



Putting Knowledge to Work

Putting *knowledge to work* is the business of Cooperative Extension. With a network of university-affiliated staff in 59 of the 64 counties across the state, the local county Extension office is truly the *front door* to Colorado's land-grant university. Local Extension professionals work side-by-side with community residents as they bring the knowledge base of Colorado State University to address locally-identified needs and issues. The mission of Colorado State University Cooperative Extension is to provide information and education and encourage the application of research-based knowledge in response to local, state, and national issues affecting individuals, youth, families, agricultural enterprises, and communities of Colorado. The Colorado State University Cooperative Extension system includes faculty and staff in 13 academic departments in five colleges.

A major factor affecting Colorado Cooperative Extension in 2003 was the state economy. An 18 percent budget reduction was imposed on CSU and in turn Cooperative Extension by the Colorado Legislature, which represented a total of \$1.62 million dollars. This budget cut required us to implement significant staff and operating budget reductions while attempting to minimize the effect on programs with the greatest impact in communities and on programs addressing critical issues across the state. Cooperative Extension eliminated a total of 33 full-time equivalent positions through a combination of staff layoffs (23 filled positions were eliminated), reduction of a number of employees from full-time to part-time, and elimination of some positions that were vacant at the time of budget decisions. Position reductions or eliminations affected Cooperative Extension staffing in 26 counties across the state. Administrative and operating budget reductions also were made, along with reductions in faculty support dollars in five colleges on campus.

Even with these state budget reductions for Cooperative Extension now being implemented, we are looking forward and asking the question, "How might Cooperative Extension best be organized, structured and focused to serve the citizens of

Colorado?" Futuring efforts for Cooperative Extension have been reviewing staff roles and relationships; technology, information management and access; organizational structure; diversification of funding; and marketing challenges for Cooperative Extension. These efforts will feed into the outreach portion of the Strategic Plan for the Division of Academic Affairs being led by CSU Provost Peter Nicholls.

Despite the difficulties in dealing with the budget cuts mentioned, we continue to have successes to demonstrate our commitment to the citizens of Colorado. We had great response in 2003 to our Web-based program, *AnswerLink*, which offers individuals access to a large database of routine questions and answers via the Internet. It includes an "ask the expert" component for Coloradans to ask questions and receive an email answer. Since its inception a year ago, there have been 222,000 hits on the site by people searching online information and 2,200 unique questions answered. Our staff in 59 county Extension offices also continue to be respected resources for their constituents--working with adults and 4-H youth, answering questions and providing information and educational seminars on current issues and "hot topics" like food safety and nutrition, animal health issues, drought, water conservation and others.

It is important for Cooperative Extension to provide support for priority programs throughout the state. We continue to seek new resources and increase efforts to secure more outside funding such as fees and extramural dollars. One avenue we have begun to use for generating some revenue is a fee for youth participation in 4-H, which will help insure continuity in program support and management, and assist with special services offered to youth in the Colorado 4-H Program. Please contact me at any time with questions, comments or ideas relating to Cooperative Extension educational programs.

Milan A. Rewerts

Milan A. Rewerts, Director
April, 2004

Colorado State University Cooperative Extension programs are helping Coloradans

- **practice water conservation techniques, and increase knowledge and skills required to live with finite water supplies;**
- **learn to maximize and sustain water quality in homes, gardens, farms and communities;**
- **benefit from research that addresses water-quality issues.**

The Costs...

- *Approximately 80% of the state's available water supply falls on the western side of the Continental Divide while 80% of the human population lives on the eastern side. Colorado's municipal and industrial water use is projected to increase from one million acre-feet in 1998 to 2.7 million acre-feet by 2100. Increasing population growth combined with increased demand for water for recreation, scenic value, fish & wildlife habitat, and production of food & fiber from western farms and ranches will drive major conflicts between competing uses of water.*
- *Water shortages occur frequently in the West and severe droughts have dramatic effects. During 2002-03, rainfall in the Colorado River Basin was the lowest in recorded history; the Rio Grande River flow was at 13% of normal.*
- *Pollution reduces the supply of safe drinking water – approximately 500,000 tons of pollutants find their way into U.S. lakes and rivers each day. In Colorado, 2,087 miles of major rivers are affected by nonpoint sources of pollution including eroded sediment, nutrients and salinity.*
- *A faucet or toilet that leaks one drop of water per second wastes 2,400 gallons a year.*

