons after harvest. Utah State University provided the training facilities, including an indoor pavilion, classrooms, meat lab, overnight animal housing facilities, and animal transportation.

Carcass data from 254 steers were returned to County Extension Educators. In one multi-state effort, UI and OSU Extension Educators collected carcass information of 4H/FFA market beef from seven Idaho and five **Oregon** counties. Youth, parents and leaders in Washington and Adams Counties were educated on carcass quality and received carcass data on their fair steers. Two hundred forty-six contacts were made during the Franklin County Fair livestock weigh-ins.

The 4-H and FFA beef breeding and market beef projects educate youth and parents about efforts of the beef industry to provide a safe, wholesome, and high quality product to the American consumer. Including beef quality assurance curricula in the youth beef projects educates future consumers of industry efforts while simultaneously providing information to current consumers.

a. 4-H Organization

Converting all Idaho state 4-H record books and administrative support materials into electronic format to post on the 4-H website has saved the 4-H office both time and money by facilitating updates and greatly reducing printing, storing, and mailing costs. In the past two years the number of 4-H record books has dropped from more than 30 different project record books to two.

Implementation of the new Idaho 4-H Code of Conduct reduced conflict among participants and retained volunteers in the three counties that jointly agreed to pilot it. The process also provided a prioritized list of issues to annually address in 4-H programs. Thirty 4-H volunteer leaders at the Ada County Fair identified more than 70 issues in less than two hours.

Enhance 4-H Programs & Reach New Audiences

The 4-H campaign for program expansion and enhancement has raised \$1.7 million in donations and pledges. Extension efforts resulted in 1,209 more people benefiting from 4-H Youth Development programming than last year, from 9,914 face-to-face contacts to 11,123. In Franklin County participation more than doubled, from 384 to 863. Statewide, the largest enrollment increases were in the 4-H Club Program and special interest/day camps. Other areas of participation remained steady. Extension recruitment and promotion also increased the number of members in the Minidoka 4-H Teen Association.

The number of Hispanic youth participating in 4-H projects increased from 18% to 25% over the past year, and enrollment in the **Shoshone-Bannock** Tribal horse program has grown from one to thirteen. Twenty five percent of the youth now participating in Idaho 4-H day camps are Hispanic.

Two of 19 youth who completed the camp counselor-training program in Bingham County were from the **Shoshone-Bannock** Indian Reservation. To qualify for entry into the program, these youth attended three of five training sessions and served on a 4-H project planning committee. Their leadership projects were exhibited at county and state fairs. Ninety-one students, 80% whom were Hispanic, completed projects at the Minidoka County summer school program that were displayed at the county fair.

UI Extension and Clark County businesses raised money for youth who could not afford to attend 4-H day camps, increasing enrollment from 21 youth with 34 projects in 1999 to 86 youth with 200 projects in 2004. Two low-income families and three Hispanic youth were able to participate in the WHEP Fun Day because it was offered free.

Marketing efforts resulted in an 8% increase in the number of 4-H volunteers. One hundred twenty-six families learned about the 4-H program by attending the Ada County Extension Open House.

After seeing the results of the Idaho 4-H Impact study, Utah and Arizona are planning to replicate this study, which will develop a broader base for documenting predictable outcomes. Seventy-five percent more volunteers than from past involvement at the Canyon County Fair learned about the philosophy of evaluation and practical methods to evaluate 4-H youth projects.

Training on how to use the 4-H curriculum to support Idaho Achievement Standards resulted in partnerships with 20+ schools, more than a 10% increase from 2003.

### Leadership Development

More than 12,000 youth and 800 adults in 40 groups who participated in the Idaho Junior Master Gardener (JMG) Pilot Program gained knowledge and experience in horticulture, environmental science, nutrition, mathematics, critical thinking, service learning, teamwork, decision-making, and problem solving. Life skills obtained during this experience have direct application to continued learning in other 4-H programs, home school, public K–12, boys and girls clubs, churches, etc. JMG is regularly featured and fostered by the State Department of Education Science Coordinator.

