

2012 University of Nevada Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

University of Nevada Cooperative Extension (UNCE) works in all five NIFA priority areas: (1) Global Food Security and Hunger; (2) Climate Change and Natural Resources; (3) Sustainable Energy; (4) Childhood Obesity, Health, and Nutrition; and (5) Food Safety. Additionally, UNCE is reporting on two state mandated program areas: 6) Human and Family Development and 7) Community and Economic Development. A 2012 progress report on each is briefly described below.

GLOBAL FOOD SECURITY AND HUNGER

In its second year of funding, Nevada's Beginning Farmer and Rancher Project (i.e., Herds & Harvests), offered 32 educational workshops that reached 213 beginning farmers and ranchers. Workshop topics included So You Want to be a Vegetable Producer (66); Processing and Selling Locally Grown Meat (91); and Field Crops: Old versus New (56). More than 65% of workshop participants reported changing some aspect of their agricultural business based upon the knowledge gained in the Herds & Harvest workshops. Of the 21 items listed on the program evaluation, 20 items had statistically significant differences between pre-test and post-test scores. Top rated knowledge and behavioral change indicators included: 1) How to decide if tef is a potential alternative crop; 2) What production practices are required to sell meat to Whole Foods Markets; 3) How to use plants and farming practices for insect control; and 4) What criteria/regulations are needed to sell meat to Whole Foods Markets. Herds & Harvest (UNCE) educators mentored 28 beginning agricultural producers. This included teaching producers to complete enterprise budgets, general cow-calf budgets, and small farm budgets. As a result of this educational program one farmer changed his fertilization program which nearly doubled grass/alfalfa mix yields. Seven southern Nevada small farm operators, through one-on-one mentoring created enterprise budgets for 9 different enterprises or whole farm operations.

Between 2011 and 2012, agricultural producers increased their participation in Nevada Targeted States Risk Management programs by 46% (from 2,629 participants in 2011 to 3,859 in 2012). Specific topics, and number of participants per topic included: 1) Nevada Crop/Livestock Insurance Options Handbook Update (2,648); 2) Cattlemen's Update (475); 3) Tribal Agriculture, Record-Keeping and Tax Workshops (147); 4) Nevada Small Farms Conference [Beef, Hispanics and Women, Business Planning and Risk Management] (260); 5) Farm/Estate Transition Program (33); 6) Business Planning Targeting Women and Hispanic Producers (22); 7) Managing Agricultural Risk and Insurance Basics for High School Students (216); 8) Nevada Farmer Direct Marketing (32); 9) Dairy Futures and Hedging Strategies (26). Program evaluations administered six months following each workshop indicate that 64% of all program participants had incorporated skills and information from workshops into their operations and 85% reported that program topics were critical in the current agricultural business environment. Nearly 100% of participants reported that they would attend a Risk Management program workshop in the future. Approximately 46% producers reported that changes they had made to their operation, as a result of workshops, made them more economically viable and 62% felt their quality of life had improved. Thirty-eight percent felt that their family goals had become easier to achieve.

Many communities (29 out of 487 census tracts) in Nevada are considered food deserts or have limited access to fresh foods. An 8-week Grow Your Own-Nevada program was offered 3 times in 2012 via

Interactive Video to 13 sites across the state, including Duck Valley Reservation. This translates to 48 hours of instruction to 1,953 people. A program website was developed (growyourownnevada.com), which is linked to the UNCE website and was accessed by more than 6,000 in 2012. Participants reported an average of 58.3% to 129.4% knowledge gains. As a result of UNCE programs targeting youth with interest in small farm operations, 46 high school agricultural students created budgets for vegetables, flowers, and eggs to assist them with deciding on profitable ventures for their program fundraising projects.

Moapa Valley small farm operators continue to increase in number. Two new producers applied for and received producer's certificates and are now selling their products. As a qualitative indicator for program demand, approximately 55 producers participated in What New Farmers Need to Know-Financial Planning at the 2012 Nevada Small Farm Conference.

Education statewide has evolved from teaching the benefits of diversifying farming operations to educating innovative leaders in the local food industry about production, marketing, distribution (food hubs), business, and processing. The local food educational interest and needs have shifted from considering local food production to requiring information on how to run local food businesses. Areas of focus include how to sustainably feed plants by building soil quality and the use of cover crops or organic matter as well as how to efficiently sale, market, and distribute the product as the amount of product increases.

In Lincoln County, the Community Value-Added Processing program gained approval from a USDA health inspector for the sale of packaged greens such as lettuce, spinach and arugula. A processing facility for bagged greens has been approved and is being constructed on one of the farms. Six farms are developing a growers' cooperative to better market and distribute products. This group spent much of the year seeking grants for low interest loans for capital start of a food hub. Four hoop house grants were awarded to producers through the National Resource Conservation Service program demonstrating producers' growth and confidence in specialty crop production. Three participating farms are currently expanding the size of their farm's niche production, with one farm building 8 new hoop houses. The managers of the farms indicated their decision to further diversify is based on the initial successes in production and sales of products resulting from the program's education. Seventeen landowners/managers out of the 110 in Lincoln County have continued diversifying their operations to include new specialty crops. Eleven producers, who participated in education programs, continue to implement their knowledge growing vegetables in 27 hoop houses.

Burned area revegetation, wildlife habitat restoration, and livestock grazing are the controversial rangeland issues of highest priority in northeast Nevada. Grassroots collaborative approaches to resolution of these issues are gaining momentum in many Nevada communities. For example, the Northeastern Nevada Stewardship Group continued to implement natural resource educational and collaborative stewardship activities, including landowners' forums to learn about sage-grouse habitat and convening local sage-grouse working groups.

During 2012, two new collaborative resource stewardship teams have formed as a result of rancher participation in the Shoesole Resource Management Group, in addition to UNCE's Range Management School. The teams are dedicated to improving sage-grouse habitat while maintaining ranching tradition and livestock forage sustainability. As a result of these smaller collaborative team approaches to range stewardship, riparian improvements occurred concurrently with a greater than two-fold increase in cattle stocking rates.

UNCE faculty, working in partnership with the Rangelands West Team, created and updated an interactive set of web pages in association with the western agricultural experiment stations and National Agricultural Library (<http://globalrangelands.org/rangelandswest>) which includes an interactive page focused on Nevada Rangelands (<http://campusguides.unr.edu/nvrangelands>). UNCE faculty collaborating with other land grant university faculty launched the Rangeland Stewardship and Health Community of Practice for the eXtension project in 2012 (<http://www.extension.org/rangelands>).

APLU National Diversity Award 2011 recipient, People of the Land, continued to expand as a national program strengthening the skills of agricultural professionals to work more effectively with American Indians living on reservation lands. In 2012, WSARE funded the expansion of the program to the Hopi Reservation. UNCE faculty partnered with University of Arizona Extension faculty to complete the

Hopi tribe Institution Review Board (IRB) process. In 2012, the Umatilla tribe in Oregon integrated the curriculum into their reservation schools.

Expanding on the outreach concepts under the People of the Land program, the American Indian Farmer and Rancher Outreach and Assistance Improvement project was designed to identify and examine underlying factors and potential obstacles to successful utilization of USDA programs by American Indian farmers and ranchers. Funding secured from USDA-Office of Advocacy and Outreach enabled UNCE faculty to work with Extension professionals in Oregon, Washington, North and South Dakota to conduct an analysis of obstacles to American Indian agricultural producers' use of USDA assistance programs. This included focus group and interview needs assessments, resulting in a curriculum published in 2012. This project was successful to the extent that the UNCE faculty involved received additional funding (\$285,903) from the grantor to teach the new curriculum in 8 western states to increase USDA outreach efforts in Indian country in 2013.

Eagles and Agriculture promotes the benefits of agriculture to wildlife habitat and the community, conservation and prosperity of ranching in western Nevada, and enhances participant knowledge in wildlife habitat and local agriculture. UNCE partnered with Carson Valley Chamber of Commerce, Natural Resources Conservation Service, Western Nevada Resource Conservation and Development, Washoe Tribe, and a number of Carson Valley ranchers to conduct an annual 3-day educational event to raise awareness of the relationships between agriculture, wildlife and community. Approximately 400 people attended the event in 2012. Evaluation results indicate respondents (n=37) gained a better understanding of Carson Valley agriculture (4.4), have a greater appreciation for the role agriculture plays in providing wildlife habitat (4.3), and have greater understanding for the benefits agriculture provides our society (4.2) (5 point Likert-type scale, 1=strongly disagree; 5=strongly agree).

The Greater and the Bistate sage-grouse are two distinct bird species being considered by the US Fish and Wildlife Service for listing as threatened or endangered. Listing as threatened or endangered would have devastating consequences to the agriculture industry and rural economies at large. Sage-grouse conservation plans were developed in 2004 with the assistance of UNCE. Encouraging plan implementation to improve habitat conditions and ultimately increase sage-grouse populations has been the focus of the Nevada Department of Wildlife. In 2012, UNCE conducted 7 meetings with the Bi-State, 2 meetings with the Washoe Modoc Lassen, 4 meetings with the Lincoln County, and 4 meetings with the White Pine working groups. Educational sessions for private landowners were conducted in the Bi-State area (Bishop, Yerington), a field trip for the Bi-State working group members, local residents, and media, and a 2-day sage-grouse symposium coordinated by the Society of Range Management in Minden. The Bi-State working group successfully developed a new action plan which was approved by the Executive Oversight Committee. Extensive conservation work has been implemented and well documented.

A comprehensive educational/research program was developed to educate producers on the recommended best management practice for growing corn as an alternative crop as a means to increase farm profitability. In partnership with producers, on-farm research was conducted, presented and evaluated for this program. In cooperation with a local producer, corn test plots were planted with 11 different corn varieties and 7 different relative maturities. Corn test plots were harvested to determine significant differences in yield and moisture content as related to relative maturity days and varieties. Results of the test plots demonstrated the potential profitability of producing corn as a rotational crop to be integrated in local producer's alfalfa enterprise production systems.

Nevada received Integrated Pest Management (IPM) grant funds totaling \$131,337 to continue IPM programming in Nevada. Weeds to Watch and Early Detection Rapid Response workshops were taught in 12 of 17 counties. The evaluation results indicated that of the 96 participants who responded, 80% felt the workshops were very useful to their work. The most important survey results indicate that over 80% of the respondents view pest management as an important part of their employment responsibilities and 85% provide advisement on pest management subjects to their clientele. In addition nearly 85% utilize self-knowledge to identify pests, which indicates a critical need for educational programs aimed at improving this level of self-knowledge. The top rated resource used when providing information was UNCE personnel.

UNCE faculty partnered with USDA-ARS to expand a program evaluating habitat requirements of

giant reed (*Arundo donax*) to Nevada. Giant reed is a non-native noxious weed that is rapidly expanding in the western US. The ARS is modeling giant reed growth characteristics of this weed in an effort to better manage this pest. Two sites in Nevada were identified and property owners involved establishing a set of 5 hobo temperature/solar radiation monitors at 3 meter increments in each stand.

UNCE Humboldt County collaborated with the Paradise Valley Weed Control District (PVWCD), Nevada First Corporation, and individual land owners to treat noxious weeds on over 4,000 acres. Approximately one-third of the \$125,000 funds expended were from program enhancements and assistance agreements acquired via UNCE. This effort included a \$40,000 effort to target Russian Knapweed on seven different ranches in Paradise Valley. Prior to this weed identification program in 2002, the annual expenditure by the PVWCD was less than \$2,000 per year, despite annual tax revenue of about \$14,000. Since 2002, annual expenditures have increased 50-fold, exceeding \$100,000 the past four years. Assuming treatment costs of \$50 per acre, annual weed control efforts have expanded from under 40 to more than 2,000 acres per year. Since the weed education and management program was implemented four years ago, the number of individuals receiving certification from the Nevada Department of Agriculture as Pesticide Applicators has increased 132%.

Pesticide Safety Education program training focuses on safe and effective use of pesticides to reduce environmental contamination and harm to applicators and others. Working with Nevada Department of Agriculture (NDOA) staff, UNCE faculty conducted two safety trainings for 170 certified applicators. Pesticide safety manual sets consisting of the Nevada Pesticide Applicator's Certification Workbook and the National Pesticide Applicator Certification Core Manual were distributed to all UNCE offices. UNCE faculty updated the website in 2012 to include information on NPDES permits, new restrictions on the use of chlorpyrifos, and soil fumigant Phase 2 regulatory changes. The website was accessed by 19,709 visitors in 2012. The free online course and practice exam was the second most accessed content after the home page, with 1,313 visitors.

Invasive Weed Education and Coordination in western Nevada conducted its annual training on weed identification and management for 54 seasonal workers. Weed group outreach events reached 10,165 people in 2012. Site visits were made to 420 properties in the basin. Two complete weed inventories of the basin were completed, with weeds treated when found.

Results from the evaluation of the Tahoe Weed Spread Prevention program (n=18, 34.6% response rate) showed 10 respondents planned to implement 3 to 10 new spread prevention BMPs in 2012. Planned actions included training for staff/volunteers (66.7%); sharing information with upper management (55.6%); and modifying contract language to add more BMPs on weed spread prevention (22.2%). As a result of attending the workshop, 38.9% planned to modify contract language to require weed-free aggregate materials. Participants requested additional training on the subject of the value of weed-free aggregate. A total of 52.3 acres of public lands in the Truckee Meadows were treated for weeds using chemical and mechanical means, with a 76.7% reduction in weed populations after treatment. A total of 83.9 cubic yards of weeds were removed from the 8 dig sites, along with 17.8 cubic yards of trash.

