The 343 youth enrolled in Lyon County’s 4-H animal projects don’t just compete for blue ribbons. Instead of preparing their animals for one day of show, participants learn to raise them for life.

Lyon County 4-H staff encourages participants to use the practical approach to livestock raising, which emphasizes treating animals humanely.

“The practical approach teaches youth to be proud of all their achievements and not base their successes on the evaluation of one judge on one given day,” said Lyon County 4-H Coordinator Darci Beaton. “It is not the idea to take away champion ribbons, but to reinforce the learning that goes with the raising of animals. Our system emphasizes goal setting, responsibility for raising a healthy animal and management skills to achieve the best product at the best price.”

Some competition styles pressure participants to win ribbons, which may result in the unethical treatment of animals. “Traditional show-ring judging emphasizes eye appeal, muscle and excess trimness in animals,” said Beaton. Youth practicing the ethical approach, however, learn how to care for a sick animal, handle newborns and properly groom and feed animals.

Beaton has given presentations on this ethical system to 4-H groups in Douglas and Churchill Counties and Carson City. 4-H groups from across the state learned about the system at a spring 2001 livestock competition in Reno.

Visit our Web site: www.nce.unr.edu
Fallon wells targeted for water testing and research

The Churchill County “cancer cluster” of 14 cases of childhood leukemia has caused concern and anxiety about the safety of public and private water supplies in Fallon and other locations. Cooperative Extension is helping citizens better understand the risks associated with private water supplies, which are not regulated or systematically tested. Here are the program components:

**Well water testing.** This service – formerly limited to arsenic – has expanded to include a complete and consistent domestic water test. Residents pick up bottles and instructions from the Cooperative Extension Office in Fallon. They take their samples to Churchill Community Hospital, which runs a courier to the Nevada State Health Lab in Reno, savings residents a long drive. The testing fees range from $20 to $100.

**Public education.** Cooperative Extension is revitalizing its popular Nevada GOLD (Guard Our Local Drinking Water) program, where trained volunteers help residents conduct well water tests, interpret the results and treat their water, if needed. Publications – such as Arsenic in Drinking Water: Issues Associated with Revising the Standard – will be given to citizens at home and in workshops. To download this new fact sheet, log on: www.nce.unr.edu/water

**Research.** Cooperative Extension Water Specialist Mark Walker and Environmental & Resource Sciences graduate student Brian Fitzgerald are examining historical data for Fallon area groundwater arsenic levels and, for the first time, analyzing the data using a geographic information system (GIS).

“The information from this study will help us understand how thoroughly we've looked at the occurrence of arsenic so far, especially in private water wells,” said Fitzgerald. “I enjoy helping solve problems that are relevant to people and the environment.”

Walker is looking for support for a four-year study testing arsenic and other inorganic materials in the area’s 4,900 private wells. Currently, the amount of arsenic in Fallon’s public drinking water supplies is double the national standard. The program would also include a public education program with workshops, publications and a central hotline.

Ewes chew weeds and stomp seeds to restore rangelands

After Cooperative Extension’s sheep project was so successful in reducing fuel loads on Carson City’s fire-prone and populated C-Hill, educators looked at how the ewes could help restore Nevada’s arid rangelands.

Cooperative Extension’s Rod Davis, Jay Davison and Ed Smith initiated a second project in 2000, near Battle Mountain. The controlled experiment evaluates the difference between mechanical weed control/seeding techniques and using sheep to accomplish the same treatments. With the help of the Bureau of Land Management and Nevada Division of Forestry, treatments were completed on 48 acres of rangeland. The College of Agriculture, Biotechnology and Natural Resources helped supply funding to support the project.

Once again, the sheep did their job. The sheep-grazed plots produced 45 percent less annual mustard than the untreated plots, and fire-prone cheatgrass was reduced by more than 66 percent.

The study will continue in 2001 and 2002 to determine if sheep will keep competitive weeds down and improve the success of native seeding. Twelve-hundred sheep were turned out on rangeland near Battle Mountain in spring 2001. The vegetation response will be studied over the next two years.