Since 2002, 65 adults from Idaho, **Oregon** and **California** have completed the six-week Idaho JMG certification program and are using JMG curriculum with youth gardening groups or have integrated JMG into home, private, or public school courses. More than 600 adults from Oregon, **Washington**, **Arizona**, and Idaho have attended JMG Awareness programs and applied JMG curriculum to 4-H projects, master gardener programs, and schools throughout the West.

More than 200 delegates developed practical life skills at the Idaho 4-H Teen Conference run by 13 officers, 11 college staff, and 26 adult citizens; this represented approximately 70 more than in previous years. One hundred forty-eight participants in the Idaho State 4-H Leaders' Forum learned and practiced new leadership skills. One hundred eighty-seven youth and 51 adults attending the Know Your Government Conference, National 4-H Congress, and Citizenship Washington Focus Conference gained new citizenship and leadership skills and learned how their government functions.

Extension efforts to build the Clark County 4-H program and keep youth involved produced 16 new leaders who assisted other youth in various 4-H projects and teaching skills. Comments from teen leader record books indicate that learning patience was the number one skill they gained from leading a 4-H project, followed closely by how to teach skills, work with younger children, and improved public speaking ability. Ten new leaders joined the Latah County 4-H program this year, and 23 attended the Latah County Leaders' Forum, which gave them enthusiasm and ideas for the coming year. Forty-six Bingham County leaders benefited from training to manage 4-H activities for older youth.

Youth technology teams taught GIS using hands-on activities with younger children in their communities and gained teaching, leadership, and mentoring skills by applying

their knowledge of technology to community projects. The technology teams also created web pages and worked with digital imaging and robotics.

A middle-school technology team received higher scores than last year for both presentation and technical difficulty on a project that advanced to the final round in the high school division of the EdTechQuest competition. Their 2004 project is a website featuring a map developed from GPS units of dangerous sites in a local recreation area.

The state-to-state 4-H teen exchange has created interest in 4-H activities for older youth and strengthened the entire county program. Increased interest in 4-H by older members has encouraged younger members to stay involved. For example, 30% of 4-H members 13 years of age and older in Minidoka County were active members of the 4-H Teen Association, 64% of these teens have participated in activities beyond the county level, and more than 90% of the teens who become involved continue to be active 4-H members until they graduate from high school.

Reported results from the 19 cabin leaders who evaluated their leadership training at a summer natural resources workshop included new or improved skills such as adaptability, decision-making, self-discipline and motivation, teamwork and group dynamics, public speaking, responsibility, stress management, and problem solving. Youth leaders taught several of the 20 classes organized for the Mini-Cassia Achievement Day, during which 65 youth and adults learned new leadership skills.

Participants in the YDPA national program indicated they feel more confident in actions taken, make fewer mistakes, and experience a higher level of job satisfaction, resulting in lower turnover rates and budget savings. Since attending Youth-Adult Partnership Trainings, community clubs have reported more interaction and responsibility from their teen club members.

As part of the German Marshall Fellows Program organized and supported by UI Extension, Idaho Grange, and Idaho State Department of Agriculture, six European 4-H leaders learned about Idaho farm life, American agriculture, the media, and state government via tours, interviews, and a six-week stay with Idaho farm families. Their visit also built international relationships for Idaho products and people. On program evaluations, the German Fellows reported they would take back to Europe the perspectives on family and community values, independence, self-sufficiency, patriotism, and self-responsibility that they had encountered from their experience in Idaho, as well as an appreciation of the people, landscape, and rural living.

#### Strengthening Families & Communities

*Creative Solutions for Youth Development* has been used for program planning and delivery in church groups, Boys and Girls clubs, at the Mountain Home Air Force Base, and other partners in HC\*HY.

Three TV stations and two newspapers reported on the boot camp held at the National Guard Armory in Pocatello, bringing about more community awareness of 4-H involvement in *Operation Military Kids*. Many of the 88 youth and adults who participated in the boot camp indicated interest in becoming involved with other 4-H



activities, and the Army Reserves in the area expressed interest in joining the Operation Military Kids team.