Addressing Water Challenges Faced By Colorado Homes, Farms, Communities

The western states are settling the country's fastest growing populations into its most arid environments. Competing users see the need to optimize use, protect quality and conserve water – a valuable resource shared by all. All new water supplies in Colorado, a headwater state, result from precipitation in the form of rain, hail and snow. Annual precipitation varies considerably in Colorado – from seven inches in the San Luis Valley to more than 25 inches in the mountains. Most of the state is heavily dependent on annual snowmelt and runoff from the mountains to the eastern plains where a majority of the water is used. Colorado on average has 15,600,000 acre-feet of surface water runoff, consumptively uses approximately 6,000,000 acre-feet, and delivers the remaining water to downstream states, primarily those in the southwestern United States. Through creative and diligent management, Colorado provides water to a large agricultural industry, a number of growing urban population centers, and other states as governed by interstate compacts.

In addition, Colorado has been able to provide water for environmental uses, snow making, and recreation. Despite the relatively large volume of water that originates in the state, drought and limited supply conditions are very much a part of Colorado's history – and its future. Water quality also is a high-priority issue. As population growth continues, demands on finite water supplies and the risk of adverse impacts on the quality of those resources steadily increase. Colorado State University Cooperative Extension provides educational programs on drought, water conservation, and water-quality issues.



Colorado State University Cooperative Extension programs assist residents in understanding the crucial role they play in the management of drought and water quality in their semi-arid environment.

The Payoff...

Colorado State University research and Extension education, focused on finding and demonstrating new irrigation practices and technology, have helped stem the salty tide of Colorado's Arkansas River, one of the most saline rivers for its size in the United States. An estimated 75% to 85% of the salt comes from rainwater flowing overland and down to the river, which then becomes concentrated on irrigated land. Reduced tillage procedures, increased use of surge irrigation and soil-stabilizing polymers have reduced erosion, enhanced water absorption and helped farmers cut costs through more efficient irrigation and reduced salty drainage to the river and groundwater basin. Overall cost savings and productivity increases to producers have amounted to \$1.6 million over the last seven years.
(Colorado State University, 2003)

Cooperative Extension coordinates a six-state regional water-quality program funded by an annual U.S. Department of Agriculture grant of \$650,000. This regional program provides for a sharing of water expertise among the states that strengthens Cooperative Extension's

ability to address Colorado water-quality concerns.
(CSU Cooperative Extension ePOWER, 2004)



- Colorado's dominant water-quality concerns include municipal and industrial discharges, urban and agricultural runoff, mining and abandoned mines, and modification of streams, wetlands and canals. Colorado State University Cooperative Extension personnel conduct research and educational programs to address impairments in both surface and ground-water resources. Programs focused on Best Management Practices (BMPs) help agricultural producers use precise irrigation and fertilization techniques to use water more efficiently, save money and protect the water supply; more than 60% of growers surveyed reported using soil-test analysis to determine fertilizer rate; 54% who applied pesticides used BMPs such as field scouting and crop rotation.
- Ground-water monitoring data suggest that BMP education is paying off. For the 200,000 wells providing domestic water to Colorado residents, this is good news. Of 1,000 wells sampled since 1992, only 4 detections of any pesticide above a drinking-water standard were found; 2/3's had no pesticide detection, and in areas that had high agricultural-chemical contamination, trend analysis showed decreasing atrazine concentrations.
- Cooperative Extension, cooperating with the Colorado Climate Center, improved the usability of crop water-use reports using evapotranspiration estimates provided by the CoAgMet weather network; users have the ability to choose specific crops, weather stations and planting dates to customize their reports. ET rates help growers reduce irrigation pumping and conserve water and also help homeowners improve lawn-watering practices.
- Of 800 participants in Cooperative Extension workshops designed to help producers understand the complex legal issues of ground-water pumping and surface-water augmentation requirements in the South Platte River Basin, 83% increased knowledge about irrigation alternatives to fit their operations, 29% said they would use crop rotation and reduced tillage systems to raise farm profitability and sustainability, 15% indicated they were able to net excellent yields and profits from their irrigated crops as a result.
- In rapidly growing urban areas, Cooperative Extension programs help consumers reduce water consumption and minimize pollution in homes and gardens; an updated water-resources Web site provides them direct access to publications, information on water-use during drought and updates of municipal watering restrictions.
- Cooperative Extension, in collaboration with local conservation districts, continues to study and manage selenium and salinity impacts from approximately 80,000 acres under irrigation in western Colorado. Through these efforts, local growers have taken the lead in handling regulatory pressures due to endangered fish in the Colorado River Basin.

