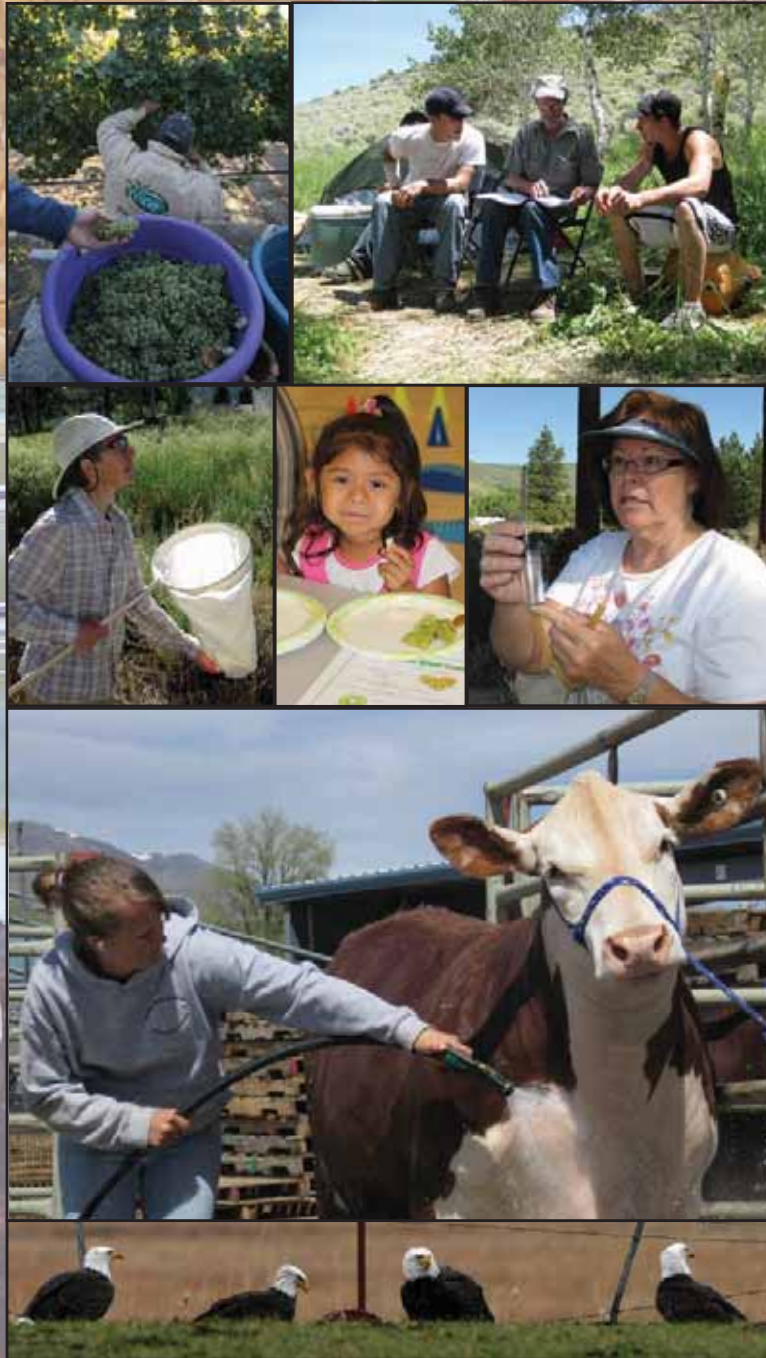


2010 Program Highlights



University of Nevada
Cooperative Extension

BRINGING THE UNIVERSITY TO YOU

www.unce.unr.edu

MESSAGE FROM THE DEAN



It brings me great pleasure to share with you some of University of Nevada Cooperative Extension's accomplishments for the last year.

Our programs range from alternative crops to health and nutrition, and they are developed with all Nevadans in mind — from newborns to seniors. We tackle our state's problems with strong, practical programs, leveraging our expertise and our partnerships to help communities from Laughlin to Battle Mountain.

University of Nevada Cooperative Extension is the college that puts university research to work — on

public rangelands; on family farms and ranches; and in your home, workplace or community. We're in every corner of Nevada, helping our residents stay strong, healthy and independent; teaching sustainable agricultural practices; training day care workers; helping cities strengthen their economies; helping youth become resilient; and bringing innovative programs that teach young people to lead and appreciate their state's cultural heritage.

We're the outreach arm of the University. That's why our slogan is "bringing the university to you." When a community needs help, we bring not only the expertise of our own Cooperative Extension faculty but the expertise of the entire University.