### Youth Natural Resource Management Education

Tests given to youth upon arrival and shortly before leaving natural resource workshops showed a 57% improvement in understanding the principles and practices of managing soil, wildlife, water, forestry, and range. Approximately 200 youth and their teachers who attended the Washington County conservation field day left with more knowledge and a better appreciation of wildlife habitat issues. Exit surveys from the Wildlife Habitat Evaluation Fun Day showed similar results.

By attending the Clearwater area Farm and Forest Fair, 338 youth and 45 adults learned how direct seeding improves water and air quality on farms. Approximately 160 youth and adults from four counties learned survival skills at the Alpine 4-H camp.

A local public school incorporated the *JMG Wildlife Gardener Curriculum* into their new urban horticulture program. One thousand children participated in MG taught school classes, nursery tours, and other gardening demonstrations.

### Out-of & In-School Programs

One hundred twenty eight community stakeholder surveys of the UI Extension after-school program showed that 92% believed participation keeps children out of trouble, helps children prepare for the future and become successful, and is an asset to their community. Another survey showed that all parents felt that after-school programming kept their child safe, and more than 93% reported it helped their child with homework.

Similarly, 100% of the day school teachers reported after-school classes are an integral part of their school, providing vital services to their students. Eighty six percent of these teachers reported changes in student behavior and performance after children attended the program. Specific improvements included turning in and completing homework, being prepared to learn, attending class regularly, and getting along with other students. Students who attended the after-school program also showed improvement in grades and standardized test scores, which escalated with multi-year involvement.

Two hundred eighty-three youth, about 61% of the youth in Fremont and Clark Counties, completed 606 projects at 32 4-H day camps, an increase of 443 projects since 1999. Participation in a North Idaho summer youth camp increased from 45 to 67, and surveys showed they learned history and how to use GPS. Parents verified the youth's reported learning and added a few more areas, primarily related to food preparation. One hundred percent believed their child had shared information about the camp with someone else.

The number of 4-H food and nutrition projects increased 15% from last year, to 406 from 352. The ENP/EFNEP Program in Southeast Idaho benefited 3,766 youth. Pre- and post-tests of the summer school lunch program showed a 66% increase in food safety practices, 36% increase in those that consumed a dairy product at each meal, a 10% increase in eating breakfast, and a 25% increase in hand washing before

meals. Approximately 70 children and teens were served free lunches as part of the Summer Feeding Program at the Notus 4-H day camp.

As a result of Extension firearms training, 12 of the 13 participants received certification to be 4-H rifle instructors. The 4-H shooting sports club constructed and managed the shooting trailer at the Minidoka County Fair for a fundraiser that made enough money to buy equipment for the younger members to shoot air rifles. Fifty-three participants completed shooting sports training for leaders held in Pocatello and Nampa. As a result, many counties are expanding their shooting sports programs. Grants have allowed the purchase of equipment to encourage additional children to participate. The 25 youth who attended Archery Day Camps in Fremont County learned about safety on and off the shooting range, and archery equipment and how to care for it. They also benefited from new equipment donated by the local Wells Fargo Bank.

Ninety six percent of the 3,900 students who completed the high-school financial management course called *Welcome to the Real World* reported having learned such skills as balancing a checkbook, tracking income and expenses, and how to make more informed decisions about their educational needs for future career choices. In Blaine County 13 girls learned to manage choices such as skin care, makeup application, hair care, and clothes at a Consumer Education Day. Almost half the class modeled their choices during the 2004 Blaine County Fair Style Revue.

#### 4-H Agricultural Education & Experience

More than 30 adults volunteered more than 100 hours to help 500 4-H and FFA members in Twin Falls County with beef, swine, sheep, horse, or dairy projects. As a result, the quality of the animals exhibited at the county fair has consistently improved over the past 10 years. Ratings at the county fair demonstrate statistical successes in cattle grading, from 28% in 1990 to 62% in 2004. A similar improvement was recorded for average daily weight gain in beef steers, from 2 lbs/day in 1990 to almost 3 lbs/day in 2004. This increase is attributed to participating 4-H members' development of skill in selecting and feeding beef steers.