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Colorado State University Cooperative Extension programs are helping Coloradans

- **increase their knowledge about the social, educational and physical needs of children;**
- **recognize the importance of early child development on the long-term growth and development of youth;**
- **improve childcare quality through research-based education and best practices for provider training, parent involvement and community support.**

The Costs...

- *According to the Census Bureau, there are 36.7 million children in the U.S. between the ages of 5 and 14, of which 24 million are likely to need care because they live in family structures where parents are working, going to school, or seeking employment; 75% of children under age 5, or 14.4 million infant and preschool children are in some form of childcare arrangement.*
- *Lack of reliable childcare causes workers to lose time, be less productive and affects job performance. Research has shown that among employed parents, up to 57% of women and 33% of men with children under the age of 6 had lost time from work due to a failure in their childcare arrangements. Increased absenteeism, tardiness and turnover rates adversely affect productivity, work quality and ultimately business competitiveness, and cost American businesses \$3 billion annually.*
- *The Children's Defense Fund found that professional, quality childcare is hard to find in a marketplace where childcare providers do not earn as much as bus drivers (\$20,150) or garbage collectors (\$18,100). Poor-quality care has been shown to cause serious impacts on children's development including delays in cognitive and language development.*

Working With Parents and Providers to Strengthen Colorado Childcare Programs

Dramatic changes are occurring in the way families work and live, the environments in which youth learn and develop, methods of parenting and the financial security of families and communities. Decades ago, most children had seven hours a day to interact with parents and friends – they walked to school, ate lunch at home, and had the afternoon to learn and play. In today's society, with changing family structures and more demands placed on working parents, time with children is greatly diminished. Children are whisked away to childcare centers or before-school programs as early as 6 a.m., to after-school programs at the end of the school day, then returned home at 6 p.m. to eat, watch TV or do homework and go to bed. At best, they might have two hours per day to interact with parents, siblings and their community. At worst, some children are left on their own or in unsafe conditions. Educating, nurturing, guiding and caring for our nation's children are increasingly becoming the responsibility of a broad array of childcare providers in an equally broad array of settings. Over the course of their developmental years,

most children will spend more time in childcare than they will in formal education. Every day in America 14 million infants and preschoolers are left in childcare arrangements, 24 million school-age youth are in need of programs, and an estimated 5 million are without any adult supervision. Colorado State University Cooperative Extension is improving the quality of Colorado childcare programs by training childcare providers, disseminating developmentally appropriate curriculum, and working with communities and other agencies to establish and expand childcare programs and make childcare safe and reliable for families.



Colorado State University Cooperative Extension helps parents, families and care providers gain knowledge and implement best practices to improve the quality of childcare in Colorado.

The Payoff...

Participation in high-quality early childhood care and education programs can have positive effects on children's cognitive, language, and social development, particularly among children at risk. A national study found that children in quality childcare programs had better language, mathematics and social skills and better relationships with teachers than those in lower-quality classrooms; quality care also had a greater impact on at-risk children's school readiness and self-perception.