One-hundred percent of the Master Gardener Summer Common Weed Identification class students (n=15) correctly identified botanical terms including petiole, leaf lobes, opposite leaves and midrib. One-hundred percent also correctly identified 6 of the 12 target weed species. Of the 52 Master Gardener students who completed the training in Washoe, Carson, and Douglas counties post-test scores showed a 140% increase in knowledge. A new completion exam was developed and administered in 2012 helped to increase Master Gardener retention rates: Reno class, 47.5% certified within 6 months of training; Carson City, 50% certified within 6 months of training; Douglas County, 30% certified within 6 months of training. Volunteering in the greenhouse program and plant sale, western Nevada Master Gardeners sold more than 250 plants. As weekly volunteers they completed more than 144 soil tests, served 522 clients in the UNCE Plant Diagnosis Clinic, and propagated 400 native seedlings for the Native Plants Club.

The Greenhouse Project (TGP) students and volunteers produced and donated 1,463 pounds of produce much of which was donated to local food banks. Student participation, including classes, tours and juvenile probation work, totaled 2,599 hours. Non-student volunteer hours totaled 1,042 hours. This yielded an in-kind value of \$22,705 to TGP. This does not include the hundreds of hours volunteered by the Executive Board members, the Action Committee members, volunteers who handled each fundraiser

or the volunteer who wrote multiple successful grants (over \$100,000 in gifts and fundraisers and \$27,500 in grants). As AmeriCorp volunteers, students managed the greenhouse for the summer, earning stipends and learning work skills. Two students focused their CHS senior projects using TGP; one researched hydroponics in the greenhouse and the other the viability of winter crop production in the hoop house. The Special Needs Students' instructor involved in the project reported improved motor and work skills and increased independence by participating students.

Growing In Small Places (GISP) addresses public demand for horticulture information pertinent to urban residents and Community and Healing Gardens teaches southern Nevada residents how to grow at least part of their food in a community environment. UNCE faculty worked with Las Vegas and the Las Vegas Parks department to design and develop the new community garden at Floyd Lamb Park at Tule Springs. In 2012 an MOU was signed by the city and UNR (Board of Regents) to establish this site as both a community garden and a site for teaching neighborhood residents.

CLIMATE CHANGE AND NATURAL RESOURCES

Due to severe drought conditions in 2012, the Nevada Targeted States Risk Management program offered Fire and Drought workshops with an attendance of 151 participants at 10 different locations. Producers reported that as result of this program, they planned to add specialty crops and value added products to their business operations.

Green Industry Training(GIT) consists of eight 3-hour sessions on the topics deemed most important by landscape industry members and prepares new and existing professionals for certification exams. Attendance at the spring GIT program was 12 per each of eight sessions. Evaluation of GIT indicated that 90% of attendees believed sessions provided valuable new information at the appropriate educational level. Participants achieved on average a 21% gain in knowledge and skills. Eleven of the 12 participants received a passing grade (70% or greater) on their nursery worker certification exam.

The Synergistic Monitoring for Adaptive Vegetation Management in the Sagebrush Ecosystem of the Great Basin project is focused on empowering active vegetation management through monitoring and adaptive management. To date, this project has documented the location and nature of close to 7,000 vegetation management events (treatments or wildfires) that can potentially be used for studying their response. Field studies this year investigated projects for return of natives to crested wheatgrass seeding and restoration of native perennials after mowing fuel breaks in Wyoming big sagebrush. To make this happen, close collaboration has occurred with many agencies and because of this project, many people have turned to this data base for related research and extension needs.

Nevada Youth Range Camp participants acquired a better understanding of Nevada's natural resources, ranch management, the diverse vegetation of Nevada, and the wildlife that depend on these habitats. Each year camp participants submit a written evaluation, specifying the knowledge they gained from the 13 instructional modules. A formal impact evaluation indicated that students demonstrated an increase in knowledge across eight subject matter areas, with knowledge increases ranging from 10% to 54%, and averaging 29% per subject area. Mid-term impacts include at least 5 former camp participants pursuing a college education preparatory to careers in natural resources.

UNCE collaborated with Eastern Nevada Landscape Coalition to put Adaptive Vegetation Management concepts into practice in a landscape setting. Nevada Partners in Conservation and Development (NPCD) developed and signed an interagency MOU and NPCD funds were used to implement hundreds of thousands of dollars worth of projects. For example, the Pinyon-Juniper Partnership is pursuing specific treatments to encourage ecosystem restoration and economic development. The Eastern Nevada Landscape Coalition was established a decade ago to address this vision and as a result, the Great Basin Environmental Program and the Sage-STEP research program have been established to provide additional research support. Three additional collaborations (Nevada Partners in Conservation Development, Great Basin Landscape Conservation Cooperative, and the Pinyon-Juniper Partnership) were developed to accomplish active vegetation of Nevada and Great Basin rangelands.

UNCE's Living with Fire (LWF) program continued to expand educational materials and teaching activities to help land owners/managers take steps to avoid and prevent catastrophic wildfire. In 2012, LWF involved all 17 Nevada counties, increased its number of partnering organizations by 24%, increased the number of educational events statewide by 19%, and distributed 17,800 copies of 19 different LWF publications. Approximately 13,900 online visitors viewed 36 different LWF publications and educational tools (including five Spanish language publications), 4 states requested program material parent files in order to customize materials, and permission to use LWF content was granted to 7 out-of-state entities. Approximately 600 Nevadans attended 20 wildfire threat reduction presentations. LWF Facebook page received 128 new fans in 2012 for total of 250 fans located in 9 Nevada counties, 8 states, and 8 countries. Living With Fire was recognized in 2012 as an "Exemplary Project" by the C. Peter Magrath University/Community Engagement and Outreach Scholarship W. K. Kellogg Foundation Engagement Awards selection committee.

In Nevada 172 communities are rated as extreme, high or moderate wildfire hazards. The Annual Nevada Wildland-Urban Interface Fire Summit convened stakeholders to discuss how these community hazard ratings could be reduced and to promote action. In 2012, 142 individuals representing 33 different entities participated and community members and/or fire service representatives participated from 24 of Nevada's extreme, high and moderate fire hazard communities. As a result of the 2012 summit, 98% of the community representatives had a better understanding of the wildfire threat to their community, 96% had a better understanding of the resources available to reduce the threat, and 98% intended to take some form of action to reduce the wildfire hazard when they returned home.

UNCE collaborating with University of California Cooperative Extension and 20 partnering agencies, offered its annual Lake Tahoe Basin Wildfire Awareness Week (LTWAW) which provided 11 educational events with 2,190 participants. In 2012, five LTWAW resolutions were issued including a joint resolution from the Governors of Nevada and California. Six, 1-hour webinars were viewed by a total of 195 individuals and the Lake Tahoe Fire Adapted Community exhibit was used at seven events and viewed by 300 people.

UNCE continued its partnership with the Tahoe Regional Planning Agency (TRPA), the Natural Resources Conservation Service, and Conservation Districts in the Tahoe Basin to offer its BMP Retrofit/Environmental Improvement Program addressing the installation of BMPs on private properties at Lake Tahoe. Approximately 89 participants attended UNCE's Basic BMP Workshop and the Refresher Course. An Experience Survey of contractors indicates that of the 27 participants who responded, 6 who had not completed the program before completed a total of 20 BMP jobs in 2011. The 21 people who had completed the program completed a total of 162 BMP jobs that year. In other words, respondents who attended previously completed about 2.5 times more BMP jobs per capita than those who had not attended before. Through the joint efforts of BMP Retrofit partners in 2012, 398 BMP Site Evaluations were performed on private properties, and 551 Certificates of BMP Completion were awarded by TRPA.

The Agriculture Innovation Forum Series provides practical information needed for agricultural producers and small acreage owners to optimize their land use potential and maintain agricultural open space in Carson Valley. More specifically, the forum series offers options and solutions for surviving as a small agriculture entity. A total of 5 two-hour programs were conducted over 5 months. Forum topics included, agricultural uses of farmland beyond cattle and hay operations, alternative crops, small scale poultry production, getting the most out of your hoop house, and weed control. Forum attendance averaged 12 per session over the 5 forums offered. Evaluation respondents (n=13) indicated they found the forums informative, 3.3 on a 5-point Likert Scale. Seven of the respondents (58%) have used information from the forums, while 75% intend to use information at some point in the future. Seven of the 13 respondents claimed to have shared information gleaned from the forum, with friends, neighbors, or others. Eighty-five percent of respondents agreed that they have the know-how to optimize their land use potential.

Through the Alternative Crops program producers learned how to better market their crops resulting in the renewal and expansion of a contract (October 2012) between Desert Oasis Teff Company and Bridgewell Resources for a minimum delivery of 350,000 pounds of teff grain and flour over a 12 month period. A result of the contract is that Desert Oasis teff products are now the sole supplier of teff to Bob's

Red Mill, a major retailer of non-gluten products in the US. UNCE faculty assisted the two largest teff producers in Nevada to develop and expand a vertically integrated, teff production, processing and sales firm in Nevada. Efforts targeted improving marketing and expanding sales beyond the ethnic (Ethiopian) markets. To increase the market share and consistency of teff produced in Nevada, UNCE worked with executives of a multi-national, purchasing and distribution company (Bridgewell Resources) to buy and distribute locally produced teff.

An analysis was completed of the of the forage needs, current supplies and potential opportunities for Nevada's forage producers related to the dry milk processing plant being constructed in Fallon by the Dairy Farmers of America Cooperative. The results were presented to local producers at Changes in US and Nevada Agriculture Affecting Future Growth in Nevada Dairies. Participants achieved statistically significant knowledge gains concerning how a proposed dry milk processing plant may yield opportunities in new agricultural crops.

Low Water Use Alternative Crops program and curriculum helped agricultural professionals work more effectively with producers in western arid states to select alternative crops. Of those responding to a six month follow-up evaluation (n=23), 43% have introduced workshop curriculum and other SARE resources into producer programming; 39% have worked one-on-one with producers to evaluate the economic feasibility of alternative low water use crops on their farm/ranch; 35% assisted agricultural producers in implementing low water use crops on their farm/ranch; 35% assisted producers with the measurement of changes in water use and resulting environmental improvements such as water and soil quality; 35% assisted producers with the measurement of changes in profitability and economic sustainability of alternative crop use; and 82% have incorporated some of the material presented in the workshop into their operation/job.

As a direct result of the activities of Native Plants and Sustainable Landscaping, multistate project WERA 1013, the Intermountain Native Plant Grower's Association (INPGA) has broadened their scope of activities and range of western growers, and developed a strategy for stabilizing and expanding the market by establishing the INPGA Intermountain Choice™ program.

The Great Basin Fire Science Delivery Program (GBFSDP), in existence for about two years, is one of 14 consortia across the country. Project information delivered by the GBFSDP comes via multiple media, including a list-serve (newsletter), website, webinars and synthetic publications. In 2012, GBFSDP team hosted 6 webinars. All webinars (current and previous years) were accessed by 1,784 viewers, approximately 70% of whom were unique viewers. The website had a total of 4,608 viewers, with 53% being new visitors and 47% returnees. The high return rate strongly indicates the project is meeting the research based knowledge needs of many resource specialists who work with fire, fuels and vegetation management issues. Also, the website was visited by individuals from 45 foreign countries, of which seven countries had individuals visit the site six or more times.

Joint Fire Prevention Consortia Cluster Evaluation project continued in 2012 through a second national e-survey of consortia stakeholders (n=1,309), and a 70-page report of these data published. Additional evaluation components include a web metrics analysis of consortia. Common consortia goals include coordinating current fire science delivery efforts, increasing communication and collaboration between fire managers and fire scientists, and facilitating the dissemination and application of current fire science information among researchers, fire managers, policymakers, and the general public. Each consortium has developed a variety of educational activities designed to improve the linkage between fire science research and application.

SUSTAINABLE ENERGY

UNCE faculty completed a series of cellulosic bio-fuel field experiments in 2012, providing the only source of replicated data in Nevada regarding production of cellulosic bio-fuels. The results of these experiments demonstrated conclusively that while yields obtained from both cool and warm season grasses were relatively high this production came only with maximum applications of water and regular fertilizer applications. These high input costs and low product values demonstrated as a result of this

project provides solid evidence precluding economically viable production of cellulosic biofuel products in northern and western Nevada. This information is extremely valuable for anyone contemplating an investment in commercial production cellulosic bio-fuels in Nevada. Formal evaluations of pre and post test scores measuring knowledge increases in response to the question "How to decide if cellulosic biomass is a potential alternative crop" revealed a statistically significant increase following educational workshops in Pershing County (pre= 1.43, post= 3.43, 5 point scale) and in Churchill County (pre = 1.75, post =4.00).

UNCE faculty collaborated with Nevada producers in identifying high value lower water use crops with the potential of bio-fuels that can be produced as alternatives to hay production. A second priority is developing revegetation techniques and identifying adapted perennial plant species that can be used to reclaim abandoned farmlands in Nevada. Canola trials results have been statistically analyzed and a preliminary report and fact sheet is in preparation. Public demand has increased seven-fold for information on canola production techniques.

Sustainable Living Renewable Energy Roundup is a local non-profit designed to promote sustainable practices, renewable energy use, and environmental responsible lifestyles. In 2012, UNCE collaborated with this non-profit to provide the public with a Green Living Festival and "localvore" dinner. Topics addressed included well and septic maintenance, hoop house design, bee keeping, geothermal heat pumps, wine making, and improving home energy efficiency. Approximately 600 attended the single day event, which consisted primarily of the general public. More than half (64%, n = 47) of the respondents who completed evaluations of the educational event indicated they planned to make changes in the way they live, play or work as a result of what they learned at the festival. Some of the changes included improving winter growing techniques, installing solar panels, purchasing an electric bike, recycling, buying local, and examining wells and leach fields.

CHILDHOOD OBESITY, HEALTH AND NUTRITION

All 4 Kids takes a multi-dimensional approach to childhood obesity targeting preschool children, their families, and their preschool center teachers. The program includes a 24-lesson classroom curriculum that incorporates learning activities, music and dance to teach preschool children about nutrition, physical activity and the importance of accepting children of different shapes and sizes. Outcomes for 2012 include statistically significant improvements in participants' abilities to perform 12 movement skills and an increased preference for healthy snacks.