Participants in 4-H livestock projects have also demonstrated increased knowledge in general husbandry, overall product quality, and understanding of the production of our nation's food. The number of completed 4-H animal projects at the Minidoka County Fair rose from last year, with a corresponding increase in the market animal sale: 185 animals brought in \$225,500 compared to \$176,000 from 178 animals in 2003. Likewise, Latah County had a 15% increase in 4-H members' exhibit animals that qualified as within industry standards for weight. One hundred percent of Latah County 4-H members completed their involvement report, 65% via computer.

With 188 youth sponsored by 48 families enrolled in 4-H livestock and horse, participation in Bear Lake County 4-H livestock projects has increased by 12% from last year. Ninety-two percent of these youth completed a 4-H project. Money paid to purchase a donated hog at the fair provided college scholarships to area youth.

Approximately 260 youth and adults gained hands-on experience at Nez Perce County livestock field days. Youth that participated in the Blaine County Swine

Education Day were the first in the state to receive certification by the National Pork Board in Swine Quality Assurance. The Beef Education Day resulted in 16 youth and 12 adults learning more about proper feed plans, animal selection, and overall animal care. The Sheep Education Day brought in 16 youth and six adults, who learned about proper feed, care, selection, and tail docking.

A survey of skills learned at 4-H Livestock Day Camps held in seven counties showed that the program had helped 78–89% of the participating 345 youth and adults to identify body parts and meat cuts, understand livestock selection and evaluation priorities, and how to dress and act in the show ring. 4-H livestock members in Ada County learned about selecting, preparing for fair, and general animal care from completing their projects and talking to experts. Participants at Lemhi County's Livestock Day Camp learned about nutrition and feeding practices, diseases, etiquette, judging, and record books.

Sixty-nine to 95% of the adult and youth from **five western states** who attended the Intermountain Livestock Judges Training reported learning new or improved skills related to show ring responsibility, livestock and carcass selection and evaluation, and oral reasoning. Industry sponsors provided subsidized registration costs.

The 2004 Livestock Judging Team from Power County won the mixed age division of the 4-H Livestock Judging Contest at the Eastern Idaho State Fair. Money donated by the United Dairymen of Idaho helped provide awards and recognition for 21 youth dairy exhibitors, which encouraged them to be more confident and competent and continue participating in learning activities.

The 52 youth and eight adults attending the *Horsin' Around Camp* made up the largest enrollment this event has seen. Counselors gained or developed life skills such as meeting schedules and working with younger members. Attendance at the District II 4-H horse camp was also up this year, and most of the youth reported plans to attend next year. Exit surveys produced several suggestions for new clinics. Nineteen more youth than last year went to the three-day *Living the Cowboy Life* 4-H camp. A total of 47 benefited from workshops on horsemanship conducted by a professional horse trainer hired from the youth's fundraising. While preparing for drills to be performed for parents, youth learned teamwork, patience, and control. Citizenship skills were gained from an afternoon of community service projects at the local fairgrounds.

The 208 youth and 89 adults who attended the annual Idaho Youth Horse Board-sponsored State Horse Contest learned about Oral Reasons scoring, which helped them prepare for the National Contest. Comments from youth and leaders participating in the Eastern Idaho State Fair Working Ranch Horse Show demonstrate the event's value, which continued to improve this year with new registration and stall assignments.

- a. Grants totaling \$2,477,986 supported youth development activities in 2004. Sources included Kraft, the National 4-H Cooperative Curriculum System, and local businesses and individuals. Additional support for these programs comes from Smith-Lever (3) b and c appropriations and State and county appropriations for agricultural research and extension, and by various grants and contracts.

- a. Youth development programs were conducted throughout the state, along with involvement from **Alaska, Arizona, California, Minnesota, Missouri, Oklahoma, Oregon, Texas, Utah, Wyoming, and Washington**. Activities included participation in national and international conferences.