Karen Hinton
Dean and Director
hintonk@unce.unr.edu
775-784-7070

2009 ACCOMPLISHMENTS

Here are just a few examples of how we fulfilled our mission last year:

- Faculty and staff made nearly 797,430 face-to-face contacts with children, youth and adults throughout Nevada;
- Faculty and staff received outside grants totaling \$2,051,372;
- Faculty published more than 84 educational fact sheets, bulletins, curricula and special publications;
- More than 1,700 individuals visited our website each day; and
- Nearly 1,600 volunteers helped faculty and staff deliver educational and research programs.

2010 PROGRAM HIGHLIGHTS

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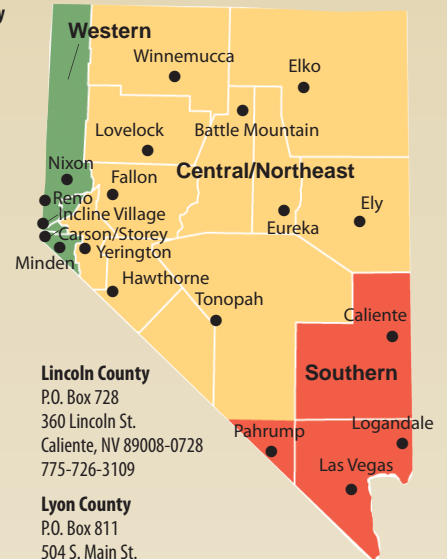
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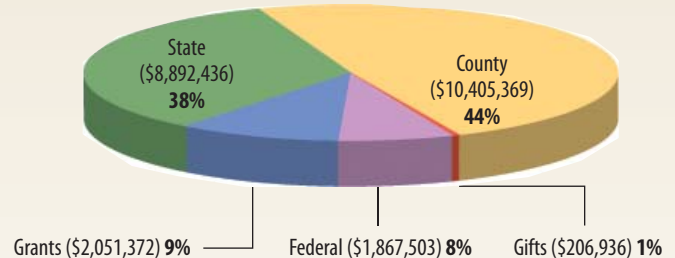
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2009 UNCE FUNDING
(Total: \$23,423,616)



UNIVERSITY OF NEVADA COOPERATIVE EXTENSION MISSION

To discover, develop, disseminate, preserve and use knowledge to strengthen the social, economic and environmental well-being of people.

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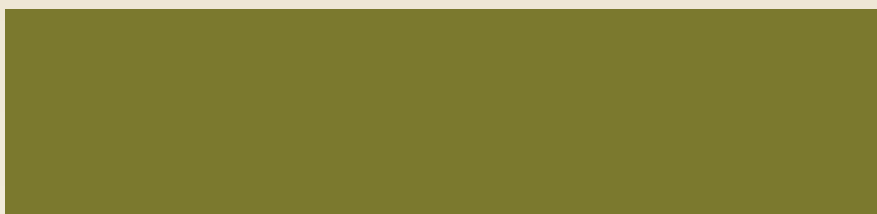


NATURAL RESOURCES

12

Reaching Out

Innovative program combines environmental education with social media, sparking students to study the ecological challenges facing the Carson River.



AGRICULTURE



Alternatives

Jay Davison is helping Nevada farmers profit from alternative crops.

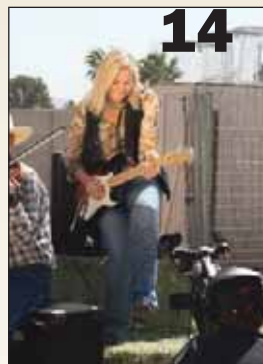
HORTICULTURE



Eating Smart

New program helps seniors grow their own food and eat better.

NUTRITION



Sound and fitness

UNCE faculty pulled out all the stops in taking aim at obesity in Nevada.

Cooperative Extension, with offices in every county in the state, is the outreach arm of the University of Nevada. Although many people associate Extension with 4-H and agriculture, our work extends far beyond those areas.

We're helping protect homeowners from fire and preserving our investment in public and agricultural lands by fighting the spread of noxious weeds.

We help small, financially strapped communities plan for their future growth and economies.

We recruit nearly 2,000 Nevada volunteers a year to teach in schools, pull weeds at county parks, staff community gardens and answer questions from the public.

Programs using our statewide interactive video facilities reach nearly 8,000 people annually, saving taxpayers and public officials the expense of traveling.

We help seniors live better lives, and to remain strong, confident and healthy – saving the state of Nevada millions of dollars.

We help rehabilitate juvenile offenders and train them to contribute to the state economy, saving the state millions in incarceration costs.

We're helping struggling Nevada farmers discover new crops that save water and increase their bottom line.

We train the state's day care workers. We've leveraged our resources, our expertise and our in-depth knowledge of our communities to **build powerful partnerships** on a local level. We've helped **develop new leaders** for small communities across the state, and we've worked hard to encourage more **civic engagement**.