In 2012, All 4 Kids received the USDA National Institute of Food and Agriculture (NIFA) Partnership Award for Mission Integration of Research, Education or Extension; USDA-NIFA National Jeanne M. Priester Award for a statewide/multistate; Western Extension Directors Association Award (WEDA) of Excellence - Multistate research; Family Health and Wellness Award, 3rd place National Award, National Extension Association of Family and Consumer Sciences; Family Health and Wellness Award, 2nd place Western Regional Award, National Extension Association of Family and Consumer Sciences; and Florence Hall Award, 3rd Place Western Regional Award, National Extension Association of Family and Consumer Sciences

Through AFRI funding, UNCE faculty collaborated on research in support of All 4 Kids [Resiliency in an Obesogenic Environment] and completed a reliability study for AFRI grant state partners (Oklahoma, Connecticut, New Jersey) and Nevada. The three partner states rated the Moodle version of the All 4 Kids program as being a successful way to allow others to implement the program at their sites. Comments received regarding both the Child and Adult Curricula were incorporated into the Moodle training as were suggestions for reorganization of the layout. Connecticut and New Jersey continued program implementation beyond the pilot study with Oklahoma seeking external funds to continue as well.

UNCE faculty participated in a Multi-State Obesity Project W-1005: An Integrated Approach To Prevention Of Obesity In High Risk Families. The objective of the multi-state USDA research-extension project is to research factors that help low-income families with children ages 4 to 10 maintain healthy weights rather than looking for what caused their overweight status.

A total of 461 youth in southern Nevada participated in the Anahuac program. Of those 461, 402 completed both the pre-test and post-test program evaluations. Ages of the participants ranged from 14 to 19. After the program, participants demonstrated improved health and nutrition knowledge. Following the program, participants were significantly more likely to identify plants that were domesticated by Meso-American people. Additionally students were more likely to respond correctly to 9 of the 11 health and nutritional questions which included questions to measure student's knowledge of portion size, recommended dietary intake and physical activity guidelines.

Two National eXtension electronic publications by UNCE faculty were reviewed and accepted. These include: 1) Paying the Price for Caffeine: A Look at Energy Drinks, National eXtension Electronic Publications [<http://www.extension.org/pages/62629/paying-the-price-for-caffeine:-a-look-at-energy-drinks>] and 2) Growth, Obesity and Energy Balance, Nevada Registry for Child Care Training via National eXtension.org [<http://www.nevadaregistry.org/blog/professional-development/obesity-training.html>].

Community Gardens Build Healthy Kids utilizes school gardening as a health education tool. Both the Centers for Disease Control and Prevention and the Nevada State Health Division Fitness and Wellness Council have identified the presence of school and community gardens as an indicator of a community's health. The School Gardens Coordinator made direct contact with personnel from 19 Washoe County Schools: 12 elementary, 4 middle and 3 high schools to assist in garden creation, maintenance or enhancement. A total of 9,546 students and 402 teachers were impacted by garden learning experiences.

UNCE faculty taught Breast Feeding Basics to 19 University of Nevada School of Medicine (UNSOM) pediatric and medical students. Monthly, pediatric residents received 90 minutes of individualized professional development on this topic. In 2012, 16 OB/GYN residents received the training, currently the only outreach program for providing lactation information for these physicians. Seventeen of the 24 residents responded to follow-up evaluations (5-2nd year, 6-3rd year and 6 with no information). When queried about how many lactating women they had worked with, answers ranged from two to 'too many to count.' All but one would recommend the program to other health professionals. When medical residents asked how much the training contributed to their current breast feeding proficiency, responses ranged from 7% of the residents checking 76% to 100%, 41% each checking either 51% to 75% or 11% to 25%, and 12% checking 26% to 50%. Most topics covered were considered helpful although more than half wanted more information about helping lactating women who need to return to work or school. UNCE faculty also taught this program to 135 nursing students attending the College of Southern Nevada and Kaplan University.

Mom's Special Gift (MSG) received a total of 880 referrals (71% from UNSOM) with 220 women being unreachable (phone disconnected, wrong numbers, etc). MSG's staff educated 567 women over the phone and followed them on a monthly basis until breastfeeding stopped or up to six months. MSG staff conducted a total of 28 in-person individual sessions; 14 participants received prenatal breastfeeding education. In addition to telephone and in-person educational sessions, MSG's two lactation educators (1 bilingual) conducted breastfeeding classes at two local WIC sites; 99 classes comprised of 723 women. MSG staff conducted an additional 31 community classes and 11 school classes. Over 8,400 MSG fact sheets were requested by 6 community agencies to be distributed to pregnant and breast feeding women. An unknown amount is printed by partners who have requested a disk so they can reproduce the series themselves.

Chefs for Kids is a nutrition education program for primary-grade children in high needs elementary schools, supported in part by the Adventures with Chefs for Kids of Las Vegas. The first grade curriculum introduces the concept of food groups to children with a six-part program. A variety of teaching methods are used to ensure children of all learning abilities will be able to achieve. In 2012, first grade students (n=1,988) achieved a mean score of 86.6% for correct food categorization determined during the final lesson.

Chefs for Kids' Intensive, second grade curriculum (Food for Health) is a weekly program that focuses on the origin, use and need for food as well as on physical activity practices that engender lifelong, healthy lifestyles in children to lower their risks for developing obesity and chronic diseases. Following the program, a total of 1,131 second grade students were assessed for hand washing skills. Of those tested, 91% responded with no errors. A total of 1,275 second grad students were assessed for their

knowledge of activities that would be considered part of an active lifestyle (activities that get the body moving). Over ninety percent (93.5%) of students were able to list two activities that would be considered part of an active lifestyle. Another 5.5% could list one activity that would get them moving. Only 1% of students could not list any activity that would be considered part of an active lifestyle. Average food categorization score was 88.4%. Only six children could not categorize any foods correctly. The snack behavior assessment yielded 1,090 paired tests. Results showed that, before the program, 328 students (30%) chose three snacks rated as less healthful; following the intervention, only 95 students (9%) chose three snacks rated as less healthful. Second grade students improved their average score from 22.1 on the pre-test to 26.6 on the post-test indicating that snack choices improved significantly by one healthy snack.

Nevada continues to have a high birth rate (live births/1,000 population) in teens 15 to 19 years old (13.9 statewide versus 12.0 nationally). Working in high schools and community agency programs, UNCE's Nurturing Partners program facilitates changes in attitude, knowledge, and practice of adolescents and young adults regarding general nutrition and health, specific issues of pregnancy and breastfeeding, and parenting guidance. In 2012, a total of 1,309 students (67% female) were taught in 172 sessions at 4 school and 6 community sites. Weekly classes were presented at 4 high schools to a total of 1,075 students. Nutrition lab (cooking) classes were offered quarterly. Significant increases in nutrition knowledge (pre-test scores 20.5 and post-test scores 29.4) were noted at 3 schools and one community site.

Eat Smart Live Strong combines nutrition and horticulture education to help seniors enhance the flavor of the commodity foods they receive and thus, increasing the chance that the commodity foods will be consumed and will improve the nutritional health of these seniors. While a total of 125 seniors attended some or all of the classes, 107 seniors completed the pre-test and 85 seniors completed both the pre/post-test evaluations. The racial breakdown of the 107 seniors included 52% African American, 36% Caucasian (includes Hispanics), 7% Native American (including Hawaiian), and 5% Asian. The program achieved a highly significant improvement in the number of people who used the nutrition label on foods. Fewer people reported running out of food at the end of the month. Participants showed a statistically significant improvement in their self-reported happiness (a recognized indicator of overall well-being).

Healthy Eating on a Budget provides direct nutrition and food resource management education to recipients of Nevada Department of Welfare and Social Services (DWSS) benefits at DWSS locations. Nutrition and benefit resource management education is also provided to DWSS recipients and those seeking assistance through a UNCE website link on the DWSS website. In 2012 Healthy Eating on a Budget provided education through direct education classes at DWSS locations and through the DWSS website via the UNCE SNAP-ED website link. Initial results from an internet access survey (n=35) showed that 76% have regular access to a computer, 66% have access to the internet through a smart phone, though only 24% reported having a data plan. Seventy-six percent reported having internet social media accounts (i.e., Facebook), and 83% requested to receive additional nutrition information following classes.

Calcium, It's Not Just Milk partners with middle school health teachers to teach a week-long curriculum to students. The goal is to increase awareness, knowledge, and skills among the target audience (11-14 year old middle school students) related to increasing consumption of calcium-rich foods. This year, the program was taught both spring and fall semesters 2,297 students at 9 middle schools in which the majority of the students reached through this project were from underserved groups, with an average of 79% of students receiving free or reduced-price school meals. With all schools combined, results of the pre and post-test evaluation showed significant improvements on all questions from pre- to post-test the core curricular concepts related to: (a) their knowledge and understanding of calcium and growth, bone health, distribution of calcium in the body, importance of physical activity, and disease prevention, b) their knowledge of the calcium intake recommendation for their age group; c) their ability to identify calcium-rich foods; and d) their ability to interpret food labels to identify calcium-rich foods. One month prior to the classroom-based Calcium, It's Not Just Milk program and then one month following the completion of the classroom-based program, a validated calcium food frequency evaluation instrument was implemented with 441 middle school students. Results showed that 57 students (13%) already consumed at least the recommended 1,300 mg of calcium at pre-test and post-test, while 333 students

(76%) who did not consume at least 1,300 mg at pre-test also did not consume at least 1,300 mg at post-test. Thirty-four students (8%) improved calcium consumption from below 1,300 mg at pre-test to above 1,300 mg at post-test. Though the program showed significant improvement in knowledge and skills, targeting additional ways in which to change behavior is necessary.

Food for Health and Soul and Cocinando Delicioso Y Saludable programs address chronic disease incidence in the African American and Latino/Hispanic communities. The program uses the experiential teaching method using a variety of teaching techniques to teach families how to modify recipes for better health by decreasing sugar, fat and sodium, while increasing fiber. A series of 6 classes were taught by paraprofessionals in groups. In 2012, classes were conducted at 36 community locations including churches, libraries, public housing complexes, childcare centers, schools, and recreation and community centers. Pre-assessment data were collected from 450, post-assessment data was collected from 311 participants, and post-assessment data was collected from 65 mailed responses. Results showed that participants reported making healthier choices after the conclusion of the program, and continued to make healthy choices three months after the workshop ended. Data from both programs showed an overall trend toward positive behavior changes regarding fat and fiber and sodium intake among participants. The items relating to fat and fiber intake experienced a progressive change from unhealthy tendencies toward healthier choices and behaviors from the pre to post-assessment. The same can be said for the behaviors of participants of the post-assessments. Furthermore, the items relating to salt and sodium intake also displayed an increase in positive behaviors from the pre to post-assessments, and continued to maintain healthier choices three months after completing the program.

UNCE faculty participated in the multi-state USDA research extension project, NC1169: EFNEP Related Research, Program Evaluation and Outreach team (which includes members from 22 states). The group continued to pursue the development of a simpler, more accurate and cost-effective evaluation to measure dietary behavior change among EFNEP clientele. Two objective groups led efforts to pilot a new web-based automated 24 hour dietary recall instrument (ASA24) with EFNEP participants.

The federally-funded Expanded Food and Nutrition Education Program (EFNEP) provides education to limited resource families in three key areas: food resource management, nutrition, and food safety practices. EFNEP classes were taught individually as well as in groups (eight 90 minute classes per series) at 30 schools and 15 community locations in low income areas in southern Nevada. Nevada's EFNEP program reached 796 participants with 3,192 family members affected indirectly by the programming efforts. The race/ethnic breakdown of the participants was 64% Hispanic, 32% White, 7% Black, 1% American Indian, and 2% Asian or Pacific Islander. Eighty-seven percent (n=796) of these participants indicated that they had incomes at or below the poverty level. Following the program approximately 95% of participants reported more closely following My Pyramid recommendations in their consumption of grains, fruits, vegetables, milk and meat and beans. Regarding nutrition (i.e., plans meals, makes healthy food choices, prepares foods without salt, reads nutrition labels, and has children eat breakfast), the number of participants demonstrated acceptable practices increased by 56%. Regarding food resource management (i.e. plans meals, compares prices, does not run out of food and uses grocery lists), demonstration of acceptable practices increased by 56%. Regarding food safety practices (i.e., thawing and storing foods properly) demonstration of acceptable practices increased by 48%.

Little Books and Little Cooks is a 7-week parenting education program for preschool-age children (3 - 5 years old) and their parents designed to promote healthy eating, family literacy, parent-child interaction and child's school readiness skills. During the program, children and parents learn about healthy eating and nutrition, gain positive parent-child interaction skills and practice school readiness skills (cooking skills) by reading children's books about healthy eating/nutrition and cooking/eating every week. Each weekly session features a new book about healthy eating and a new recipe. Following the program, children showed an improvement in cooking skills, were more likely to eat fruits or vegetables if served, and showed less picky eating during mealtimes. The program achieved significant improvement in positive parent-child interactions during cooking. After participating in the program, parents were significantly more likely to report that they cooked more often for their families and cooked more often with their children. Parents were significantly more likely to report that they consumed more fruits and vegetables after completing the program than before completing the program. Parents were more likely to

be more authoritative when feeding their children (encouraging, setting limits, etc.) after attending the program than before attending the program. All parents and children understood how to match each food with the food group to which it belongs and mastered proper hand washing.

Veggies for Kids provided 8 weeks of in-school lessons and a summer institute, teaching youth how to grow vegetables while increasing rural senior access to fresh vegetables. Youth participants achieved significant knowledge gains. The majority of students were able to correctly name five food groups and six different vegetables. When students were asked about what they drank the day before, the most common drinks mentioned from pre-test to post-test were water (80% to 95%), milk (41% to 58%), juices (27% to 14%), sweetened beverages (7% to 0), and sports drinks (7% to 0). The most commonly reported after-school activities noted by students from pre-testing to post-testing ranged from Playing Outside (62%- no change at post-testing), Sports (9% to 22%), Running/Walking/Biking (22% to 46%), Chores (27% to 21%), and Video Games/Computer/TV (8% to 1%).