## B. STAKEHOLDER INPUT PROCESS

The University of Idaho Cooperative Extension System conducted a statewide process to gather stakeholder input in 1999, immediately prior to the development of the current plan of work. That process invited and involved Idahoans from across all counties and interests to help determine the priorities of Cooperative Extension. Findings from that effort were used to identify specific customer needs and program expectations and were built into the plan of work as priorities.

In the period since that statewide effort, stakeholder input has been solicited and gathered in a variety of ways. Our state level advisory process has been modified to help focus input. Each academic department in the College of Agricultural and Life Sciences has formed discipline-based advisory councils, and receives input at least annually. In addition, Extension has formed, assembled, and led a statewide advisory council through a process to provide regular input on issues and needs, and on programs and delivery. These new or re-formatted groups add to the input collected at the County level, through their numerous and representative advisory groups.

At the local level, educators in every county maintain a variety of advisory councils including 4-H leaders' associations and expansion (diversity) committees, agricultural producer committees, community development committees and FCS advisory committees. These groups are assembled at least annually to provide input about programs, needs, and priorities.

UI Extension collects input from stakeholders through ongoing program contacts with interest groups, commodity and industry representatives, other organized groups, and service and agency providers. Extension faculty participate in a large number of interest-based organizations, frequently holding elected or *ad hoc* leadership positions. At many organizational meetings, Extension (and research) faculty learn about stakeholder needs and priorities through participation on program planning committees or, more informally, through participation in the meetings and conferences. Faculty often schedule specific meetings with members of organizations to discuss existing and future programs and needs that interface the industry and the university. Faculty attend priority-setting meetings with commodity commissions, professional organizations, and industry or producer groups. Extension faculty work with Federal and State agencies to share information about problems, programs, and priorities.

Formal needs assessments are conducted with interest groups and stakeholders, as well. In 2004 the Forestry Extension program administered a survey of more than 400 forest managers and owners who participated in the forestry shortcourse over the past eight years. A greater than 75% return of the instrument provides some very specific input for future educational programs in forestry extension.

A statewide needs assessment was also conducted during 2004. For that project, nearly 5,000 surveys were randomly mailed to Idaho households, and resulted in an overall 52% response rate. Data from that survey has been shared with UI Extension faculty, and is being considered during program planning activities. Data and interpretations

from that survey will also be consulted for the development of the next 5-year plan of work.

Stakeholder input is incorporated throughout the development of Extension programs; from problem identification through evaluation. Extension program and planning teams gather and summarize input from stakeholders that is used to determine program priorities.

## **PROGRAM REVIEW PROCESS**

At the most basic level, all Extension faculty (and all other UI faculty) develop annual position descriptions that outline major programs for the year. These position descriptions are subject to annual merit review at a number of levels, beginning with division leaders and department heads and ending with associate deans and deans. Merit and program success of each faculty member is also thoroughly reviewed throughout the tenure and promotion process by a panel of faculty, at years 3, 5, 10, 15, 20, etc. Review panels charged with specific program responsibilities conduct further merit review. These review panels may include commodity interests, other academics, agency personnel and stakeholders.

UI Extension has adopted a “Topic Team” approach to program planning and delivery. Teams of faculty meet to discuss priorities, and agree upon which of those projects should be advanced. Topic Team procedures are monitored by College administration. Topic Teams prepare and submit competitive grant applications for state critical issues funding. Successful applications are those that demonstrate that the project meets a team-identified, peer-reviewed priority, and will result in measurable outcomes for stakeholders.

## **EVALUATION OF THE SUCCESS OF MULTI AND JOINT ACTIVITIES**

University of Idaho Extension is involved in multi-state and integrated activities as an integral part of our plan of work. Individual faculty have described and reported their involvement in multi-state projects as part of their annual reporting process. The cumulative total of investment in multi-state programming and multistate project titles are reported for 2004 (see section E).

All extension faculty report their activities in relation to twenty-two Topic Teams that form the framework for our planning and reporting process. Most Topic Teams are populated by faculty from both research and extension missions, and topic team projects are intended to be fully integrated. To estimate our investment in integrated programs, however, we limit our calculations to the portion of extension funding invested in faculty with joint appointments with both University of Idaho Extension and the Idaho Agricultural Experiment Station. Our Topic Team priorities were originally identified and characterized following a statewide effort to generate stakeholder input, and are reviewed during annual Topic Team planning meetings. The cumulative total of investment planned in multi-state programming is reported for 2004.