Our faculty serve their communities. They volunteer in their schools, and they serve on boards and committees. People know they can come to us for help and trust us to follow through with what we say we'll do.

UNCE's Jay Davison analyzes teff grain in a field in Churchill County. Teff uses less water than alfalfa and returns a higher profit.



Farmers finding profit in growing teff industry

BY JIM SLOAN

SOME YEARS THE ALFALFA FARMERS in Nevada have to wonder if it's worth all the aggravation.

Last year was one of those years.

Average hay prices dropped 55 percent in 2009, from \$180 to \$100. To make matters worse, it was a drought year — the third in a row in which many farmers didn't get all the water they have rights to — and an increasing amount of agricultural water was being sold or siphoned off to other uses.

But now, thanks to University of Nevada Cooperative Extension Alternative Crops and Forage Specialist Jay Davison and other UNCE researchers, an increasing number of Nevada farmers are finding profits in a crop that uses less water and sells for a higher price — teff.

Teff is a small-seeded grain crop used to make a flat bread called injera. The grain and the bread made with teff flour is a big part of the Ethiopian diet and is commonly served in Ethiopian restaurants around the country.

Teff originated in the early 10th century in northeastern Africa in such present-day countries as Ethiopia, Eritrea, Djibouti, southeastern Sudan and northern Kenya. The flour, in addition to being used to make bread, can also be used to thicken soups and sauces and can be fermented to make beer.

Teff flour is also free of gluten, which is found in wheat, barley and rye flours and causes physical problems in about 1 percent of the U.S. population who have Celiac disease. It's also considered more nutritious than enriched wheat flour, making it a popular ingredient in baby foods. Teff's fibrous stalk is also nutrient-rich and makes an excellent fodder for livestock.

With all these qualities, demand for the crop greatly exceeds supply in the U.S. According to Davison and UNCE Agriculture Marketing Specialist Kynda Curtis, an assistant professor in the Department of Resource Economics in the College of



Agriculture, Biotechnology and Natural Resources, only seven distributors in the U.S. provide teff flour, and Ethiopia, the world's primary producer of teff, restricts international exports.

Although Davison has been working on establishing a teff crop in Nevada since 2002, last year his efforts expanded from simply helping farmers grow a commodity to helping establish a teff grain-processing facility that now allows Nevada farmers to sell directly to wholesalers and consumers throughout the U.S.

Davison said farmers have been pleased with the results they've had growing teff.

"In fact, as a result of their success, two farmers recently formed a company to process and sell teff to the general public," he said. "This will expand the market to go beyond just the Ethiopian teff wholesalers who are currently the only marketing effort."

Davison has worked tirelessly to teach, research and promote teff production, helping scores of farmers in Churchill, Lyon, Pershing and Douglas counties. Davison himself planted 15 varieties of teff in 45 different plots, testing different irrigation levels and trying out different teff pesticide applications. He helped form a limited liability company in Churchill County, assisted in the development of a teff marketing contract in Churchill and Humboldt counties, and did data analysis to help determine teff grain prices.

As a result of his efforts, there are now 14 teff growers in Nevada cultivating about 1,100 acres of the crop — nearly twice as many as in 2008. More importantly, those farmers are earning about \$90 more per acre than alfalfa, and they are using two-thirds as much water.

Still, some farmers remain leery of the new crop, Davison said.

"It's been moderately difficult to convince farmers to grow teff as grain because most farmers are reluctant to try completely new crops," he said. "They are more likely to grow teff as forage, though, because they are very familiar with growing grass hays."

According to Curtis, the potential market for a new teff flour supplier is a favorable one. The availability of teff is

RESEARCH HIGHLIGHTS

All told, Nevada farmers produced about 1.1 million pounds of teff seed last year, a nearly 20 percent increase over the previous year. All that grain is being cleaned and bagged at new facilities in Humboldt and Churchill counties, and those processors are selling the grain to markets in Georgia, New Jersey and California. The Churchill County operation is working on establishing a flour mill.

inconsistent in the market right now, which increases the chances of Nevada producers finding a market niche.

Curtis recommends Nevada producers focus on Ethiopian and gluten-free specialty restaurants in Nevada, California and Arizona. It's easier to ship to these locations, and buyers—particularly those concerned with food safety, energy efficiency and supporting local agriculture—might like the idea of buying from a small farming operation.

"The teff industry as a whole is facing competition from other grain products like amaranth, corn meal and flaxseed meal," Curtis said. "But none of the teff producers are marketing themselves as 'locally grown' and 'certified organic,' and that's something a small community of producers could take advantage of."

Curtis said there are also opportunities for Nevada teff growers in centralized markets on the West Coast, where a smaller, regional producer could beat the prices charged by a national competitor.