(University of Colorado-Denver, Economics Department, 1995)

Research has shown that investments in quality preschool programs save \$7 for every \$1 spent, by increasing the likelihood that children would be literate, employed, and enrolled in post-secondary education, and making them less likely to be school dropouts, dependent on welfare, or arrested for criminal activity or delinquency. The 7:1 cost-benefit ratio also reflects savings in the criminal justice system, reduced welfare costs and higher taxes paid from better paying jobs.

(High-Scope Educational Research Foundation, 1992; Rand Corporation, 2001)



- A decade worth of research on the developing human brain has made the issue of quality preschool and “who is watching our children” an important public issue. Research confirms a strong and consistent link between the training received by childcare providers and the quality of care they provide. Last year Cooperative Extension improved the knowledge and skills of nearly 4,000 Colorado childcare providers.
- The Childcare Referral Network operated by Cooperative Extension in the Tri-River Area last year answered 771 technical assistance calls from child-care providers, provided information to more than 280 individuals interested in entering the childcare business, made educational contacts with 2,948 providers, and conducted 20 site visits to childcare facilities as part of their outreach effort; 72% of those surveyed said they found training opportunities through Extension resources.
- In Routt County, a partnership with the local Consolidated Childcare Pilot, has increased capacity of childcare providers to deliver quality programming through monthly meetings where they receive training and work to create a collaborative service delivery system.
- In Gunnison County, Extension hosted the annual Western Colorado Early Childhood Conference, a local collaboration committed to assisting preschool and K-3 teachers, and home and center childcare providers to improve early childhood education. The 219 statewide participants received continuing education credits and increased knowledge by 20-60% about child literacy, brain development, nutrition, health, behavior, curriculum development and best business practices.
- In Pueblo County, a series of workshops using the “Better Kid Care” curricula was provided to 156 childcare providers who needed certification hours to maintain licensed homes and centers; 90% reported increased knowledge about nurturing and caring for kids.
- Foster parents and grandparents are target audiences for Extension parenting and childcare education efforts such as “Grandparents Raising Grandchildren,” which provide support and bilingual assistance to seniors who find themselves raising their children's children due to abuse, neglect, parent incarceration, substance abuse, death, financial hardship, or mental health issues. In Weld County, a collaboration between the Colorado Department of Human Services' Alcohol & Drug Abuse Division, the Area Agency on Aging, Catholic Charities, Extension's Partners in Parenting Program and the local Extension office provided technical assistance and train-the-trainer sessions for the “Kinship Care” program. In subsequent sessions for grandparents, participants expressed appreciation for the support, increased knowledge of resources, and improved confidence in their abilities to nurture and care for themselves and their grandchildren.

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Colorado State University Cooperative Extension helps Colorado youth

- **access educational, safe, caring, before- and after-school programs;**
- **enhance personal development, academic performance, social interaction, and life skills through participation in 4-H Youth Development school-age programs.**

The Costs...

- *Research from the law-enforcement community shows that 45.5% of all violent juvenile crime on school days takes place between 2-8 p.m., the time of day millions of children and youth are left unsupervised. 57% of violent crimes committed by juveniles occur on school days. Research has shown that unsupervised children are at significantly greater risk of truancy, academic problems, and risk-taking behavior including substance abuse and teen pregnancy.*
- *A Canadian study compared juvenile arrests in two public housing projects, one with an after-school and summer program and one without. Results showed that the number of juvenile arrests declined by 75% in the housing community that had an after-school program, and increased by 67% in the comparison project. The resulting savings to government agencies came to twice the program's cost.*
- *A Wellesley College survey revealed that children who lack supervision and/or structured after-school programs spend a great deal of time watching TV. Children's television viewing has been associated with lower reading achievement, behavioral problems and increased aggression, and when children watch more than three hours of television a day or watch violent programs, these risks increase.*