Participation in the rural Veggies for Seniors program increased by 130%, from 27 in 2011 to 62 in 2012, with 95% of the vegetables and fruits grown locally. Seniors (90%) indicated that the program improved their overall financial condition by dramatically increasing their access to local garden vegetables. The majority of participants (70%) reported that the program had improved their eating habits.

Through Smart Choices teacher in-service trainings were provided to 149 teachers and school staff resulting in 75 classroom nutrition education lessons through 59 teachers and reaching 1,220 students directly. Indirect contacts totaled 7,023 through Smart Choices newsletter distribution.

Grow Yourself Healthy met or exceeded all objectives with the exception of identifying MyPlate food groups. The goal was to reach 85% on post-test scores; participants scored 83.3%.

Nevada Radon Education program received 4,468 requests for test kits with nearly half (2,006) used in home testing. At least 147 homes were mitigated, 35 more than 2011. Approximately 286 homes were known to have been tested for real estate transactions, an increase of 149 homes from 2011. The program website recorded 101,225 hits, an increase of 15,230 from 2011; 29,609 visitors, an increase of 8,832 over 2011; 38,080 downloaded pages, an increase of 3,059 over 2011; and 31,010 pages viewed, an increase of 2,432 over 2011. In 2012, 102 test kits were requested from a website coupon; out of those, 54 have been used, resulting in 53% usage.

FOOD SAFETY

UNCE faculty identified opportunities to establish a program to improve food safety education in the state of Nevada. This program is being developed specifically to target Nevada's increasing number of small farm operators, value-added food industry, and hydroponically grown fruits and vegetable industry. UNCE faculty partnered with Nevada Department of Agriculture and USDA inspectors to collaboratively develop an Extension program to improve small farmers' Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs) through education, planning, and voluntary on-site audits.

Quality assurance training provided adult and youth livestock producers with the knowledge and skills to improve ethical treatment and handling of livestock while ensuring higher quality market meat products.

Food Safety Education for Child and Adult Care Providers provided online educational food safety modules and onsite food safety workshops addressing educational needs of small family caregiver situations to large institutional or facilities with several caregivers. Caregivers increased their confidence through increased knowledge and improved safe food handling to control for and reduce food safety risks from purchase to consumption points in the food system.

HUMAN AND FAMILY DEVELOPMENT

Cumulative 5-year evidence of Bootstraps (a recognized National Registry of Evidence-based Program and Practice) impacts includes statistically significant improvements in participants' knowledge

gain and behavior change on short, intermediate, and long-term measures. Since the intent of the program is to create change among young adults (18-24) not in school and not working, the program dictates a small participation rate to provide the intensity of programming needed to create change. The 72 participants who completed the program were significantly more likely to report having greater efficacy in completing tasks related to job safety. Participants showed a significant improvement in: life skill scores knowing at least two ways to save money; understanding how to get the job they want; prepare for work properly, complete their jobs properly, have a positive attitude and clean appearance, and demonstrate better team work skills as rated by their job coaches; and good problem solving and decision-making abilities, better communication skills, leadership skills, or health habits. Participant interview data revealed important changes from the beginning to the end of the program. Specifically, participants expressed changes in acceptance of responsibility for their current situation and future direction, a recognition and willingness to use community resources for help, and ability to take pride in their work.

Project MAGIC (Making a Group and Individual Commitment), for first time juvenile offenders, is recognized as a National Registry of Evidence-based Program and Practice. In 2012, a total of 180 youth of 84 parents participated in the program and completed both the pre and post-survey. Cumulative impacts of this evidence-based program are available at: <http://nrepp.samhsa.gov/ViewIntervention.aspx?id=193>.

Keeping Kids Safe: Recognizing, Reporting and Responding to Child Maltreatment educates trainers, youth workers, volunteers, and child caregivers about recognition, reporting suspicions, and responding to disclosures of child abuse can help decrease the incidence of maltreatment, reduce the impact of abuse on children and families, and provide families with support to do a better job of parenting their children. Over 698 youth workers, program directors and child caregivers accessed the program self-study guide (Kids Deserve a Safe Place to Grow). Previous analyses of evaluation data indicate a statistically significant increase in knowledge regarding: how to recognize child maltreatment; how to respond to disclosures of child maltreatment; how to report suspicions of child maltreatment; UNCE policies related to child maltreatment; and Nevada laws/policies related to child wellbeing.

Growing Healthy, Happy Preschoolers program recognizes that quality care and education are vital for healthy development of young children. And that typically, new caregivers have little early childhood education or training. In 2012, 212 child caregivers who participated in the training increased their knowledge about how to effectively support and nurture positive growth and development of preschoolers as well as recognize developmental concerns and make appropriate referrals.

UNCE faculty served on the 3-member national leadership committee for the eXtension Alliance for Better Child Care Community of Practice, gathering Extension classroom teaching materials from across the country and posting them to the web site to provide classroom activities data base (<http://www.extension.org/child%20care>). In 2012, on average the webpage received 13,710 page views per month.

The Child Safety/ Welfare Parenting program helped parents acquire and internalize parenting and problem-solving skills necessary to build a healthy family, and further prevent child abuse and neglect. In 2012, of the 52 parents who completed the post-test questionnaire, 90% of parents thought the program was very helpful; 75% of the parents answered correctly on more than 5 skill questions; 66% of the parents' answers were correct (8 true/false questions); and 73% of the parents attended more than 3 classes (44% completed the program).

Fun to Play program teaches parents to foster cognitive, physical, social and emotional well-being of children. After completing the Fun to Play program, parents' understanding about pre-k standards increased significantly, from 4.79 point to 6.22 (N=108, scale ranging from 0 to 10).

Family Storyteller program effected positive changes in parents' reading to their children and doing literacy/ language activities with their children. Parents showed an increase in the average frequency of 8 family reading activities. After completing the program, parents or another family member tended to spend more time reading to children in a single day, were likely to have more books in their home for child's use, and were likely to spend more time reading on their own than before. Parents were significantly more likely to report that they felt confident about reading to children at home and doing language and literacy activities with their children at home after attending the program than before attending the program. After completing the program, 93% of parents reported they were very likely to continue using what they learned

Storyteller Program to others. Among 6 features of the program, 31 % of parents liked all 6 features of the program, 23 % of parents liked to participate with their own children and more than 10% of parents liked learning new skills and doing language and literacy activities with their own children.

The Community Emergency Response Team (CERT) program UNCE faculty developed and taught in a Churchill County high school was adopted by the Churchill County High School Health Occupations Students of America (HOSA). Traditionally CERT members are local adults who are trained under approved Department of Homeland Security (DHS) curriculum to assist first responders in a disaster. However, this program demonstrated that youth also have important roles they can play to help ensure that disaster planning is optimized and information resources are available to communities.

Alliance of Latinas in Teen Action and Solidarity (ALITAS) held 18 sessions during the school year with middle school-aged girls to teach them the importance of education and preparing for college. The Parent Project (10 sessions for 12 parents mandated to attend by the high school) teaches parents how to reduce destructive behavior in their teens. Making Education the Answer (META) keeps Latino students involved in activities at school and guides them in helping other students. The 2012 evaluation of these programs indicate that 69% of program participants graduated from high school; 14% attended university; 57% attended community college; and 21% planned to go to college. META club members went to middle schools to talk to eighth graders about the value of school to younger students' futures. They helped in after school programs at elementary schools. ALITAS, META and ESL students took part in the Hispanic Youth Leadership Summit at UNR in 2012. A total of 938 Latino youth participated in these programs.

In 2012, 94 participants completed the 16-week Seniors CAN program, reflecting 3,008 teaching contact hours was taught at four sites in Clark County. Each student received an average of 32 hours of instruction over a four-month period. Comparisons between pre-and post-test scores for participants who completed the entire 16-week program demonstrated that the program significantly decreased loneliness and stress. Mastery levels increased significantly.

COMMUNITY AND ECONOMIC DEVELOPMENT

Stronger Economies Together (SET) helps people in rural communities work together as a regional team to develop and implement an economic development plan that builds on current and emerging economic strengths of their region. In 2012, the first Nevada SET project was undertaken in the nine western Nevada counties comprising the Western Nevada Development District (WNDD). The Governor's Office of Economic Development (GOED) funded this planning effort with a \$50,000 grant. The primary partners included GOED, WNDD, UNCE and USDA Rural Development. A vision for economic development in the region was crafted along with five economic sector and four capacity building goals. A regional economic development blueprint was developed. This blueprint will eventually evolve into a comprehensive economic development strategy for the region. Other significant outcomes included the networks and relationships built within the region, as well as the keen appreciation for a regional approach to economic development. Attendance and sustained participation was excellent, varying from 25 to 70 people per session with more than 200 total individuals attending workshops held across 33,781 square miles of the Western Nevada Development District region. Each of the 9 counties hosted at least one training workshop. On average workshops lasted 4 to 10 hours. It is estimated that SET regional team received more than 50 hours of economic development training over the nine month program or approximately 2,500 of total classroom hours. For the five targeted industries and four capacity building platforms, strategy and action workgroups have been assembled that meet monthly.

The Business Opportunity and Workforce Development (BOWD) program is implemented under the Strategic alliance for emerging Small Businesses (SafeSB) that includes a working partnership between public, private and nonprofit entities. The primary goal of the BOWD program is to introduce small businesses in Clark County to local government procurement opportunities using a 12-session 3-hour class curriculum. In addition, each participating business is required to meet three times with instructors individually outside of class to receive specialized business counseling. As a result of this program, 123 businesses (100%) have directly contacted, by email and/or phone, county departments that may require

their products or services; 110 businesses (89%) prepared and distributed to county departments a one-page statement of qualifications; 47 businesses (38%) that completed the BOWD program have submitted a formal or non formal bid to Clark County; and 31 businesses (68%) that submitted a bid to Clark County received a contract. Over \$4.2 million has been awarded by Clark County to recent graduates of the BOWD program. This is an average of approximately \$135,483 per awarded contract. These contracts have also created approximately 75 new jobs because of business expansion to meet newly created demand. Using a multiplier of 1.8, it is estimated that this program during 2012 had a total economic impact on Clark County of over \$7.5 million and supported 135 total jobs.

Area Sector Analysis Process (ASAP) helps communities focus economic development efforts to diversify local economies. ASAP results helped both Bullhead City, Arizona and Laughlin, Nevada in the successful location of industries to their industrial park and to develop economic diversification plans to address economic impacts from the shutdown of the Mohave Power Plant. In 2012, ASAP was applied to Lander County, Nevada to derive economic targets for the county's efforts to target industries and investigate potential economic targets for mining operations on public lands that have closed.

Leadership Douglas County(LDC) consists of 11 days, 1 day/month, of leadership skill building, networking, focusing on critical community issues and learning about many important aspects of the county. The program creates community leaders from all walks of life by focusing on our community's leadership needs, history, values, members, strengths, and issues. One hundred twenty community leaders, business and organization representatives gave presentations throughout the year. Sixteen participants were enrolled in the 2012 class. LDC met 100% of the candidate's expectations (n=16) and exceeded expectations by a mean of 6.7 on a scale of 1 to 7. Sense of commitment to the community was increased in the minds of 100% of the class. About three quarters of the candidates (73%) increased their community leadership activities over the course of the eleven-month program. One hundred percent of the class felt they have a better sense of applying their background, skills and passions to leadership in Douglas County issues, 100% to leadership in their professional life, and 93% to leadership in their personal life. The majority of the class foresaw their leadership activity changing in the future as a result of LDC.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	23.5	0.0	0.0	0.0
Actual	36.8	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External University Panel
- External Non-University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Expert Peer Review

2. Brief Explanation

As outlined in the plan of work, UNCE's annual merit review process comprises multiple steps. Each year UNCE faculty are required to prepare a Role Statement detailing their teaching, research, and service activities for the coming calendar year. Extension faculty review their individual Role Statements with their Area Director and/or Department Chair who ensures the quality and relevance of planned programming efforts effectively address formally identified program goals. Both the UNCE Area Director and the Dean/Director must review and approve the plan.

Annually UNCE faculty evaluate their peers' teaching, research and service activities to assess overall performance and program quality. Faculty consider the results of published needs assessments, programs developed in response, and the substance of documented outcomes and impacts in numerically rating peer performance and providing narrative feedback. Area Directors also conduct an annual review of faculty performance and provide numerical ratings and narrative feedback. Area Directors then meet individually with faculty to discuss the review findings. The UNCE Dean/Director also reviews and signs off on the evaluation documents.

Upon request, faculty representing land grant institutions in other states provide formal reviews of UNCE faculty applications for promotion and tenure. These reviews are included in the application packet and considered by the promotion and tenure committees at the area, college, and university levels.

Programs outcomes and impacts are reviewed by a Non-University External Panel (State Extension Advisory Committee). This review provides an additional source of needs assessment data from key representative community and industry stakeholders.

Extension publications undergo a blind peer review process involving internal and external university faculty in order to improve and ensure quality publications. Additionally, several UNCE faculty contribute specialized program content to eXtension Communities of Practice (CoP). Subsequently their program content is reviewed as part of the eXtension CoP selection process.

Finally, some Cooperative Extension efforts are a part of the Multi-state Review Committee (MRC) process and are documented, reviewed and approved by the sponsoring regional association. MRCs are responsible for the review, evaluation, and recommendation of all aspects of western multistate programs which may involve research, academic programs, extension, and/or international programs.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals
- Survey of selected individuals from the general public

Brief explanation.

Use of local newspapers and radio through public service announcements encourage stakeholders to participate in public meetings and listening sessions. In 2012, UNCE also used paid advertisements in Edible Tahoe-Reno quarterly to specifically target the increasing number of small and urban farm operators, CSAs, and their clientele. Faculty target traditional and non-traditional stakeholders through email and postal mail invitations to participate in public meetings, focus groups, and individual interviews. Poster announcements are placed in public places frequented by traditional and non-traditional audiences.