Idaho Extension realizes significant benefits from involvement in integrated and multi-state activities. A principal benefit is that faculty and staff develop new ideas, skills, and interests through collaborations, as they share, learn, and co-develop new applications, new models, and methods with colleagues across mission areas and States. New curricula, new concepts in teaching and learning, and new ideas about how to address stakeholder needs are cornerstone benefits from collaborative efforts.

*Did the planned programs address the critical issues of strategic importance, including those addressed by stakeholders?*

Our efforts during 2004 directed Idaho Extension resources toward issues of importance to stakeholders. Among the many programs described in “section A. Planned Programs” (above), multi-state examples can be found to address most of the 18 critical issues identified during the statewide stakeholder input process conducted to inform the development of our plan of work. Many of our multi-state and joint activities produce annual output consistent with the objectives of the project. For example, the annual cow-calf symposium results in a predictable, annual product; and many of our research and extension trials with neighboring States result in annual gains in knowledge. However, it would be premature to proclaim that our programs have achieved their goals. Many of our intended goals and outcomes have long-term implications.

*Did the planned programs address the needs of under-served and under-represented populations of the state?*

Primary under-served populations in Idaho have been identified as Latinos (doubled over the last ten years, to more than 7% of the population), American Indians (1%) and economically disadvantaged persons. Programs that addressed the needs of under-served audiences were both planned and not planned. Among those planned efforts with the greatest influence on under-served residents are EFNEP, ENP (Extension Nutrition Program), EIRP (Extension Indian Reservation Program), and 4-H. Over the past two years UI Extension has increased efforts to reach Spanish-speaking farm workers through a number of vehicles, including Spanish-language milking schools and Spanish-language pest management clinics, and many individual Spanish-language classes taught as a part of other commodity school programs. Our contacts with Latino audiences were approximately 8.9% of all face-to-face contacts in 2003 and 8.6% in 2004. Each of these programs directs significant resources to meet identified needs of under-served.

Notable accomplishments in 4-H include an increase in Latino 4-Hers from 1,737 (2001) to 4,145 (2002), 4,725 in 2003; to nearly 25% of our total 4-H enrollment in 2004. This level of minority participation represents a formidable accomplishment in a State whose minority population is less than 9% of the population total. Projects that contributed significantly to this increase include the 4-H technology partnership in Canyon and Owyhee counties and after-school and in-school enrichment programs. UI Extension also continued to grow membership in the special interest EFNEP/4-H clubs.

Much of our outreach targeting Native Americans is conducted through our two EIRP programs. Participation in Extension programs for the Shoshone-Bannock tribe has increased. Further, Extension has begun to deliver more of our regional (multi-county) programs in partnership with the Shoshone-Bannock program (such as the Shoshone-Bannock range school), bringing traditional audiences to visit the people and programs on the Fort Hall Indian Reservation. Our newest EIRP program on the Coeur d' Alene reservation was without an educator for much of the year but has since made significant progress. Extension continues to work with the Tribal government in areas of youth development, community development, and natural resources. Extension is responding to an increasing number of specific requests from the leadership and membership of the Coeur d' Alene tribe, and also the Nez Perce tribe.

Agricultural programs continued to extend their reach to Latino audiences. In 2001, two Spanish-language programs were delivered at Potato School. In 2002, Spanish-language presentations at potato school increased to 13, and four Spanish milking schools were delivered. Spanish-language presentations were also introduced at milking school (at four different locations), and at Sugarbeet School. All of these programs continued in 2003 and 2004. In addition, a Spanish-language Master Gardener program was rolled-out in 2003 and 2004. Outreach to Spanish-speaking clients continued to increase through the EFNEP and ENP programs. Parenting programs continued to reach Spanish-speaking audiences this year, through the Parents as Teachers program in Power County. Our "Grandparents as Parents" curriculum was translated into Spanish in 2003 and distributed in 2004. Our family financial management tools continue to be translated into Spanish. Another important under-served audience includes small-scale farmers. Multi-state efforts with Washington and Oregon continue to reach larger numbers of this audience in both northern Idaho and in the Treasure Valley, with a variety of targeted programs including alternative farming and pest alert networks.