“Whenever seeds are broadcast they have a more difficult time surviving,” says Plant and Soil Specialist Davison. “However, when sheep push them down into the soil, the survival percentage should increase, along with the beneficial nitrogen from sheep urine and manure.” The sheep will be rotated on and off the plots every few weeks, according to Davis, Lander County Extension Educator.

During a related project conducted by the Elko BLM, sheep grazed rangeland in preparation of post-fire seeding. They not only reduced competitive weeds but saved $8 an acre compared to mechanical weed-control methods.
Weeds mapped and sprayed along Walker River in Tall Whitetop Initiative

Nearly 100 percent of invasive tall whitetop weed infestations were mapped and will be sprayed again in 2001 along the West and East Forks of the Walker under the Cooperative Extension-led Tall Whitetop Initiative, report Jay Davison and Loretta Singletary.

In partnership with the Smith Valley Resource Conservation District, Walker River Weed Control District and private property owners, the educators mapped locations for the first time along the riparian zone using GIS Geopositional Satellite (GPS) technology. Spraying followed, along with educational workshops, resulting in a long-term watershed weed strategy that continues in 2001 and beyond.

In addition, Cooperative Extension’s Mark Eiswerth and Wayne Johnson are conducting benefit-cost analyses on the West Fork to determine the ecological and economic impacts of various chemical treatments and revegetation strategies.

To get an early handle on the tough noxious weed, the 1999 Nevada State Legislature asked Cooperative Extension to lead a two-year initiative to enhance public awareness and education and control the weed. Walker River was one of nine statewide “hot spots” targeted for demonstration and eradication.

“We made a substantial start in raising public awareness of this threat and motivating people to get involved in identification and eradication activities,” said Karen Hinton, Cooperative Extension dean and director.

With the help of local citizens and groups, Cooperative Extension nearly tripled the legislature’s initial investment through donated time, funds and equipment. The “Tall whitetop: It’s NOT just a pretty face” campaign resulted in numerous weed sightings throughout the state. Visibility was raised through newspaper tabloids, billboards, posters, bookmarks, fact sheets, fliers, traveling exhibits, videos, slide shows, media releases and public service announcements.

For more information, log on: www.nce.unr.edu/tallwhitetop/

Tri-county weed control coalition works in eastern Nevada

With a jump-start from Bob Wilson, White Pine Cooperative Extension Educator, three counties – Lincoln, Nye and White Pine – have formed a weed district to wage war on invasive weeds. It’s the largest weed district in land area in the nation.

The coalition has purchased weed-control equipment; Cooperative Extension has trained supervisors and staff at area conservation camps and certified them to apply restricted pesticides.

The weed control program is part of the Eastern Nevada Restoration Project that is collaboratively addressing many natural resource issues. Cooperative Extension’s Don Holloway, Dan Simmons and Norm Suverly, and Nye County’s natural resource staff are all involved in these efforts.
Alternative crops help sustain agriculture

Nevada’s dry climate and arid land have long been an obstacle for farmers. Few crops can grow in dry land and the ones that do require supplemental irrigation, a limited resource in the state. Experimenting with new crops is a costly and hazardous expenditure for Nevada farmers.

Cooperative Extension specialists test alternative crops for survivability at the Newlands Agricultural Experiment Station in Fallon. They share the successes and failures with farmers statewide in an effort to improve agriculture and conserve natural resources. In addition to testing new crops, Cooperative Extension helps farmers manage resources and improve their farming skills.

“We are teaching people effective conflict resolution skills regarding public land-use as well as low-volume irrigation techniques to help expand the limited water supplies,” said Jerry Buk, Cooperative Extension rural area director. “We study alternative crops that may have a higher value or lower water requirement than traditional crops.”

Hybrid poplar trees are one of the alternative crops being studied. Besides serving as a viable crop to Nevada farmers, poplar trees can help protect farmlands from floods and dust storms.

Cooperative Extension’s Willie Riggs and Jay Davison began hybrid poplar research in June 1998 by planting 300 trees of three varieties in Eureka and at the Newlands Station. The Eureka trees averaged 53 inches of growth in the first year, but perished in the winter. The Newlands’ trees fared better. Some trees have reached heights of more than 20 feet, while less than 5 percent have died.