Formal needs assessments serve as another means for contacting stakeholders. Faculty continually assesses stakeholders' perceived program priorities in order to efficiently allocate resources and to identify and develop partnerships for program implementation and delivery.

Primary data collection methods include postal mail and internet surveys, focus groups, and individual interviews. Results of Cooperative Extension community needs assessments are published and made available to other university faculty and the broader public via the UNCE website (www.unce.unr.edu/publications/assessments).

Frequently faculty develop partnerships with a variety of stakeholder groups as part of program planning, development and implementation. These community and organizational partnerships provide an ongoing venue for receiving stakeholder input and feedback for the life of a program.

Additionally, a 19-member UNCE Advisory Committee meets biannually to provide broad guidance on programs and policies. Committee members represent a diverse cross-section of stakeholders from both rural and urban communities, including minorities. Two of the Advisory Committee members also serve as representatives on the Council of Agricultural Research, Extension, and Teaching (CARET) and regularly communicate with Nevada's Congressional delegation as well as USDA-NIFA administrators.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

UNCE faculty use a variety of methods to identify individuals/groups of stakeholders and to collect their input, including collecting primary data through surveys and interviews and secondary data from sources such as the US Census and Bureau of Economic Analysis. UNCE also utilizes a diverse collection of community advisory and stakeholder groups as an additional means of identifying stakeholders and to collect program input. Such groups include, for example, American Indian tribal governments and leaders, 4-H Leader Councils, 4-H Teen Ambassadors, 4-H Teen Councils, Boys and Girls Club of America Advisory Boards, Nevada Public School Districts, National Association of Counties-Nevada, Northern Nevada Business Connections, Specialty Crop Institute, Small Business Development Centers, Healthy Community Coalitions, Farm Bureau, Resource Conservation Districts, Irrigation Districts, Nevada Specialty Crop Institute, FFA Advisors, County

Offices of Juvenile Probation, and United Way. Input is also sought from federal and state agency personnel, such as USDA Rural Development, Farm Service Agency, Natural Resource Conservation Service, Bureau of Land Management, Nevada Department of Agriculture, and Governor's Office for Economic Development. As the outreach unit of Nevada's land grant university (UNR), UNCE develops program partnerships with all Nevada System of Higher Education (NSHE) institutions and seeks programmatic input from NSHE faculty and students. Special interest groups, such as Nevada Grown, Walker River Stewardship Council, and Great Basin Food Advisory Council, provide input as well.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Survey of the general public
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Survey of selected individuals from the general public

Brief explanation.

UNCE values the input of its past, current and potential program stakeholders. Face-to-face meetings and surveys are effective methods for identifying program priorities and implementation strategies. Meeting with both traditional and non-traditional stakeholders, in groups and individually, provides a vehicle for collecting input while also strengthening relationships and program partnerships.

3. A statement of how the input will be considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities

Brief explanation.

UNCE uses stakeholder input to identify emerging issues and to set priorities for Extension teaching and research programs. This includes strategic planning, development of Extension Specialists positions, hiring, and periodic redirection of Extension teaching and research programs. Since teaching and research occur in communities, community stakeholder input is essential to the UNCE mission and effective development, evaluation, and revision of action plans. Given that Nevada is a predominantly urban population, broad stakeholder input is critical to satisfying the state's six legislatively mandated program areas [revised 1999] which redirects UNCE from a primarily rural focus on agriculture and home economics to a statewide focus on a broad spectrum of urban and rural issues (Assembly Bill 324: Section 1. NRS 549.010 is hereby amended to read as follows: To provide for continued [extension work in agriculture, home economics and rural welfare.] educational, research, outreach and service programs pertaining to agriculture, community development, health and nutrition, horticulture, personal and family development, and natural resources in the rural and urban communities). This legislative change was instituted to expand UNCE's educational programming into Nevada's fast-growing urban communities and has been the foundation of UNCE's expanded urban programming since 1999. As an independent unit, UNCE serve the needs of and develop partnerships with all of the NSHE campus units. UNCE faculty also collaborate on Nevada Agriculture Experiment Station research projects as determined by identified program needs and available funding.

Brief Explanation of what you learned from your Stakeholders

In order to effectively target limited budget resources and design programs that address stakeholder needs, UNCE faculty continually conduct assessments. These assessments include collection and analysis of both primary and secondary data. As Nevada struggles to recover from the recession, much of the input from stakeholders is focused on increasing food security. That is, the number of small acreage agricultural producers has increased considerably since 2008, which has created a new demand for farm/ranch on-site food safety programs. With the competing demands for scarce water resources in Nevada, traditional (large-scale) producers have developed an interest in producing low-water alternative crops, some of which may be used for the biofuel industry. Rural and urban populations alike in Nevada continue to struggle with: a) obesity accompanied by poor health and nutrition issues; b) successful youth to adult transition; and c) joblessness and underemployment. UNCE faculty are actively pursuing these larger issues while also addressing related issues, such as positive youth development/parenting skills and regional economic development strategies.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1143854	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	1143855	0	0	0
Actual Matching	1143855	0	0	0
Actual All Other	1044571	0	0	0
Total Actual Expended	3332281	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	0	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Global Food Security and Hunger
2	Climate Change and Natural Resources
3	Sustainable Energy
4	Childhood Obesity, Health, and Nutrition
5	Food Safety
6	Human & Family Development
7	Community and Economic Development
8	Health & Nutrition (Healthy Lifestyle & Food Choices)

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	10%			
121	Management of Range Resources	15%			
205	Plant Management Systems	15%			
211	Insects, Mites, and Other Arthropods Affecting Plants	5%			
216	Integrated Pest Management Systems	15%			
307	Animal Management Systems	5%			
601	Economics of Agricultural Production and Farm Management	5%			
602	Business Management, Finance, and Taxation	10%			
604	Marketing and Distribution Practices	10%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	5%			
806	Youth Development	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	10.0	0.0	0.0	0.0
Actual Paid Professional	9.4	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
271433	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
271433	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
247873	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct applied research on Nevada rangelands involving range ecology concepts and livestock grazing systems.
 - Publish studies, develop curricula and teach workshops related to plant and livestock production.
 - Educate local, state, and regional stakeholders concerning progress in producing livestock and plants that are economically viable and environmentally friendly.
 - Establish herbicide demonstration/research plots to evaluate the efficacy of these products under local conditions.
 - Expand use of Integrated Pest Management (IPM).
 - Coordinate Nevada IPM efforts with other western states.
 - Educate Nevada land managers, producers and general public regarding invasive weed identification and control.
 - Strengthen the skills small acreage producers.
 - Utilize multiple demonstrations/applied research plots to explore high value specialty crops and manage weeds in agronomic crops with results reported at field days, workshops, or professional annual meetings.
 - Develop applications for the research on plant production to directly benefit producers.
 - Provide risk management strategies to agricultural producers.
 - Provide teaching and research outreach to agriculture businesses to provide in-depth information on small business management, farm profitability, and market development.

2. Brief description of the target audience

The target audiences for these programs include beginning and existing large scale crop and livestock (primarily beef/dairy/sheep) producers and small acreage operators. USDA agencies and other government entities that conduct work in this area are an audience and frequently a program partner.

3. How was eXtension used?

UNCE faculty collaborating with other land grant university faculty launched the Rangeland Stewardship and Health Community of Practice for the eXtension project in 2012 (<http://www.extension.org/rangelands>).

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	27516	0	2930	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	26	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of personal contacts through all means by Master Gardener volunteers with those requesting information or assistance.
 Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Number of green industry employees certified in proper horticulture techniques.
 Not reporting on this Output for this Annual Report

Output #3

Output Measure

- Number of best management practices site evaluations performed on private property in the Lake Tahoe region to protect the water quality of Lake Tahoe.
 Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Number of individual land managers and private land/home owners reached directly with information about how to live more safely in high fire hazard environments.
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- "Living with Fire" website hits.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of target audiences who learn best management or risk management/skills for alternative or sustainable agriculture.
2	Total acres planted or tested for potential alternative crops in Nevada.
3	Number learning best management practices for 'living with fire' and wildfire hazards.
4	Number of participants who apply or use best management or risk management knowledge/skills learned for alternative or sustainable agriculture.
5	Number of producers or individuals or learn or apply changes in operations to increase niche farming opportunities for Nevada Producers.
6	Number of individuals who gain knowledge about improved human, plant, and animal management systems for sustainable agriculture.
7	Number of individuals who implement improved human, plant, and animal management systems for sustainable agriculture.

Outcome #1

1. Outcome Measures

Number of target audiences who learn best management or risk management/skills for alternative or sustainable agriculture.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Total acres planted or tested for potential alternative crops in Nevada.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Number learning best management practices for 'living with fire' and wildfire hazards.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Number of participants who apply or use best management or risk management knowledge/skills learned for alternative or sustainable agriculture.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Number of producers or individuals or learn or apply changes in operations to increase niche farming opportunities for Nevada Producers.

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Number of individuals who gain knowledge about improved human, plant, and animal management systems for sustainable agriculture.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nevada is experiencing increasing numbers of small scale producers who are either beginning or considering beginning a farm/ranch operation. Programs are needed that are specifically designed for recent and/or future small scale farmers. The goal is to help agricultural producers increase profits and improve quality of life. By learning financial management tools and entrepreneurial skills producers can improve the efficiency of their operations. On-the-ground training and support is necessary to help beginning and niche producers successfully grow and market their products.

What has been done

In its second year of funding, Nevada's USDA-NIFA grant funded Beginning Farmer and Rancher program (i.e., Herds & Harvests), offered 32 educational workshops that reached 212 beginning farmers and ranchers. Workshop topics included: So You Want to be a Vegetable Producer (66); Processing and Selling Locally Grown Meat (91); and Field Crops: Old versus New (56).

Results

More than 65% of workshop participants reported changing some aspect of their agricultural business based upon the knowledge gained in the Herds & Harvest workshops. Of the 21 items listed on the program evaluation, 20 items had statistically significant differences between pre- and post-test scores. Top rated knowledge and behavioral change indicators included: 1) How to decide if Tef is a potential alternative crop; 2) What production practices are required to sell meat to Whole Foods Markets; 3) How to use plants and farming practices for insect control; 4) What criteria/regulations are needed to sell meat to Whole Foods Markets; and 5) How to decide if cellulosic biomass is a potential alternative crop. More than 65% of workshop participants reported changing some aspect of their agricultural business based upon the knowledge gained in the Herds & Harvest workshops. As a result of this educational program one farmer changed

his fertilization program which nearly doubled grass/alfalfa mix yields. Seven southern Nevada small farm operators, through one-on-one mentoring created enterprise budgets for 9 different enterprises or whole farm operations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
205	Plant Management Systems
216	Integrated Pest Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #7

1. Outcome Measures

Number of individuals who implement improved human, plant, and animal management systems for sustainable agriculture.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Efficient production of field crops and forages is essential to maintaining the economic viability of Nevada's 2,950 agricultural operations. Each year, Nevada farmers and ranchers produce commodities that generate nearly \$5.13 million in income, with crop sales, which include nursery and greenhouse production, accounting for approximately 43% of this value (NASS, 2011). The livestock industry generates much of the remaining farm income and the majority of farmland in Nevada is devoted to supplying the forage and nutritional needs of cattle. A significant beef industry also requires effective stewardship of thousands of acres of public rangelands. Also, it is estimated that the number of small farms (less than 50 acres) in Nevada has increased steadily in

recent years; but until the 2012 census figures are published the data are inconclusive.

What has been done

UNCE faculty combine applied research and teaching to educate agricultural producers on specific subjects designed to improve their skill set and subsequently their success. Teaching methods include field demonstrations featuring research plots to strengthen cultural management practices while exploring water-conserving crops, managing rangelands, and identifying and controlling for weeds, pests, and disease. UNCE faculty also emphasize business and marketing planning to help producers increase profitability. Applied research results are published in Extension peer reviewed publications, including journal articles and Extension curricula, and reported at field days, workshops, and annual professional meetings.

Results

As a result of participating in the Nevada Targeted States Risk Management program in 2012, approximately 46% producers reported they had made notable changes to their operation which made them more economically viable and 62% felt their quality of life had improved. Thirty-eight percent felt that their family goals had become easier to achieve. The Community Value-Added Processing program in Lincoln County gained approval from a USDA health inspector for the sale of packaged greens such as lettuce, spinach and arugula. A processing facility for bagged greens has been approved and is being constructed on one of the farms. Six farms are developing a growers' cooperative to better market and distribute products. This group spent much of the year seeking grants for low interest loans for capital start of a food hub. Burned area revegetation, wildlife habitat restoration, and livestock grazing are the controversial rangeland issues of highest priority in northeast Nevada. Grassroots collaborative approaches to resolution of these issues are gaining momentum in many Nevada communities. For example, the Northeastern Nevada Stewardship Group continued to implement natural resource educational and collaborative stewardship activities, including landowners' forums to learn about sage-grouse habitat and convening local sage-grouse working groups. Two new collaborative resource stewardship teams formed in northeastern Nevada as a result of rancher participation in the Shoesole Resource Management Group, in addition to UNCE's Range Management School.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
121	Management of Range Resources
205	Plant Management Systems
216	Integrated Pest Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Grant funding available)

Brief Explanation

Nevada's slow economic recovery, in addition to the increasing demand for locally produced foods, inspired a steady increase in small farm/ranch operations, CSAs, and community and school gardens. Traditional large scale producers were challenged by severe drought conditions, the spread of invasive weeds, and the potential for sage-grouse to be listed as a threatened or endangered species.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

UNCE faculty evaluate the outcomes and impacts of programs largely through participant/stakeholder self evaluations. Evaluations of selected Global Food Security and Hunger programs in 2012 include the Nevada Beginning Farmer and Rancher, Risk Management Education, Grow Your Own, Great Ideas for Growers, and IPM and related weed management programs. Evaluations comprise self-administered questionnaires involving pre-tests and post-tests administered immediately following the educational intervention. Six month follow-up surveys and interviews are also used frequently.