*Did the planned programs describe the expected outcomes and impacts?*

Our annual report of accomplishments reveals some valuable information about program outcomes for many of our planned programs. However, we are still learning, and in transition, and there is variable quality in the measurement and description of our diverse programs. As UI Extension more fully adopts outcome-based programs, we will develop new approaches to accountability and implement new measurement of meaningful indicators. In most cases, multi-state activities describe outputs of collaboration rather than intended outcomes. Examples of such planned multi-state outputs include workshops, publications, conferences, databases and curricula.

*Did the planned programs result in improved program effectiveness or efficiency?*

UI Extension has lost approximately 22% of its professional workforce since 2002. Our Topic Team process, however, has allowed our faculty to deliver quality programs and to produce outcomes exceeding those measured in previous years. Our faculty continue to rely on external collaborations. We have increased our participation on multi-state



projects as well as with in-state partners. These collaborative efforts helped Idaho CES achieve efficiency and effectiveness, especially in the development of educational products. Multi-state collaborations allow diverse faculty to combine skills, talents and resources to develop tools useful to each collaborator and their in-state colleagues. A notable multi-state collaboration to deliver education about weight management brings expertise and materials into Idaho that would not be available otherwise. Idaho participation in the eXtension project promises similar efficiencies. These collaborations greatly increase the number of programs offered through UI Extension, and reduce per learner costs to a fraction of what any state could accomplish on its own. Our involvement with the PNW publications effort enables Idaho, Washington and Oregon to develop regional products that meet the needs of multiple states, eliminating inefficiencies associated with duplication and reducing the per unit cost of production.

# MULTI-STATE EXTENSION ACTIVITIES

Appendix C

U.S. Department of Agriculture--Cooperative State Research, Education, and Extension Service

Multistate Extension Activities and Integrated Activities

(Attach Brief Summaries)

Institution University of Idaho

State Idaho

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

## Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Goal 1; Competitive agriculture	<u>\$329,455</u>	<u>\$249,977</u>	<u>\$367,968</u>	<u>\$ 257,013</u>	<u>\$ 137,153</u>
Goal 2; Safe Food	<u>23,328</u>	<u>11,355</u>	<u>74,837</u>	<u>26,228</u>	<u>\$ 14,787</u>
Goal 3; Health & Nutrition	<u>26,762</u>	<u>11,355</u>	<u>79,972</u>	<u>29,794</u>	<u>\$ 12,856</u>
Goal 4; Natural Resources & Environ	<u>267,601</u>	<u>104,370</u>	<u>127,270</u>	<u>194,853</u>	<u>\$ 246,855</u>
Goal 5; Econ Oppor & Quality of Life	<u>272,584</u>	<u>166,443</u>	<u>137,226</u>	<u>169,858</u>	<u>\$ 270,331</u>
Other multi-state investment	<u>23,161</u>	<u>197,500</u>	<u>99,224</u>	<u>82,139</u>	<u>n/a</u>
Total reported by faculty	<u>942,894</u>	<u>\$741,130</u>	<u>\$886,497</u>	<u>\$ 759,885</u>	<u>\$ 681,983</u>
Total actually expensed in budget		<u>\$695,289</u>	<u>\$780,274</u>	<u>\$ 709,380</u>	<u>\$ 681,983</u>

Form CSREES-REPT (2/00)

\_\_\_\_\_  
 Director

\_\_\_\_\_  
 Date

Scope of Project

Title of Project

International

Potato Pest Management  
Potato Production and Storage  
Develop Leadership in Youth and Adults  
Beef Cattle Nutrition alternative crops