“There is great potential for these trees,” Riggs said. “They are fast-growing trees that may benefit farmers. In addition to serving as flood barriers and windbreakers, they create shelter belts, reduce soil erosion and form snow fences and wildlife habitats. Poplar wood can be used in a variety of wood products and could be quite profitable for farmers. The trees can be made into wood chips, paper pulp, peeler logs (used in door and cabinet veneers) and furniture logs.”

Riggs and Davison plan to test the trees for survivability in other locations around the state before recommending them to farmers. Still, some producers are eager to start planting poplars now. Davison has fielded numerous calls from potential growers and estimates that farmers will plant 5,000 hybrid poplars in 2001.

Free publications help citizens manage natural resources

Published in spring 2001, Managing Natural Resource Disputes is a comprehensive guide to reaching agreements over natural resources. Several hundred copies have already been requested from universities and organizations across the nation.

Farm and Rangeland Water Quality Management is a guide to understanding non-point source water pollution for farmers and ranchers. Cooperative Extension held water quality workshops in Nevada communities in May 2001.

For a copy of these books, contact Loretta Singletary at (775) 463-6541 or singletARY@unce.unr.edu.

Switchgrass: an alternative energy source?

Cooperative Extension researchers and Natural Resources Conservation Service specialists began studying five varieties of switchgrass at the Newlands Agricultural Experiment Station in 1993. The trials were successful and switchgrass appears to have potential as an alternative crop for Nevada farmers. Now it looks like a potential alternative fuel, as well.

Cooperative Extension Plant and Soil Specialist Jay Davison is growing switchgrass not just as forage but also for use as fuel for pellet stoves. When the crop is harvested in summer 2001, the switchgrass will be shipped to Eureka to be milled into pellets.

“The switchgrass pellets have high BTUs (British Thermal Units), a good source of energy,” said Davison. “They also produce a low amount of ash which is beneficial for users.”

The pellets will be marketed in Reno. If successful, they could be a profitable alternative crop for farmers and a good source of fuel for consumers.
American-produced beef is the safest, most wholesome and satisfying in the world. However, health concerns can scare away consumers. Cooperative Extension is collaborating with other agencies to ensure Nevada’s ranchers continue producing safe, high-quality beef.

In November 2000, 31 Nevada cattle producers completed the first level of the Beef Quality Assurance (BQA) educational program. BQA, created 10 years ago by the National Cattlemen’s Beef Association, teaches producers about animal genetics, cattle handling, feed purchasing, record keeping, testing and other procedures to produce the safest beef possible. BQA safety requirements exceed standards set by the federal government.

“This first series of voluntary programs reinforced the animal selection, management, health and feeding practices that affect the wholesomeness and eating satisfaction of beef products,” said Ron Torell, Cooperative Extension livestock specialist.

Ranchers who complete the three levels of BQA education are likely to increase the confidence and satisfaction of consumers with their superior product. By increasing consumer confidence, producers, in turn, increase demand for beef.

“American families expect and deserve quality and wholesome beef,” said Ben Bruce, Cooperative Extension livestock specialist. “Cow-calf producers are the very first link in the production chain.

Cooperative Extension and bees help alfalfa growers maximize their crops

Alfalfa production is a vital industry in Nevada—one of the top five alfalfa producing states in the nation. Because of the importance of alfalfa to the state and the country, Cooperative Extension works with farmers to produce better crops and maximize their harvests.

Cooperative Extension specialists began studying the interaction of irrigation, fertility and pollination on alfalfa at the Newlands Agricultural Experiment Station in Fallon in 1999. This six-year study focuses on irrigation requirements and pollination of alfalfa by bees to maximize production output.

“Reproduction (pollination), plant nutrition and water management are highly interrelated in alfalfa seed production,” said Don Breazeale, Pershing County Extension Educator. “We believe that better control of nutrient supply and soil moisture levels, combined with good bee management, will result in a plant capable of producing maximum economic yields.”

Free Beef Quality Assurance training helps producers improve meat quality

What they do in the raising, feeding and marketing of their animals has an impact on the final beef product."

Upon request, BQA programs will be held in any Nevada community or on any ranch. For more information, contact Ron Torell, (775) 738-1721, or torellr@unce.unr.edu.