Out in the field, meanwhile, Davison says teff crops grown for forage continue to expand while the teff grain fields remained limited by the 1-million-pounds-per year capacity of the sole Nevada company that processes the grain. But he said the company hopes to expand into the gluten-free market soon.

"I see a great future," he said.



Camp teaches ecology of Great Basin



Campers study the soil profile of the rangeland during one of the exercises conducted at the Nevada Youth Range Camp. After several soil exercises, Fisher's students can determine a soil's type and its pH and carbonate levels.

BY ROBERT MILLS

JUNE 2010 MARKED THE 50TH ANNIVERSARY of the Nevada Youth Range Camp. The Nevada Chapter of the Society for Range Management's annual, weeklong camp, located in the Toiyabe National Forest at the U.S. Forest Service Big Creek Campground near Austin, offers high school students an in-depth look into Nevada's rangelands. Campers learn the ecology of the Great Basin by surveying the land, identifying plants and animals, analyzing stream health and participating in fun, educational activities.

Classic camping activities like hanging out by the campfire, fishing, swimming, photography and hiking are essential to the camp experience. Campers even challenge camp counselors to a rousing game of outdoor volleyball toward the end of the week.

However, it's not all fun and games. Camp Coordinator Jim Gatzke of the Natural Resource Conservation Service said campers gain an intensive, real-life understanding of Nevada's Toiyabe Mountain Range, which boasts several peaks over 10,000 feet in elevation, accompanying valleys and a variety of plants and animals.



The week-ending volleyball game is always a highlight of the camp.

"It's an opportunity to interact in a not-so-formal setting and ask questions," Gatzke said. "It really allows them a real-world experience."

More than 30 campers attended in 2009, and throughout their week on the range, they were mentored by rangeland experts.

"These kids have an opportunity to interact with professionals in the field," Gatzke said.

"These professionals are volunteering their time, and they have a lot of expertise."

Extension educators like Brad Schultz have worked at the camp for more than 10 years. Other members from UNCE, including Rangeland Resource Specialist Kent McAdoo, teach campers about rangeland vegetation and riparian management. As a soil data quality specialist, John Fisher of the Natural Resources Conservation Service (NRCS) teaches the importance of understanding soils when managing rangelands. After several soil exercises, Fisher's students can determine a soil's type and its pH and carbonate levels.

Schultz said camp organizers have made great strides to enrich the camper's overall experience over the years.

"We've developed a lot more activities — more learning modules, more extracurricular evening activities and better equipment," Schultz said. "We recently got a new cook wagon and some propane refrigerators. We've also gotten into Dutch oven cooking."

Schultz said campers take a lot home from the experience.

"There have been campers who have gone on to study wildlife biology and range management after high school," Schultz said. "Some come from ranch families and go back to work on the ranch. This camp is right up their alley. They all come out saying 'I learned something here.'"

Educators from UNCE conduct the program with staff from various state and federal agencies including NRCS, Nevada Division of Forestry, Nevada Division of Conservation Districts, Bureau of Land Management, U.S. Forest Service,

RESEARCH HIGHLIGHTS

The following questions rate behavior/attitude changes and their corresponding scores (based on 1-to-5 scale):

Has the Nevada Youth Range Camp increased your interest in studying range management in college? **3.85**

Would you tell your friends to attend the Nevada Youth Range Camp? **3.92**

Has your knowledge about Nevada's rangelands improved? **4.42**

Has your appreciation of Nevada's rangelands improved? **4.27**

Because of what you learned at Range Camp are you more willing to attend a public meeting about the management of Nevada's rangelands? **3.38**

After attending the Nevada Youth Range Camp, if you are provided the opportunity to write a report or assemble a project in your high school science classes, are you more likely to select a topic or issue related to Nevada's rangelands? **3.85**

U.S. Fish and Wildlife Service and Nevada Department of Wildlife. Financial sponsors include Nevada Wildlife Federation, Nevada Conservation Districts, Nevada Bighorns Unlimited, and Nevada Society for Range Management.

For more information or to apply for Nevada Youth Range Camp, visit the website at www.ag.unr.edu/nsrm/camp.html, or contact Brad Schultz at 775-623-6304.

UNCE helping Central Nevada find new businesses for old mining sites

THE SMALL COMMUNITIES along Interstate 80 in northern Nevada, with the help of Cooperative Extension, are looking to expand their economy by utilizing the mining industry's vast infrastructure to attract new businesses and industry to their towns.

The Future Industrial Needs Discover (FIND) project is headed up by community leaders, including Lander County Extension Educator Rod Davis, who says the goal is to find businesses who can utilize mining's transportation, power and water systems once a mine is retired. Davis has been studying the issue for 10 years and leaders from the Bureau of Land Management, Lander County and mining join him on the leadership team.