National

Financial Security Later in Life  
Credit/debt management curriculum  
Dollar Decisions  
Legally secure your financial future  
Youth development academy  
National 4H Conference  
National 4H Hall of Fame  
Blueberry transformation  
Aquaculture study  
Irrigation uniformity  
Farm & Ranch business management  
Diversity/afterschool programs

Scope of Project

Title of Project

PNW (ID, OR, WA)

Forestry shortcourse  
Cropping systems  
Agricultural entrepreneurs  
Web-based certified crop advisor training  
Dairy nutrition  
Treasure Valley Pest Alert Network  
Invasive species-CWMA's

OR

Youth development/4H  
Environmental Horticulture  
Multiple intellegences

WA

Panhandle/HUB 4H  
Long-term Care  
Youth activity camp  
Value-added producers and processors  
Cereals economics and marketing

<u>Scope of Project</u>	<u>Title of Project</u>
Western Region	Advanced master gardener
	Alfalfa-AITS
	Forages-WCC091
	Grazing academy
	WIN the Rockies
	4H curricula
	Pasture management
	Potato pest management
	Potato production and storage
	Huckleberry domestication
	Beef program
	Pest management strategic plan
	Pest management center
	OnePlan IPM planner
	Dairy biosecurity
	Dairy reproductive efficiency
	Western Aquaculture Center
	Western Rural Development Center
	Community readiness
	Farm direct marketing
	Weed management in sugarbeets
	Herbicide screening and development

<u>Scope of Project</u>	<u>Title of Project</u>
AZ	Multiple intelligences
MT	Forestry shortcourse
	4-H/horticulture
	Small fruits
	Multiple intellegences
UT	Master gardener
WY	Small acreage landowners
	Community development
	Consumer horticulture
IL	Grandparent training
IN	4H Teen Exchange
SC	Hispanic 4H

## F. INTEGRATED ACTIVITIES

U.S. Department of Agriculture--Cooperative State Research, Education, and Extension Service

Supplement to the Annual Report of Accomplishments and Results

Multistate Extension Activities and Integrated Activities

Institution University of Idaho

State Idaho

Check one:  Multistate Extension Activities

Integrated Activities (Hatch Act Funds)

Integrated Activities (Smith-Lever Act Funds)

### Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Goal 1; Competitive agriculture		<u>\$508,586</u>	<u>\$594,100</u>	<u>\$568,406</u>	<u>\$ 862,490</u>
Goal 2; Safe Food		<u>6,136</u>	<u>4,769</u>	<u>9,466</u>	<u>44,828</u>
Goal 3; Health & Nutrition		<u>1,455</u>	<u>3,706</u>	<u>4,337</u>	<u>59,008</u>
Goal 4; Natural Resources & Environ		<u>118,495</u>	<u>118,405</u>	<u>99,808</u>	<u>464,151</u>
Goal 5; Econ Oppor & Quality of Life		<u>286,465</u>	<u>165,517</u>	<u>106,781</u>	<u>217,339</u>
Total (Smith-Lever)		<u>\$921,137</u>	<u>\$886,497</u>	<u>\$789,099</u>	<u>\$1,647,816</u>

Form CSREES-REPT (2/00)

\_\_\_\_\_  
Director

\_\_\_\_\_  
Date

UI Faculty with Joint Extension – Ag Experiment Station Appointments

FACULTY MEMBER	PRIMARY GOAL AREA	FACULTY MEMBER	PRIMARY GOAL AREA	FACULTY MEMBER	PRIMARY GOAL AREA
Alvarez	1,4	Prather	4	Neibling	1,4
Barbour	1	Schwartzlander	1, 4	Qualls	1,4
Barney	1	Shewmaker	1, 4	Sheffield	4
Brown	1	Tripeppi	1	Karsky	1,4
Ellsworth	1			King	1,4
Gallian	1	Guenthner	1,5		
Guy	1	Higgins	5	Glaze	1
Hopkins	1	Nelson	5	Miller	1
Hutchinson	1	Rimbey	4,5	Chahine	1
Mahler	4	Taylor	5		
Miller	1			Exon	2
Mohan	1	Sanders	4	Culbertson	2
Morishita	1,4			Raidl	3