How to keep youth on the land in Lincoln County

With nearly all Lincoln County youth moving away after high school graduation, the numbers of ranchers left behind are declining. To rejuvenate interest in agriculture and natural resources and provide career choices for young people, Cooperative Extension Educator Don Holloway developed programs in soils, range and wildlife management.

More than 40 percent of the county’s youth learn soil composition and conservation; 30 percent have expanded their soils education to range, where they identify plants and weeds and learn efficient management; 11 percent attend the new wildlife classes where they develop habitats.

The students participate in state, regional and national competitions, earning awards and recognition. Some have received university scholarships in these fields, but many have applied knowledge to enhance rangelands right in Lincoln County.
Indian reservation programs teach farmers and youth

Alfalfa farmer Fred Kinerson knows what good hay looks like. He needs more expertise, however, about how soil minerals, irrigation tracts and level land can contribute to hay quality.

Kinerson lives on the Walker River Paiute Reservation and, like many Native American farmers, doesn’t always have access to the latest farming information.

The Nevada Extension Indian Reservation Program (NVEIRP) offers workshops aimed at helping farmers like Kinerson. NVEIRP is a Cooperative Extension program that helps tribes improve their agriculture, natural resource practices and youth programming on the Walker River Paiute Reservation as well as the Fallon Paiute-Shoshone and Pyramid Lake Paiute Reservations.

Tribal farmers and ranchers benefit from soil sampling seminars, hay clinics, water testing sessions, cattle clinics, horse management classes and courses in natural resource mapping and native plant identification.

When program coordinators were looking for a site to hold a hay and soil sampling workshop, Kinerson volunteered his land.

Cooperative Extension Plant and Soil Specialist Jay Davison taught the workshop and helped producers test the nutrient quality of their hay. Davison helped farmers understand hay purchasing, fertilizer costs and benefits and the importance of irrigation.

“The workshop was a good benefit for me,” Kinerson said. “I learned how to level out my land and make it better for irrigation.”

NVEIRP is preparing future Native American generations with life-long skills, as well. After-school activities and 4-H clubs have been established to teach children agricultural practices along with leadership, communication and cooperation skills. A water quality curriculum is being written for middle schools that will emphasize natural resource conservation.

NVEIRP leaders hope to unite all tribal farmers in Nevada at the first-ever Indian Agriculture Summit, Sept. 6-7 in Reno. The summit is a chance for farmers to share techniques and learn new skills from professionals.

Mark your calendars now!

Indian Agriculture Summit

Sept. 6-7
Atlantis Hotel and Casino, Reno
Coordinator: Staci Emm
(775) 428-0203
emms@unce.ag.unr.edu

Improved water quality is an objective of the tribal programs. The Pyramid Lake Paiute Tribe operates a fishery on the lake where they spawn Lahontan Cutthroat Trout.

Tonopah revitalizes downtown to attract businesses, tourists

Tonopah has lost one-fourth of its population in the last 10 years, putting it on the downside of a boom-and-bust cycle. The town board decided to revitalize its downtown area to build a stronger and more economically stable community. The new look will include modern signs, better parking, trees and remodeled store fronts.

Cooperative Extension Economist Buddy Borden co-facilitated meetings of the steering committee and the development of a retail leakage study. When Northern Nye Extension Educator Norm Suverly came on board in early 2001, he got involved with the group’s beautification and landscaping efforts. He’s linking the local group with resources from the university’s business and economic departments to help strengthen and develop the Tonopah economy.

The historic Mizpah Hotel, shown above, will be part of the downtown Tonopah revitalization efforts.
Community Based Education for Rural Nevadans

Dean and Director: Karen Hinton
Assistant Director: John Burton
Communications Coordinator: Alice Good
Writers and Photographers: Candy Cook, Alice Good
Art Director: The WriteTYPE
Area Directors: Dixie Allsbrook (Southern), Jerry Buk (Rural), Richard Post (Western)

What is Cooperative Extension?

Our Purpose
We’re the outreach college that extends knowledge from the University of Nevada – and other land-grant universities – to local communities to address issues. We are a federal-state-county partnership with 17 offices throughout the state. Our more than 200 personnel – with the help of volunteers – deliver non-degree educational programs based on local needs. In 2000, Cooperative Extension made more than 400,000 face-to-face contacts with community citizens.