"We're talking about changing what this community will look like in 20 years," Davis said. "There are companies whose infrastructure needs match what's in place at the mines."

Community development became a key issue for Davis in 2001, after a survey he conducted showed that most Lander residents felt they needed a stronger economic base. The boom-bust cycle of mining was hurting small rural towns.

In recent years, Davis and fellow project leaders have:

- Done a study on available housing and future residential development most strongly favored by residents.

- Inventoried the basic infrastructure along I-80 from Lovelock to Elko.

- Completed a broad community situational analysis targeting sustainability issues.

- Embarked on an economic study to see how money is spent in Battle Mountain versus how much leaves the county and is spent elsewhere.

- Launched a survey of the Battle Mountain businesses.

That final study was conducted in March 2010 by a leadership class at Battle Mountain High School under the guidance of UNCE Community Development Specialist Tom Harris, director of the University Center for Economic Development; and UNCE Community and Organizational Development Specialist Marlene Rebori.

"The idea behind using students was to help teach them the value of community engagement," Davis explained.

The FIND project has brought in \$250,000 in grant funds, and in about a year the sustainability committee will have a complete marketing package to take to the Lander Economic Development Authority to use to attract businesses.

"In the end," Davis said, "we want matches that are both highly compatible and highly desirable."

Program mixes nutrition and horticulture to help seniors live healthier lives

BY MARILYN MING

RESIDENTS OF SENIOR LIVING FACILITIES in North Las Vegas are learning to grow their own vegetables and prepare delicious, nutritious meals from basic commodity foods through a new program launched by UNCE Nutrition Specialist Mary Wilson and Social Horticulture Specialist Angela O'Callaghan.

The Eat Smart, Live Strong program sprouted from concerns brought to Wilson by Nevada State Food Distribution Program Chief Jenelle Gimlin, who was concerned that seniors receiving commodity foods were malnourished and not able to prepare the commodity foods in a nutritious fashion.

Many of Nevada's lower income seniors receive monthly commodity foods, which include cereal, juice (usually apple), canned vegetables (usually peas, carrots, green beans), canned fruit (often peaches), peanut butter, and canned chicken pork or beef. Commodity food distribution occasionally includes spaghetti, rice or macaroni; evaporated milk; cheese; and a bag of powdered milk every other month.

Wilson surveyed recipients at several commodity food distribution centers in Las Vegas, Reno and Elko and "found there is a definite need and audience for nutrition education and healthy, flavorful recipes with the commodity foods."

Wilson enlisted the collaboration of O'Callaghan, and the Eat Smart, Live Strong program was born.

The program was launched at the Rose Garden Senior and Disabled Public Housing facility, where the City of North Las Vegas had already installed raised gardening beds and UNCE horticulture staff had helped residents start gardens.

"Because we already had a great relationship with the Rose Garden facility, it was a natural fit to incorporate the program at that site," O'Callaghan said. "I developed the patio-gardening educational component for the program to teach the seniors how to grow herbs and small vegetables in window pots."



Some of the vegetables growing at the Rose Garden Senior and Disabled Public Housing facility, where the City of North Las Vegas has installed raised garden beds, are harvested.

O'Callaghan began the gardening program in 2009 with seniors at the Rose Garden facility and in 2010 with the East Valley Family Services center. Alfred Thomas, a 21-year resident of the Rose Garden, enjoys the team effort of maintaining the garden. "It's just what we need right now with the economy the way it is," he said.

To gain insight about seniors receiving commodity foods, Wilson conducted individual interviews with 20 seniors from the East Valley center. "Many expressed concerns about the food product dating on commodity food packages, as well as how to incorporate commodity foods into their diets," Wilson said. "Many were concerned because they had diet restrictions related to chronic diseases such as diabetes, hypertension and heart disease."

To address the food product dating issue, Wilson wrote "Food Product Dating" to help seniors (and everyone) better understand product dating codes.

During 2010, Wilson will work on formulating the curriculum for the nutrition education component. The nutrition education component will include how to prepare, handle, and store food safely; how to use the commodity food package as part of a healthy diet even with diet limitations; the benefits of eating more fruits and vegetables; and how to decrease the risk of malnutrition.

Gracie Collins, a seven-year Rose Garden resident, said that the most she can do is put seeds in the ground. But after taking one of the classes on food preparation, she learned how to make salad with dressing made from the apple juice she receives from a food distribution program.

"It was delicious," she said.



Robert Winslow (top) holds up a successful biofuels experiment during 2009's 4-H National Youth Science Day experiment. In the near right photo, Kayla Nielson (far right) and Jacob Roll (center) help Robert Winslow prepare the mixture that will produce biofuel. Sarah Chvilicek (bottom) explains the experiment to 4-H'ers during a practice session. In the far right photo, Kayla Nielson and Anna Baumann practice the experiment.