Key Items of Evaluation

In its second year of funding, Nevada's Beginning Farmer and Rancher program (i.e., Herds & Harvests), offered 32 educational workshops that reached 212 beginning farmers and ranchers. Workshop topics included So You Want to be a Vegetable Producer (66); Processing and Selling Locally Grown Meat (91); and Field Crops: Old versus New (56). Of the 21 items listed on the program evaluation, 20 items demonstrated statistically significant differences between pre and post-test scores.

Between 2011 and 2012, agricultural producers increased their participation in Nevada Targeted States Risk Management programs by 46% (from 2,629 participants in 2011 to 3,859 in 2012). Program evaluations administered six months following each workshop indicate that 64% of all program participants had incorporated skills and information from workshops into their operations and 85% reported that program topics were critical in the current agricultural business environment. Nearly 100% of participants reported that they would attend a Risk Management workshop in the future. Approximately

46% producers reported that .

An 8-week Grow Your Own program was offered 3 times in 2012 via interactive video to 13 sites across the state, including Duck Valley Reservation. This translates to 48 hours of instruction to 1,953 people. A program website (www.growyourownnevada.com) was developed for 24-hour program access. The website was accessed by approximately 6,479 visitors in 2012. Participants reported an average of 58.3% to 129.4% knowledge gains based on their use of the website.

Based in Lincoln County, Great Ideas for Growers is offered statewide via interactive video. Lincoln County producers received four hoop house grant awards from the National Resource Conservation Service (NRCS) cost-share program showing continued growth and confidence in specialty crop production. Three participating farms expanded the size of their farm's niche production, with one farm building 8 new hoop houses. The managers of the farms indicated their decision to further diversify is based on the initial successes in production and sales of products resulting from the program's education. Seventeen landowners/managers out of the 110 in Lincoln County have continued their diversifying into new specialty crops. Eleven producers, who participated in education programs, continue to implement their knowledge growing vegetables in 27 hoop houses.

Nevada was awarded the requested Integrated Pest Management (IPM) grant funds totaling \$131,337 necessary to continue IPM programming in Nevada. IPM workshops (Weeds to Watch and Early Detection Rapid Response) were taught in 12 of 17 counties. The evaluation results indicated that of the 96 participants who responded, 80% felt the workshops were very useful to their work. The most important survey results indicate that over 80% of the respondents view pest management as an important part of their employment responsibilities and 85% provide advisement on pest management subjects to their clientele. In addition nearly 85% utilize self-knowledge to identify pests, which indicates a critical need in educational programs aimed at improving this level of self-knowledge.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change and Natural Resources

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	5%			
111	Conservation and Efficient Use of Water	10%			
112	Watershed Protection and Management	10%			
121	Management of Range Resources	10%			
122	Management and Control of Forest and Range Fires	10%			
123	Management and Sustainability of Forest Resources	5%			
131	Alternative Uses of Land	5%			
132	Weather and Climate	10%			
133	Pollution Prevention and Mitigation	10%			
141	Air Resource Protection and Management	5%			
205	Plant Management Systems	10%			
213	Weeds Affecting Plants	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	0.5	0.0	0.0	0.0
Actual Paid Professional	4.3	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
144231	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
144231	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
131712	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Educate and partner to enable the recovery of the sage grouse habitat to avoid its listing as a threatened or endangered species.
- Conduct applied research to determine management options that slow or stop the cycle of cheatgrass and fire on previously burned areas through range rehabilitation, seeding programs and nontraditional approaches to grazing management.
- Educate property owners about managing wildfire risk through fuels reduction strategies.
- Educate producers and agency personnel on the need for continued range evaluation, monitoring, and management improvements and the role of grazing management in sustainable resource management.
- Educate the public on responsible use and the value of multiple uses on rangelands.
- Illustrate the need for management and control of pinion-juniper forests to restore watershed, wildlife habitat and forage values on rangelands.
- Partner with and educate the general public, livestock producers and agency personnel on the identification and methods of control of the specific noxious and invasive species.
- Provide educational training and collaborative problem solving to facilitate rehabilitation of degraded watersheds, protect and manage watersheds, and conserve, manage and enhance efficient water use.

2. Brief description of the target audience

The target audience includes agricultural producers, mining industry representatives, environmentalists, green industry professionals, small acreage owners, general public, federal and state natural resource management agencies, and other resource managers.

3. How was eXtension used?

UNCE faculty collaborating with other land grant university faculty launched the Rangeland Stewardship and Health Community of Practice for the eXtension project in 2012 (<http://www.extension.org/rangelands>).

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	6480	0	248	0

2. Number of Patent Applications Submitted (Standard Research Output)
Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	6	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals who gain knowledge about improved human, plant, and animal management systems that relate to climate change and/or natural resource use.
2	Number of individuals applying or using new knowledge to improve human, plant, and animal management systems as related to climate change and/or natural resource use.

Outcome #1

1. Outcome Measures

Number of individuals who gain knowledge about improved human, plant, and animal management systems that relate to climate change and/or natural resource use.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4932

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In 2012, Nevada experienced severe drought, significant wildfire damage to agricultural and range lands during the wildfire season and damage from wildfires at the urban-rural interface outside of the typical wildfire season. These natural disasters occurred during a time of sluggish economic growth, further slowing Nevada's recovery.

What has been done

The Great Basin Fire Science Delivery Program (GBFSDP), in existence for about two years, is one of 14 consortia across the country designed to increase the dissemination and application of wildfire science information on the ground. Project information delivered by the GBFSDP is distributed via multiple media, including a list-serve (newsletter), website, webinars and synthetic publications. UNCE's Living with Fire (LWF) program continued to expand its target audience through increased distribution of educational materials and teaching activities. This nationally acclaimed program is designed to help land owners/managers take steps to avoid and prevent catastrophic wildfire at the urban-rural interface.

Results

In 2012, the GBFSDP team hosted six webinars. All webinars (current and previous years) were accessed by 1,784 viewers, approximately 70% of whom were unique viewers. The website had a total of 4,608 viewers, with 53% being new visitors and 47% returnees. The high return rate strongly indicates the project is meeting the research based knowledge needs of many resource specialists who work with fire, fuels and vegetation management issues. In 2012, LWF involved all 17 Nevada counties, increased its number of partnering organizations by 24%, and increased the number of educational events statewide by 19%, and distributed 17,800 copies of 19 different LWF publications. Approximately 13,900 online visitors viewed 36 different LWF publications and educational tools (including five Spanish language publications), four states requested for program material parent files in order to customize materials, and permission granted to use LWF

content was granted to seven out-of-state entities. The LWF Nevada and Lake Tahoe websites were completely overhauled in 2012 and had approximately 10,000 visits.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
121	Management of Range Resources
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
132	Weather and Climate
133	Pollution Prevention and Mitigation
141	Air Resource Protection and Management
205	Plant Management Systems
213	Weeds Affecting Plants

Outcome #2

1. Outcome Measures

Number of individuals applying or using new knowledge to improve human, plant, and animal management systems as related to climate change and/or natural resource use.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	247

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Climate change research predicts a decrease in reliable precipitation patterns for much of the US. These predictions will require a proactive natural resource management approach in a state that receives less than 9 inches of precipitation annually. Diverse, competing demands for scarce water resources are likely to increase. Efficient water use and the protection of water quality are essential to the sustainability of Nevada's rangeland health, wildlife habitat, agricultural industry, and continued economic growth. Diverse and competing interests for Nevada's water resources will exacerbate climate change issues.

What has been done

UNCE faculty developed and published a curriculum (Evaluating Alternative Low-Water-Use Crops for the Great Basin) to teach agricultural producers how to strategically select crops to conserve water resources. The curriculum focuses on identified needs to reduce water use and the potential benefits of utilizing alternative crops. BMP Retrofit/Environmental Improvement program taught landscape contractors best management practices to protect water quality on private properties in the Lake Tahoe area.

Results

Low Water Use Alternative Crops program and curriculum helped agricultural professionals work more effectively with producers in western arid states to select alternative crops. In 2012, this program was featured at the regional WSARE forum in New Mexico. In 2012, 398 BMP Site Evaluations were performed on private properties, and 551 Certificates of BMP Completion were awarded by Tahoe Regional Planning Authority.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
121	Management of Range Resources
131	Alternative Uses of Land
132	Weather and Climate
133	Pollution Prevention and Mitigation
205	Plant Management Systems
213	Weeds Affecting Plants

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Grant funding available)

Brief Explanation

The potential for the listing of sage-grouse as threatened or endangered indicates shifting public policies and competing public priorities. Compliance with the Clean Water Act requires the education of property owners, land managers, and landscape industry

professionals.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

UNCE faculty evaluate the outcomes and impacts of programs largely through participant/stakeholder self evaluations. Evaluations of selected Climate Change and Natural Resources programs in 2012 include Low Water Use Alternative Crops and BMP Retrofit/ Environmental Improvement program. Evaluations comprise self-administered questionnaires involving pre-tests and post-tests administered immediately following the educational intervention. Six month follow-up surveys and interviews are also used frequently.

Key Items of Evaluation

Low Water Use Alternative Cropsworkshops and curriculum helped agricultural professionals work more effectively with producers in western arid states to select alternative crops. Of those responding to a six month follow-up evaluation (n=23), 43% have introduced workshop curriculum and other SARE resources into producer programming; 39% have worked one-on-one with producers to evaluate the economic feasibility of alternative low water use crops on their farm/ranch; 35% assisted agricultural producers in implementing low water use crops on their farm/ranch; 35% assisted producers with the measurement of changes in water use and resulting environmental improvements such as water and soil quality; 35% assisted producers with the measurement of changes in profitability and economic sustainability of alternative crop use; and 82% have incorporated some of the material presented in the workshop into their operation/job.

As a result of the BMP Retrofit/ Environmental Improvement program and efforts of BMP Retrofit partners in 2012, 398 BMP Site Evaluations were performed on private properties, and 551 Certificates of BMP Completion were awarded by Tahoe Regional Planning Authority (TRPA). Since UNCE formed the BMP Retrofit partnership in 2000, TRPA has issued 15,803 Certificates of BMP Completion. This is a desired mid-term outcome, showing behavioral change, because every property that earns a Certificate of Completion must have BMPs implemented correctly.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Sustainable Energy

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
131	Alternative Uses of Land	15%			
133	Pollution Prevention and Mitigation	20%			
205	Plant Management Systems	45%			
605	Natural Resource and Environmental Economics	10%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890

Actual Paid Professional	0.4	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
15767	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
15767	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
14398	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct applied research into alternative crops as potential bio-fuels and methods of production that are well-suited for Nevada.
- Report on and adapt research to educate producers outlining benefits and costs.
- Educate the public about sustainable practices, renewable energy use, and environmentally responsible lifestyles.

2. Brief description of the target audience

Target audiences include agricultural producers, general public, citizen and special interest groups, related industries, and federal, state, and local government agencies.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals who gain knowledge about sustainable energy and environmentally responsible lifestyles.
2	Number of individuals who implement practices related to or in support of sustainable energy and environmentally responsible lifestyles and practices.

Outcome #1

1. Outcome Measures

Number of individuals who gain knowledge about sustainable energy and environmentally responsible lifestyles.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	650

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Applied research and educational programs are needed to educate the public about sources of sustainable energy. This includes discovery of a portfolio of programs to develop biomass used for bio-fuels, design optimum crops for bio-energy production, and produce value-added bio-based industrial products. It also includes enhancing public awareness of alternative land uses as natural resources for environmentally responsible lifestyles.

What has been done

UNCE faculty completed a series of cellulosic bio-fuel field experiments in 2012, providing the only source of replicated data in Nevada regarding production of cellulosic bio-fuels. UNCE faculty collaborated with Nevada producers in identifying high value, lower water use crops that can be produced as alternatives to hay production. These crops include food crops and industrial crops with the potential of bio-fuels. A second priority is developing revegetation techniques for dewatered farmlands and identifying adapted perennial plant species that can be used to reclaim abandoned farmlands in Nevada.

Results

The results of these cellulosic bio-fuel field experiments demonstrated conclusively that while yields obtained from both cool and warm season grasses were relatively high this production came only with maximum applications of water and regular fertilizer applications. Canola trials results have been statistically analyzed and a preliminary report and fact sheet are in preparation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
133	Pollution Prevention and Mitigation

205	Plant Management Systems
605	Natural Resource and Environmental Economics
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #2

1. Outcome Measures

Number of individuals who implement practices related to or in support of sustainable energy and environmentally responsible lifestyles and practices.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Grant funding available)

Brief Explanation

Each of these factors stymied advances in program development.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Although few in number, the programs UNCE faculty offer to date in this NIFA priority area include quantified evaluative data for crop field trials where results are used to educate producers and document impacts. Evaluations in 2012 of these three programs include results of cellulosic bio-fuel research and canola trials. Participant self-evaluations were used to document impacts of sustainable living programs.

Key Items of Evaluation

Evaluation studies of cellulosic bio-fuel production in Nevada indicate prohibitive high input costs and unacceptable low product values. Evaluation of this project provides solid evidence precluding economically viable production of cellulosic bio-fuel products in northern and western Nevada. This information is extremely valuable for anyone contemplating an investment in commercial production cellulosic bio-fuels in Nevada. Formal evaluations of pre-test and post-test scores measuring knowledge increases in response to the question "How to decide if cellulosic biomass is a potential alternative crop" revealed a statistically significant increase on a 1-5 scale following educational workshops

in Pershing County (pre= 1.43, post= 3.43) and in Churchill County (pre = 1.75, post =4.00). In contrast, canola trials were successful and public demand has increased seven-fold for information on canola production techniques.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Childhood Obesity, Health, and Nutrition

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
610	Domestic Policy Analysis	5%			
702	Requirements and Function of Nutrients and Other Food Components	25%			
703	Nutrition Education and Behavior	25%			
704	Nutrition and Hunger in the Population	15%			
724	Healthy Lifestyle	25%			
802	Human Development and Family Well-Being	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	0.0	0.0
Actual Paid Professional	9.2	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
256246	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
256246	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
234005	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct research with respect to obesegenics, health, and nutrition.
- Develop, teach and evaluate research based programs focused on health and nutrition.
- Develop and contribute materials to eXtension COP and other national efforts in obesity, health and nutrition.
- Partner with professional educators to educate youth and families to improve health and nutrition.
- Publish curricula, journal articles, and fact sheets pertaining to health and nutrition.