Our Program Areas

- Agriculture
- Community Development
- Health and Nutrition
- Horticulture and Natural Resources
- Human and Family Development

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

Cooperative Extension publications
To access our more than 300 on-line publications, log on: www.nce.unr.edu/pubs.html

Help us make a difference!

If you would like to support Cooperative Extension programs, here’s how you can help:

- Sponsor a project
- Offer a donation in memory of a loved one
- Introduce us to new funding sources

Contact Bobbi Lazzarone, development and public relations director, at (775) 784-4378, or lazzaroneb@unce.unr.edu. Your assistance can help us expand our programs to benefit more people.
During a brainstorming session at a fall 2000 High Desert 4-H meeting in Tonopah, club members came up with what they considered “the perfect community service project.” The 4-H members, ranging in age from 5 to 19, started collecting coats and sweaters to give to homeless people across the state. The kids found people were eager to donate old coats, but they were having trouble coming up with money for repairs, transportation and storage.

In October, the group received a grant from the National 4-H Council and Metropolitan Life Foundation for their “Share the Warmth” project. The money was used to buy mending supplies and laundry detergent, and pay for community advertising, transportation and storage. They were now in a position to collect and distribute more coats.

“The kids also gained an understanding of what it means to be homeless,” said Deb Cobb, Northern Nye County 4-H coordinator. “As the coats started rolling in, their enthusiasm soared. As winter approached, these youth rolled up their sleeves and were determined to find as many coats as possible.”

They posted fliers around northern Nye County and put donation boxes in the Cooperative Extension office and two high schools. They contacted other 4-H groups across the state and encouraged them to collect coats too.

In early December, the 4-H group traveled to Reno to present 180 clean and mended winter coats to a local mission. The coats were given to homeless people during an annual Christmas dinner.

While proud of their accomplishment, High Desert 4-H members realize there is still work to be done. “The kids are still passing out flyers and collecting coats,” Cobb said. “We plan to continue gathering coats long after the grant funding has ended.”

Stacy Jensen’s 16th year was anything but sweet. The Elko teenager partied with an older crowd, letting her grades slip. Her relationship with her mother deteriorated until her appearance in juvenile court on drinking-related charges led the family to positive change.

Stacy is one of more than 500 Project MAGIC (Making a Group and Individual Commitment) graduates referred by juvenile authorities to the Cooperative Extension program. Nevada has the nation’s third highest juvenile incarceration rate, and in Elko, Battle Mountain and Winnemucca where MAGIC began in 1995, no other detention options were available.

“The lack of community-based programs is the biggest contributor to recidivism,” says Marilyn Smith, program director. “Tragedies like Columbine High School have made us painfully aware of the need for collaborative, preventive programming to curb violence through research and education,” says Karen Hinton, Cooperative Extension dean and director. “With increased support we could help more first-time offenders leave the juvenile justice system and become productive members of society.”

Stacy was skeptical when she entered MAGIC’s eight-week course in summer 2000. “It’s got to be stupid,” she told her teacher, Amy Farmer. But by the third week, she started to blossom. She became a leader and helped other kids. By the fourth week, she landed a job and by graduation day, she had her sights set on college and a career in photography.

MAGIC works. A study of more than 100 teen graduates shows they increased their skills in decision making, conflict resolution, goal setting and communication. Follow-up interviews of youth a year later reveal they’re using program strategies to stay out of trouble. Furthermore, the juvenile-incarceration rate in counties that offer the program rapidly declined, saving taxpayers the high cost of imprisonment.

“Besides the curriculum,” says Smith, “our dedicated instructors are the key to this successful program.”

MAGIC has expanded to Duck Valley Indian Reservation in Owyhee, Tonopah, Carson City, and Las Vegas, where 2,500 youth encounter probation each month. The curriculum is available to other agencies or organizations that want to start a program in their community. Adaptations of the curriculum are in progress for urban and Indian reservation youth as a result of a federal five-year New Communities Grant.

“Stacy’s not a bad kid, she just made some bad choices,” says her mother, Josie Barron, who participated in the program’s parenting component. “Now I think before I act,” Stacy says. “My friends have changed too — we go camping instead of partying. If it hadn’t been for MAGIC, I’d be in a lot of trouble.”