4-H Science Day a biofuel blast for Nevada youth

BY ANDREW CHURCH

FOR TWO YEARS, THE NATIONAL YOUTH SCIENCE DAY, a part of National 4-H Week, has worked towards promoting youth involvement in the sciences. Now entering its third year, the program is more active than ever, creating new experiments and opportunities for its participants.

The National Youth Science Day is part of the 4-H organization's One Million New Scientists, One Million New Ideas campaign aimed at increasing youth interest in the sciences. The campaign hopes to engage one million youth in science by 2013.

According to the National Assessment of Educational Progress, only 18 percent of U.S. high school seniors are proficient in science. Globally, 5 percent of U.S. college graduates earn a degree in science, engineering or technology as opposed to the 66 percent in Japan and 59 percent in China. 4-H hopes to close that gap by engaging its members in the scientific process using fun and educational methods.

"4-H National Youth Science Day brings young people face-to-face with a large and complex global issue affecting our society," said Donald T. Floyd, Jr., National 4-H Council president and CEO. "Involving youth early in fun and exciting scientific exploration is paramount to encouraging their future interest in science and science careers. As the nation's next generation of leaders, it is imperative that we encourage today's young people to think about global issues today, in order to engage them in developing the solutions of tomorrow."

In 2009, participants in Youth Science Day learned how organic matter, such as corn, could be converted into fuel and alternative energies. Youth across the state of Nevada joined hundreds of thousands of young people around the nation last year to

simultaneously create biofuel. Nationally, 6 million 4-H youth and 514,000 volunteers nationwide were involved in 4-H National Youth Science Day.

One demonstration held at the Knowledge Center at the University of Nevada, Reno drew support from UNR professors associated

with the Chemical Engineering department.

This year, the experiment will explore how carbon dioxide can affect aquatic animals, plants and other living organisms in a variety of ecosystems. In doing so, participants can learn more about their own impact on the environment, as well as that of their families.

Washoe County 4-H Program Coordinator Sarah Chvilicek hopes that educating youth in the sciences will change perceptions about those fields.

"In 1902, 4-H adopted the strategy of educating youth in order to change behavior," Chvilicek said.

"By reaching out to children while they are young, we can change their perceptions about science and encourage them to try something new."

The National Youth Science Day is making noticeable improvements towards its goal. According to the 4-H National Council, Cooperative Extension engages more than 5 million youth nationally through 4-H science, engineering and technology programs. Yet in order to maintain this trend, Chvilicek believes an emphasis must be placed on reaching out to youth.

"It's really important to prepare children for future careers, whether they pursue science, engineering or mathematics," Chvilicek said.



Building resiliency in youth

THERE ARE NEARLY 50,000 YOUNG PEOPLE engaged in 4-H programs across Nevada. UNCE recruits and trains hundreds of volunteers who offer clubs/programs for youth who would not otherwise have access to 4-H. 4-H is publicly and privately funded and offers youth opportunities in communications, leadership, career development, citizenship, healthy living, science, technology, engineering and math.

A number of University of Nevada Cooperative Extension youth programs are also successfully challenging the state's dropout problems and juvenile incarceration rates. These programs not only save the state money by filling gaps in state programs but actually return money to the state by keeping youth out of incarceration and preparing them for employment in the future.

Bootstraps prepares 18- to 21-year-olds who are not in school and not working by teaching them skills and strategies to help them find meaningful work. In Tonopah, Battle Mountain and Hawthorne, Bootstraps teams learn environmental restoration, teamwork, decision-making, conflict resolution and work ethic. Nearly 70 percent of our recent participants got jobs and still had them a year later when we contacted them.

Project MAGIC tackles Nevada's highest-in-the-nation juvenile incarceration rate with a longstanding program that has kept nearly 4,000 juvenile offenders from re-entering the justice system and saving taxpayers millions in incarceration costs. In 2009, MAGIC received national recognition from the Department of Health and Human Services.

Building Employment Skills Together (BEST) program in central Nevada taught youth job skills that prepared them for work with county and reservation park projects, saving local governments money and providing meaningful jobs for youth.

Project Thunder and **Mini Society** programs in southern Nevada increase youth's ability to imagine their career goals and future work. Participants learn to make good decisions, solve problems, set and achieve goals and work with others.

The Anahuac School and Community Engagement Program targets Clark County's lowest-in-the-nation high school graduation. If the program can raise Latino, African American and Native American graduation rates to the levels of white students, the potential increase in personal income would add more than \$2.2 billion to the state economy.



Students (above) collect water samples from the Carson River. Small kits (far right) allow them to test the water.