2. Brief description of the target audience

The primary target audience is per-school youth and youth in elementary school along with their families. A secondary audience is those who teach youth health, nutrition and physical activity or care for youth - parents, teachers, child care providers, health educators, etc.

3. How was eXtension used?

Faculty involved in childhood obesity, health and nutrition related programming are actively involved in eXtension COP and other national efforts in this area. Two National eXtension electronic publications were reviewed and accepted. These include: Paying the Price for Caffeine: A Look at Energy Drinks. National eXtension Electronic Publications [<http://www.extension.org/pages/62629/paying-the-price-for-caffeine:-a-look-at-energy-drinks>] and Growth, Obesity and Energy Balance, Nevada Registry for Child Care Training via National eXtension.org [<http://www.nevadaregistry.org/blog/professional-development/obesity-training.html>].

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	16729	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	10	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Preschoolers improving physical skills for improved health and weight control(All 4 Kids).
2	Preschoolers who would choose a health snack over an unhealthy snack when present a choice (All 4 Kids).
3	First and second grade students learning healthy food choices and good physical activity choices (Chefs For Kids).
4	Youth learning to make healthy food choices and gaining physical activity through "hands on" school garden based educational programs.
5	American Indian youth increase awareness of and exposure to a variety of vegetables and fruits, including traditional American Indian varieties ("Veggies For Kids").
6	Number of individuals who gain knowledge about nutrition and health.
7	Number of individuals who implement behaviors to improve health and nutrition.

Outcome #1

1. Outcome Measures

Preschoolers improving physical skills for improved health and weight control(All 4 Kids).

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Preschoolers who would choose a health snack over an unhealthy snack when present a choice (All 4 Kids).

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

First and second grade students learning healthy food choices and good physical activity choices (Chefs For Kids).

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Youth learning to make healthy food choices and gaining physical activity through "hands on" school garden based educational programs.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

American Indian youth increase awareness of and exposure to a variety of vegetables and fruits, including traditional American Indian varieties ("Veggies For Kids").

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Number of individuals who gain knowledge about nutrition and health.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	385

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Onset of obesity in childhood accounts for 25% of adult obesity; but obesity that begins before age 8 and persists throughout childhood is associated with an even greater degree of adult obesity. According to the 2007 Nevada Youth Risk Behavior Survey (YRBS), 81% of students ate fruits and vegetables fewer than five servings a day (78.6 % of U.S. students). Picky eating behaviors are prevalent during childhood and are often linked to nutritional problems (dietary adequacy and body weight). Increasing evidence has also demonstrated parent feeding practices and style influence the development of young children's eating behaviors, food preferences and dietary patterns.

What has been done

UNCE faculty developed Little Books and Little Cooks, a 7-week parenting education program for preschool-age children (3-5 years old) and their parents designed to promote healthy eating, family literacy, parent-child interaction and child's school readiness skills. This program features a 182-page formal program curriculum (7 lesson plans) for use in program delivery. During the program, children and parents learn together about healthy eating and nutrition, gain positive parent-child interaction skills, and practice school readiness skills (cooking skills) by reading children's books about healthy eating/nutrition and cooking/eating. Each weekly session features a new book about healthy eating and a new recipe.

Results

In 2012, the Little Books and Little Cooks program (seven weekly sessions/ 1.5-2 hours per session) was provided at four community sites; 42 pilot classes (6 program series) were taught to 35 families, including both parents and preschoolers (20 Hispanic/ Latino, 5 Caucasian, 6 Asian/Pacific Islander and 4 African Americans).

4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #7

1. Outcome Measures

Number of individuals who implement behaviors to improve health and nutrition.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	24449

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Almost one-third of children in America are overweight or at risk for overweight, increasing their probability of developing chronic illnesses such as high blood pressure, high cholesterol, and Type 2 diabetes. Nevada estimates the costs associated with treating conditions related to overweight and obesity is \$337 million. A recent report released by the Nevada Institute for Children's Research and Policy on the health status of children entering kindergarten in the Nevada school system (n=3,597) stated 21% of the children in the study were obese and an additional 13% were overweight.

What has been done

All 4 Kids utilized an interdisciplinary approach to address child obesity. All 4 Kids staff teach 24, 30-minute lessons plans three times a week for eight weeks to preschoolers. Teachers participate in the lessons and parents are engaged in family activity nights. In 2012, 483 children and 328 parents participated in All 4 Kids. The program (120 lessons and 15 family events) was taught at 4 different child care sites. All 4 Kids staff distributed 8,298 Family Connection handouts (18 per family) and 164 Teacher Connection handouts (9 per teacher).

Results

After participating in the All 4 Kids sessions, pre-post measures and assessments indicate that 483 children significantly improved in all four major physical skill tests and preferred healthy snacks when given a choice. The All 4 Kids program team developed a service agreement with Acelero Learning Head Start. This required Acelero teachers to co-teach with the All 4 Kids team thereby increasing numbers of children/families reached. UNCE faculty also conducted teacher training to Head Start and Clark County School District teachers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Grant funding availability)

Brief Explanation

Each of these factors influenced programs in 2012.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluations in 2012 of numerous UNCE programs that address this NIFA priority area include results of Little Books and Little Cooks and All 4 Kids. Evaluations are largely based on pre and post-intervention observation of targeted participant behaviors. In some cases, where appropriate, parent and teacher self-evaluations were used to document perceived knowledge gains and behavioral changes.

Key Items of Evaluation

Evaluation studies indicate that of the 223 children who attended the Little Books and Little Cooks classes, the majority showed statistically significant improvement in 15 cooking skills, which included measuring ingredients, cutting soft foods, and washing hands for 20 seconds. Children demonstrated they were more likely to eat fruits or vegetables if served and were less picky, trying different types of foods or new foods during mealtimes. By the last day of the program, the majority of the 162 parents who attended the classes were more likely to report that their children were less picky eaters. There was a significant improvement in positive parent-child interactions during cooking. After

participating in the program, parents were significantly more likely to report that they cooked more often for their families, cooked more often with their children, and consumed more fruits and vegetables than before completing the program. Parents were more likely to be more authoritative when feeding their children by encouraging and setting limits. By the last day of the program, all parents and children understood how to match each food with the food group to which it belongs. All parents and children mastered proper hand washing.

All 4 Kids pre-post evaluative measures indicate that 483 children significantly improved all four major physical skill tests. Preschoolers also demonstrated increased preference for healthy snacks. Children's ability to distinguish between healthy and unhealthy snacks improved by 21%.

These and additional study results indicate that All 4 Kids was an effective intervention program to change pre-school aged youth nutrition and health behaviors. Outcomes for 2012 include statistically significant improvements in children's ability to perform 12 fundamental movement tasks.

As an additional indicator of program quality and documented impacts, in 2012, All 4 Kids received numerous awards. These included: 1) USDA National Institute of Food and Agriculture (NIFA) Partnership Award for Mission Integration of Research, Education or Extension; 2) USDA-NIFA National Jeanne M. Priester Award for a statewide/multistate program; 3) Western Extension Directors Association Award (WEDA) of Excellence - Multistate research; 4) Family Health and Wellness Award, 3rd place National Award, National Extension Association of Family and Consumer Sciences; 5) Family Health and Wellness Award, 2nd place Western Regional Award, National Extension Association of Family and Consumer Sciences; and 6) Florence Hall Award, 3rd Place Western Regional Award, National Extension Association of Family and Consumer Sciences.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Food Safety

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
308	Improved Animal Products (Before Harvest)	15%			
315	Animal Welfare/Well-Being and Protection	15%			
501	New and Improved Food Processing Technologies	10%			
504	Home and Commercial Food Service	10%			
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	25%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	25%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	0.0
Actual Paid Professional	0.5	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
14305	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
14305	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
13063	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct workshops and meetings, deliver activities, develop new curricula, write newsletters and news releases and post Internet fact sheets focused on food safety, Good Agricultural Practices (GAPs), and Good Handling Practices (GHPs).
- Continue to build partnership with Nevada Department of Agriculture to develop a voluntary Food Safety Certification program for producers.
 - Educate and support producers to develop farm/ranch food safety plans to voluntarily meet the requirements of the Food Safety and Modernization Act.
 - Educate the managers and operators of community and school gardens about food safety planning, GAPs, and GHPs.
 - Educate professionals in the cottage food industry, food processors, and custodial food providers about food safety.
 - Educate 4-H and FFA youth on Quality Assurance to comply with state requirement for market livestock projects.
 - Educate youth and professional educators about basic food safety practices to follow in school and community garden environments.

2. Brief description of the target audience

This program targets agricultural producers, small acreage operators, and managers/operators of school/community gardens. Target audiences also include livestock producers who participate in Quality Assurance and 4-H/FFA youth participating in statewide and local competitive events with market projects. Food safety programs also target professionals in the retail food industry and custodial food providers in child and senior care facilities.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	295	0	290	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals who gain knowledge about food-borne illness, farm/ranch food safety, and quality assurance.
2	Number of individuals who implement practices to prevent food-borne illness, which include farm/ranch food safety plans and quality assurance practices.

Outcome #1

1. Outcome Measures

Number of individuals who gain knowledge about food-borne illness, farm/ranch food safety, and quality assurance.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nevada is one of the few states in the nation lacking a comprehensive Extension program dedicated to on-site food safety issues involving production, harvesting, and post-harvesting levels. Agricultural producers and food consumers in Nevada require education about the importance of safe food production, handling and processing to help reduce the risk associated with food-borne illness. UNCE seeks to build food safety programs on a par with other land grant universities in the US. This means strengthening the capacity of producers, regardless of operation size, to control and prevent accidental biological, chemical or physical hazards that could contaminate food products during production, storage, and transportation.

What has been done

UNCE faculty partnered with Nevada Department of Agriculture and USDA inspectors to collaboratively develop a program to improve Good Agricultural Practices (GAPs), Good Handling Practices (GHPs), and Hazard Analysis and Critical Control Points (HACCP) through education, planning, and voluntary on-site audits. Ongoing quality assurance trainings for adult and youth (4-H/FFA) livestock producers are designed to increase knowledge pertaining to quality market meat products and ethical animal treatment. Trainings are offered annually. Additionally, UNCE faculty continued to provide Food Safety Education for Child and Adult Care Providers online educational food safety modules and onsite food safety workshops.

Results

UNCE faculty successfully forged new partnerships with the Nevada Department of Agriculture, to begin building a statewide educational program to help Nevada producers achieve farm/ranch site food safety planning and practices.

Quality Assurance trainings continued, but were fewer in number. As a result of Food Safety Education for Child and Adult Care Providers training, caregivers increased their confidence through increased knowledge and improved safe food handling to control for and reduce food

safety risks from purchase to consumption points in the food system.

4. Associated Knowledge Areas

KA Code	Knowledge Area
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection
501	New and Improved Food Processing Technologies
504	Home and Commercial Food Service
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Number of individuals who implement practices to prevent food-borne illness, which include farm/ranch food safety plans and quality assurance practices.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Grant funding available)

Brief Explanation

Each of these factors stifled progress in this program area.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Public demand is great for UNCE programs that emphasize farm/ranch food safety planning and implementation. In response, UNCE faculty are developing programs to address this NIFA priority area. Evaluation will likely include formative and summative approaches, participant self-evaluation, and direct observation.

Key Items of Evaluation

UNCE faculty worked with USDA inspectors and Nevada Department of Agriculture staff, to begin building a statewide educational program to help Nevada producers achieve farm/ranch site food safety planning and practices. This program is in the developmental stages and so evaluation data have not been collected to date.

Fewer quality assurance training sessions were provided to livestock producers in 2012 due to lack of faculty resources as a result of statewide budget cuts. Nevertheless, UNCE faculty and staff trained approximately 75 adults and youth on quality assurance and ethics.

As a result of Food Safety Education for Child and Adult Care Providers training, approximately 25 caregivers increased their confidence through increased knowledge and improved safe food handling to control for and reduce food safety risks from purchase to consumption points in the food system.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Human & Family Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	65%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	15%			
806	Youth Development	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid Professional	8.3	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
286310	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
286310	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
261460	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct research with respect to human and family development.
- Develop and publish research-based peer-reviewed curricula and journal articles in support of programs.
 - Expand eXtension Alliance for Better Child Care Community of Practice.
 - Support the positive development of at risk youth and young adults through the use of Nevada's Nationally Recognized Evidence-Based Programs, Bootstraps and Project Magic.
 - Develop and incorporate STEM components into human development programs to help prepare Nevada youth for success in secondary and post-secondary education and STEM careers.

2. Brief description of the target audience

Target audiences include youth, young adults, parents/families, child care providers and other youth/family professionals. Target audiences also include at risk families, including military families and seniors.

3. How was eXtension used?

UNCE faculty served on the 3-member national leadership committee for the eXtension Alliance for Better Child Care Community of Practice, gathering Extension classroom teaching materials from across the country and posting them to the web site to provide classroom activities data base (<http://www.extension.org/child%20care>). In 2012, this webpage received 13,710 page views per month on

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	30648	0	53044	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	13	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of adults and youth reached in the Family Storyteller literacy program.
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Number of youth reached through the traditional 4-H Club program (ES-237).
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- Number of youth reached through 4-H youth development programs through non-4-H Club membership (ES 237).
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Child care providers receiving training to improve their child care skills.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Child care providers and family/youth professionals learning new knowledge or skills.
2	Number of youth and parents reached in the Family Storyteller literacy program.
3	Number of juvenile offenders and parents/guardians participating in Project MAGIC to develop the positive skills and attitudes designed to leave the criminal justice system and become productive members of society (MAGIC).
4	Parents reached with "Just in Time Parenting" (eXtension) programming to improve knowledge and efficacy of parents about children and parenting.
5	Number of youth, families, and professionals who gain knowledge about positive human and family development.
6	Number of youth, families, and professionals who implement positive human and family development behaviors.