Video contest inspires students to study Carson River

The public may watch student entries at
www.youtube.com/CarsonRiver2009

BY ROBERT MILLS

COOPERATIVE EXTENSION'S NEMO (Nonpoint Education for Municipal Officials) program extended its educational arm to Carson and Douglas high schools in 2009. NEMO Nevada—part of a 33-state cooperative network focusing on land and water protection—typically works with land-use decision makers to maximize efficiency and quality of Nevada's lands and waters.

This year, NEMO coordinated the "Keep Streamside Greener, Keep Water Cleaner" contest for Carson-area students. High schoolers explored the Carson River and created videos and slideshows communicating the importance of riparian areas.

UNCE Water Quality Specialist Sue Donaldson said the NEMO video contest was a great first attempt at reaching public school students in the Carson and Eagle valleys.

"This was a brand-new, pilot project," Donaldson said. "We have been trying to figure out how to get people to understand the importance of riparian, streamside areas and why they should care about them. We wanted to reach high school

students who would likely not think about this sort of thing.”

The contest attracted students eager to produce their own one- to three-minute videos. Donaldson then hosted a film festival where she announced contest winners and awarded them Oscar-style trophies.

“The kids felt really special and proud of their work after the festival,” Donaldson said. “When they’re proud, they want to show off their work, and we reach more people that way. If these videos go viral, all of a sudden we could have a million people interested in protecting riparian areas.”

Katherine Hansen of Carson High School took home the \$500 first prize for the best individual video, and two other teams won \$500 prizes for the best team video and best team animated slideshow.

A panel of judges selected the winners based on creativity, effectiveness, quality of execution and compliance with contest rules.

Other prizes were awarded for “Most Compelling Music” and “Most Viewed on YouTube” — a prize designed to encourage students to use social networking to promote their work.

“It was really clear that some of the kids worked the social networking angle,” Donaldson said. “Some of the videos were watched over 300 times, so we could really see which students got the message out.

“We got thousands of views altogether which really helped us reach a broader audience. It was a way to broaden the educational message easily, and the students really capitalized on it. It was a great first try at utilizing social media concepts.”

Donaldson said plans are already in full swing for the 2010 contest, which will be broadened to host middle school, high school and college student entries.

NEMO program members work alongside planning commissioners and staff, citizen and neighborhood advisory board members, and other advisory groups to facilitate appropriate land planning.

Through cooperation in land management, NEMO members strive to facilitate proven land-management techniques statewide.

The contest was sponsored by the Carson River Coalition Education Working Group, which includes the Carson Water Subconservancy District, the Nevada Division of Environmental Protection, University of Nevada Cooperative Extension and River Wranglers.



“It was really clear that some of the kids worked the social networking angle,” Donaldson said. “Some of the videos were watched over 300 times, so we could really see which students got the message out.”



Students write in their journals during the Food for Thoughts program.

Faculty takes aim at reducing childhood obesity problem in Nevada

BY MARILYN MING

DURING 2009 AND WITH FIRST LADY MICHELLE OBAMA'S initiative, faculty and staff continued to focus on the emerging issue of childhood obesity. With one in three children in the U.S. considered overweight or obese, this is the first generation in many decades expected to have a shorter lifespan than their parents.

These are shocking statistics, but statistics that can be changed through education. University of Nevada Cooperative Extension faculty and staff are dedicated to educating the citizens of Nevada about childhood obesity through books, school gardens, healthy eating and physical activity curricula.

Education through reading

Madeleine Sigman-Grant, UNCE maternal and child health and nutrition specialist, designed two children's books: "Tummy Talks," based on the premise that children have the ability to know when they are hungry or full, and "TV Moves Me," which encourages more physical activity and less TV or computer time for children of all ages.

"I found that families were comfortable reading the books repeatedly to their children, which is how children learn," Sigman-Grant said.

To date, approximately 10,000 books have been distributed through various venues.

Education through school gardens

The goals of the Grow Yourself Healthy and the Food for Thoughts programs are to provide nutrition education enhanced by the creation and innovative use of school gardens.

Grow Yourself Healthy is conducted with third-through fifth-grade students at two Washoe County elementary schools where the majority of the students are from low-income families, Kerry Seymour, UNCE nutrition specialist and program coordinator, said.

The increased obesity and chronic disease risks of these children is heightened by their socioeconomic status and, in many cases, ethnicity.

“The Grow Yourself Healthy goals were designed to foster healthful eating habits and increased physical activity, instilling lifelong behaviors for obesity and chronic disease prevention,” Seymour said.

Food For Thoughts, a school garden program, seeks to improve learning opportunities for southern Nevada school children by teaching classroom curriculum—such as math, science, spelling—in an outdoor classroom garden setting.

UNCE Social Horticulture Specialist Angela O’Callaghan said interested schools must complete a telephone questionnaire to determine the level of interest and resources for creating and maintaining a school garden at their school. Schools are then trained with curriculum materials from many sources. To date, 64 Clark County schools are involved in the program, O’Callaghan said.

Education through classroom teaching

The Smart Choices program addresses childhood obesity through building basic skills related to food selection and promoting increased consumption of a variety of nutritious foods, especially vegetables and fruits.

Seymour said the goal is to increase teacher and student awareness of the components of a healthful diet and increase teacher competence and confidence in delivering nutrition lessons.

“We accomplish this by providing an annually updated nutrition curriculum to participating elementary schools, with accompanying in-service teacher training,” Seymour said.

The program offers grade-specific, in-class nutrition instruction (including fruit and vegetable sampling), a school-wide, food-tasting activity and distribution of three nutrition newsletters to teachers and parents.

Education through early learning

The Veggies for Kids and the All 4 Kids: Healthy,



All 4 Kids

Happy, Active, Fit programs reach out to pre-K, first-, second- and third-grade students throughout Nevada.

Veggies for Kids targets second- and third-grade students at schools with a high percentage of American Indian students. Among ethnic groups, American Indian children have the greatest risk for obesity, diabetes and other chronic diseases.

Findings from the Strong Heart Study and related studies show that, in American Indians, intakes of vegetables and fruits are significantly less than recommended, variety is limited and use of traditional foods—derived largely from plant sources, fish and lean wild game—is waning.

Using 10 in-class education standards-based lessons, the program promotes awareness of the U.S. Department of Agriculture’s MyPyramid for Kids food guide, the health benefits of traditional foods, choice of water over sweetened beverages, daily physical activity and an introduction to supplementary vegetable gardening as a means to promote the desired intake of vegetables and fruits, Seymour said.

These messages support behaviors linked to reduced obesity risk and recommendations of the USDA’s Dietary Guidelines.

Taking a multi-dimensional approach targeted at children, caregivers and child care staff, All 4 Kids draws upon the expertise of UNCE faculty from three disciplines: Teresa Byington: early care and education; Anne Lindsay: exercise physiology; and Sigman-Grant. All 4 Kids includes a 24-lesson curriculum designed to teach preschool children about nutrition, physical activity and the importance of accepting children of different shapes and sizes. The physical activity portion involved developing and teaching principles of movement, music, dance and fitness activities through a music CD and DVD video for use in the classroom.

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Cattlemen's Update program continues to grow

BY ANDREW CHURCH

The Cattlemen's Update is University of Nevada Cooperative Extension's annual educational program offered for beef cattle producers to explore and learn about issues affecting the beef industry in Nevada. Cattlemen's Update, held in at least

five locations around Nevada each year, provides a forum for information and interaction with producers and professionals.

The Cattlemen's Update was created in 1965 by UNCE faculty. The program has grown from 150 participants in 1984 to 450 participants in 2010.

State Extension Veterinarian David Thain said the program has addressed many issues, including Congress' legislation on ethanol production, which alerted Nevada beef producers that operating costs would go up due to rising corn prices. Cattlemen's Update also provides information about other livestock issues.

A 2010 survey showed that more than 90 percent of participants changed their health practices and animal handling after attending



the program, and that many also changed their nutrition management, marketing practices and expected progeny differences.

Participants said they attended because the information presented benefits their operation, it is a reliable source of information, is relevant to their

interests and helps improve profit.

The growth of Cattlemen's Update has also led to the development of other services, such as the Beef Quality Assurance program. BQA teaches beef producers safety and quality assurance practices in all aspects of production.

The program has also gained growing involvement with Nevada youth, with 120 QSA youth participating in the 2010 Cattlemen's Update.

"Producers appreciate these opportunities," Thain said. "Cattlemen's Update provides a social network for producers to meet people face-to-face and make contacts. Now they know who to call or talk to about a particular issue."

childhood obesity

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By integrating nutrition, feeding, physical activity, music and dance, child development, family dynamics and the role of caregivers together into one program, All 4 Kids demonstrates that the complex issue of childhood obesity can be addressed successfully with pre-kindergarten children.

All 4 Kids is one of only four programs nationwide to be selected as a demonstration project in the Models of Food Stamp Nutrition Education and Evaluation Study grant from the U.S. Department of Agriculture's Food and Nutrition Service.

Laura Harrison, Acelero Learning Center Clark

County's executive director, was amazed at the child care teachers' enthusiasm about this program.

"All 4 Kids is a wonderful venue for children to learn healthy habits while having fun," she said.

"The early results of the All 4 Kids pilot program are very encouraging," Tara Spann, All 4 Kids program officer, said.

"Child care staff, children and caregivers all enjoyed the nutrition education and exercise components."

All 4 Kids continues to work with the Acelero Learning Head Start Centers and will be expanding into the Clark County School District.