Outcome #1

1. Outcome Measures

Child care providers and family/youth professionals learning new knowledge or skills.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Number of youth and parents reached in the Family Storyteller literacy program.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Number of juvenile offenders and parents/guardians participating in Project MAGIC to develop the positive skills and attitudes designed to leave the criminal justice system and become productive members of society (MAGIC).

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Parents reached with "Just in Time Parenting" (eXtension) programming to improve knowledge and efficacy of parents about children and parenting.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Number of youth, families, and professionals who gain knowledge about positive human and family development.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3652

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The training and education of the child care provider is a key factor associated with the quality of care they provide. On-going professional development of child care providers is an important part of ensuring that young children in Nevada receive quality care.

What has been done

Approximately 1,100 child care providers participated in a series of UNCE faculty designed programs designed to increase the knowledge of child care providers regarding early childhood development, abuse and neglect recognition, infant health and safety, Sudden Infant Death Syndrome, promoting appropriate behavior, and responding to temper tantrums in early childhood.

Results

Evaluations (primarily pre-post tests) were conducted for a number of components used in various child care provider training series. In each of the trainings, child care providers achieved knowledge gains in: preparing for emergencies; providing a safe and healthy environment for young children; implementing appropriate transitions for preschoolers and promoting positive behavior; temperament and how to respond to challenging behaviors; developmentally appropriate interactions, environments and activities for young children; and how to care for infants and toddlers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #6

1. Outcome Measures

Number of youth, families, and professionals who implement positive human and family development behaviors.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	72

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Census data indicate that Nevada's rural communities have some of the highest rates in the nation regarding issues related to youth having difficulty transitioning to the workplace or adulthood. Additionally, the most vulnerable families, those headed by single females, are targeted for this program. Research supports the need for targeting families with the least financial resources and family support in order to improve the transition from youth to adulthood.

What has been done

In each of the locations where Bootstraps was conducted a job coach was hired and trained in positive youth development methods, how to work with agency partners, effective communication, and conflict resolution. Participants received 80-hour trainings in job site safety and weed control, with topics such as pesticide applicator safety, UNR policies, emergency communication, vehicle maintenance and safety, off-road and defensive driving, and first aid. Participants were also taught a 40-hour life skills curriculum throughout the six-month program. Participants spend 36 hours per week in natural resource management related fieldwork. Their work included surveying land for invasive weeds, applying herbicides, weed removal, and wildlife habitat restoration. Bootstraps participants received over 900 hours of educational programming.

Results

As a result of Bootstraps, participants were significantly more likely to report having greater efficacy in completing tasks related to job safety; significant improvement in life skill scores; significant improvement in knowing at least two ways to save money; positive trends in interpersonal skills such as being friendly, being respectful to others, working well in a team, and having a positive attitude from pretest to post test. Participants showed a statistically significant increase in understanding how to get the job they want. Although not statistically significant, participants showed a positive increase in knowing where to find information about jobs, confidence in finding jobs, and confidence about living on their own. Participants were significantly more likely to prepare for work properly, complete their jobs properly, have a positive attitude and clean appearance; and demonstrate better team work skills as rated by their job coaches.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Grant funding availability)

Brief Explanation

Each of these factors influenced program activity.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The majority of UNCE human and family development programs utilize a cluster evaluation approach to measure and document program outcomes and impacts. This approach features a suite of evaluative instruments that includes participants' self-evaluation pre-post surveys, risk-protective factor pre-post survey, field work pre-post survey completed by program instructors, portfolios completed by program participants, and long-term follow-up interviews with program participants conducted at the beginning and end of longer (3 to 6-month) programs and annually for a period of 5 years.

Key Items of Evaluation

Using a cluster evaluative approach, the cumulative 5-year evidence of the 72 Bootstraps participants' impacts includes statistically significant improvements in knowledge gain and behavioral change on short, intermediate, and long-term measures. Since the intent of the program is to create change among young adults not in school and not working, the program dictates a small participation rate to provide the intensity of programming needed to create change. Increases were documented in every category of the participant portfolio rubric. Tasks that were measured included identifying personal strengths and weaknesses, problem solving, communication, leadership, responsibility, setting goals, and reaching goals. Pre-test and post-test mean scores increased a total of 112%. As for long-term program outcomes, interview data revealed participants expressed changes in acceptance of responsibility for their current situation and future direction, a recognition and willingness to use community resources for help, and ability to take pride in their work. Follow-up interviews with past program participants were completed to track their progress in their school and work pursuits after Bootstraps. UNCE faculty interviewed 90% of the 72 program graduates. With few exceptions, program graduates are in school or working. These graduates continue to use their local UNCE office faculty and staff as job references and to discuss issues in their lives.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Community and Economic Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
605	Natural Resource and Environmental Economics	15%			
608	Community Resource Planning and Development	45%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	25%			
805	Community Institutions, Health, and Social Services	15%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual Paid Professional	5.3	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
155563	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
155563	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
142060	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Strengthen capacity among community stakeholders to participate in community development planning, including asset mapping, secondary data analysis, and social network analysis.
- Conduct applied research to assess regional economic development strategies for Nevada.
- Develop educational resources to build the capacity of elected and appointed officials to support sustainable economic development and viability at the community, county, regional, and state levels.
- Conduct workshops for elected and appointed officials focused on leadership ethics, Nevada's fiscal system, land use planning, natural resource management, and economic growth.
- Develop service learning for university students to learn and practice civic engagement via Extension.

2. Brief description of the target audience

Target audiences include elected and appointed leaders and officials, business owners, general public, youth leaders, service learning students, land use planners, and economic development professionals.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4061	0	60	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
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Actual	5	0	0
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V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals learning new leadership or economic development skills/knowledge.
2	Number of individuals applying or using new leadership or economic development skills/knowledge in their organizations or communities.
3	Number of community people involved in "community assessment" of their local community.

Outcome #1

1. Outcome Measures

Number of individuals learning new leadership or economic development skills/knowledge.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	150

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The economic situation in Nevada remains grim. No state has been harder by the housing downturn than Nevada where home values have fallen more than 69.4% since 2006. In 2012, Las Vegas, the state's largest city, reported 71% of mortgages under water. While unemployment declined from 14.2% in 2011 to 11.6% in 2012, Nevada continued to report the second highest unemployment rate in the US after Puerto Rico (14.2%). While the state works to diversify its tourism and mining dependent economy, economists estimate that Nevada's housing sector may require more than a decade to recover.

What has been done

Stronger Economies Together (SET) teaches rural communities to work as a regional team to develop and implement an economic development plan that builds on the current and emerging economic strengths of the region. In 2012, the SET participant team received more than 50 hours of economic development training over the nine month program, or approximately 2,500 of total classroom hours. Team members learned to identify target industries by using secondary data, local and regional asset mapping, supply chain development, export industry and clusters development.

Results

The Governor's Office of Economic Development (GOED) funded this planning effort with a \$50,000 grant. The primary partners included GOED, WNDD, UNCE and USDA Rural Development. Attendance and sustained participation was excellent, varying from 25 to 70 people per session with more than 200 total individuals attending workshops held across 33,781 square miles of the Western Nevada Development District region. Each of the nine counties targeted for this effort organized at least one training workshop.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #2

1. Outcome Measures

Number of individuals applying or using new leadership or economic development skills/knowledge in their organizations or communities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	140

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Ninety five percent of Nevada businesses are considered small by having fewer than twenty employees. Under this definition, approximately 45% of Clark County's workforce is employed by a small business. The importance of small businesses to Nevada's economy is why, in partnership with Clark County and Economic Development Administration (EDA), the Business Opportunity and Workforce Development (BOWD) program was developed and implemented during 2012.

What has been done

The BOWD program trained small businesses on how to access and compete for local, state and federal procurement contacts. However, the basic business principles learned during the training classes also provide tools and skills that are targeted to grow individual business and expand and/or sustain employment opportunities in Nevada. The BOWD program is designed to address the identified need for small business best practices training, technical assistance, and improved connectivity with business resources, especially when doing business with governments and agencies.

Results

In 2012, 140 small businesses enrolled in the program and 123 graduated resulting in 88% graduation rate. All of the 123 businesses directly contacted Clark County departments that may

require their products or services. Approximately 89% (110) of businesses that completed the BOWD program prepared and distributed to Clark County departments a one-page statement of qualifications and 38% businesses (49) submitted a bid for services or supplies. Approximately 63% (31) of businesses that submitted a bid to Clark County received a contract.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #3

1. Outcome Measures

Number of community people involved in "community assessment" of their local community.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Grant funding available)

Brief Explanation

These primary factors significantly affected activities in this program area.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

For the SET program, initial evaluation instruments include pre-post tests administered at each of the nine sessions. Results from the planning efforts of these groups will be further measured in 2013.

Evaluation studies of the BOWD program include participant self-evaluations. Additionally related economic data include business grant awards from Clark County and calculated multiplier effects. Additional impacts are being collected to include all changes in program participant business habits and activity.

Key Items of Evaluation

Preliminary evaluation studies indicate that SET was successful in creating a regional vision for economic development along with five economic sector and four capacity building goals. A regional economic development blueprint was developed. This blueprint will eventually evolve into a comprehensive economic development strategy for the region. Other significant outcomes included the networks and relationships built within the region, as well as the origin for an appreciation for a regional approach to economic development. For the five targeted industries and four capacity building platforms, strategy and action workgroups have been assembled that continue to meet monthly.

Evaluation studies of the BOWD program indicate that Clark County awarded more than \$4.2 million to recent program graduates. This is an average of approximately \$135,483 per awarded contract. These contracts have also created approximately 75 new jobs because of business expansion to meet newly created demand. Using a multiplier of 1.8, it is estimated that this program during 2012 had a total economic impact on Clark County of over \$7.5 million and supported 135 total jobs.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Health & Nutrition (Healthy Lifestyle & Food Choices)

Reporting on this Program

Reason for not reporting

These programs have been incorporated into Childhood Obesity, one of the five major NIFA-USDA priority areas.

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	0.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	1890 Matching	1862 Matching	1890 Matching
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	1890 All Other	1862 All Other	1890 All Other
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

A variety of activities will be undertaken to reach at risk individuals, especially minorities, with appropriate information. The various activities of this program are designed to provide health & nutrition educational programs where individuals, families, medical professionals and care givers can learn the

benefits of a healthy lifestyle and proper food habits which promote health and wellbeing. Nutrition education programs will be provided in school classes for older youth, new parents, low income, seniors and other audiences as well as the general public. Newsletters, publications and other informational materials will be distributed through senior centers and to professional health educators as well as to the general public through the UNCE website.

The "train the trainer" model will continue to be emphasized with training provided to health care professionals, child care providers, teachers, etc. Many of the classes and programs are delivered by grant funded positions or volunteers.

The radon education program will encourage and provide testing kits for radon testing, training for the general public as well as those in the building industry.

2. Brief description of the target audience

Targeted audiences are varied. One target audience is those who train or education others about health lifestyles and food choices (medical professionals, professional care givers) as well as individual adults and youth of all ages. A second target audience is children, youth and families at risk as well as minorities. A third target audience is home and business owners for radon education.

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012

Actual: {No Data Entered}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	10	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of students reached through programs in school classes about healthy food choices.

Year	Actual
2012	0

Output #2

Output Measure

- Number of health professional and others trained/educated about breastfeeding.

Year	Actual
2012	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals (adults & youth) who will learn knowledge or skills necessary to make healthy lifestyle and food choices for themselves or those they care for (knowledge learned).
2	Number of individuals (adults & youth) who adopt one or more healthy lifestyle practices or food choices (behavior).
3	Number of participants in a diabetes education program (An Ounce of Prevention) improving their knowledge of risk factors for diabetes.
4	Number of students increasing awareness, knowledge and/or skills related to increasing the consumption of calcium rich foods.
5	Number of radon test kits distributed and used in Nevada.
6	Number of homes with high radon levels mitigated to lower radon risks.
7	Changes in attitude, knowledge, and practice of young adults regarding general nutrition and health, specific issues of pregnancy and breastfeeding and parenting guidance ("Nurturing Partners")
8	Number of participants in a diabetes education program (An Ounce of Prevention) making lifestyle or behavior changes to reduce their risks of diabetes.

Outcome #1

1. Outcome Measures

Number of individuals (adults & youth) who will learn knowledge or skills necessary to make healthy lifestyle and food choices for themselves or those they care for (knowledge learned).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #2

1. Outcome Measures

Number of individuals (adults & youth) who adopt one or more healthy lifestyle practices or food choices (behavior).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #3

1. Outcome Measures

Number of participants in a diabetes education program (An Ounce of Prevention) improving their knowledge of risk factors for diabetes.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2012 0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #4

1. Outcome Measures

Number of students increasing awareness, knowledge and/or skills related to increasing the consumption of calcium rich foods.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code Knowledge Area

{No Data} null

Outcome #5

1. Outcome Measures

Number of radon test kits distributed and used in Nevada.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code Knowledge Area

{No Data} null

Outcome #6

1. Outcome Measures

Number of homes with high radon levels mitigated to lower radon risks.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #7

1. Outcome Measures

Changes in attitude, knowledge, and practice of young adults regarding general nutrition and health, specific issues of pregnancy and breastfeeding and parenting guidance ("Nurturing Partners")

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #8

1. Outcome Measures

Number of participants in a diabetes education program (An Ounce of Prevention) making lifestyle or behavior changes to reduce their risks of diabetes.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2012

0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
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{No Data}	null
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V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Other (Grant Funding)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}