Adding Value to School-Enrichment and After-School Experiences Through 4-H

Before- and after-school care, or school-age care as it is commonly called, has become a way of life for most American families. Over the course of their developmental years, millions of children will spend more time in out-of-school-care arrangements than they will in formal education. Children spend less than 20% of their waking hours in school. Schools usually provide educational experiences only until mid-afternoon, and are typically open less than half of the days of the year. What happens in the other 80% of a child's time is critical to children's development. High quality before- and after-school programs have been proven to help young people develop skills that enable positive development. Successful after-school programs help create safe environments for young people in the hours when juvenile crime peaks. For more than a century, Cooperative Extension's 4-H Youth Development Program – the world's largest youth-serving organization – has provided positive youth development programs for school-age children between the ages of 5 and 18. Each year, nationwide, about two and a half million youth

are involved in 4-H school-enrichment programs. Extension staff and volunteers partner with schools, churches, public-housing communities and community centers to provide educational, safe, caring before- and after-school programs. The 4-H Youth Development Program provides critical links between formal and non-formal educational experiences and helps young people develop skills such as decision making, leadership, communication, interpersonal relations, anger management, responsibility, resiliency, citizenship and good work habits. Teachers find the learn-by-doing instruction increases student learning and critical-thinking skills.



Cooperative Extension 4-H Youth Development programs help youth build a solid foundation of knowledge and life skills through learn-by-doing activities.

The Payoff...

Public officials recognize the importance of school-age care as a means of developing healthy communities and families – a survey showed that 92% of them ranked childcare and before- and after-school care as one of the most pressing needs for children and families. In a survey of voters, 8 of 10 people across party lines agreed that after-school programs are an absolute necessity and should be funded.

(National League of Cities, 1996; Afterschool Alliance, 2003)

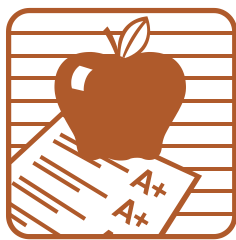
Teachers, parents and principals surveyed in 16 states reported that children had become more cooperative, learned to handle conflicts better, developed an interest in recreational reading and were getting better grades as a result of the after-school programs organized by the Cooperative Extension System. In Colorado, 98,247 school-age youth participated in 4-H Youth Development after-school and school-enrichment programs last year.

(National Association of Elementary School Principals, 1993; CSU Cooperative Extension Blue Ribbon Program, 2003)

Estimates of the economic impact of after-school programs on high-risk youth range from a return on investment of approximately \$3-\$4, to a high of \$10-\$13 for every dollar spent.

The conservative estimate excludes crime reduction benefits but includes reduced welfare costs, improved school performance and the savings realized by producing more productive members of society.

(Costs & Benefits of After-School Programs, Brown, et. al, 2002)



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- A Cooperative Extension 4-H Youth Development after-school program in Colorado Springs, funded through the Colorado Trust, reaches low-income, high-risk youth in grades 4-9 at various community sites. In addition to providing a safe haven for youth after school, the program combines culturally appropriate strategies, developmental assets and character building to promote reading improvement, academic enrichment, leadership development and community service. Of 200 participating youth, 87% had an improvement of at least one grade point in all academic classes; 90% reported they accomplished goals related to leadership, teamwork and decision-making.
- In Moffat County, Cooperative Extension served as the catalyst among community youth-serving agencies for a Colorado Trust grant that funded "RAD – Recreational After-School Doorway" an after-school program for 5th and 6th graders at Craig Intermediate School. The grant supported a full-time coordinator and instructors for 17 programs offered four days a week throughout the school year. 62% of the students participated in the program designed to increase contact with positive adult role models and enhance academic achievement.
- Gardening provides a hands-on classroom that teaches children earth stewardship, science and the process of discovery. Cooperative Extension in Adams and Boulder counties developed two programs that are in high demand by area elementary-school educators. Each year almost 900 children in the two counties participate in "Earth Gardens" to design and plant a school landscape while they learn math and science concepts. Extension's "MiniGreenhouse" program reached more than 4,000 1st-3rd graders in the metro area who were introduced to earth science by sprouting a seed and watching it grow. In Larimer County, the Master Gardener Youth Program helps dozens of 14- to 18-year-olds develop an appreciation for nature while increasing their interpersonal skills through teamwork and community service.
- Cooperative Extension is a strong participant in the Eagle River Youth Coalition, a partnership of youth-serving agencies organized to provide Eagle County youth aged 10 to 18 constructive, skill-building experiences. A wellness fair held at the high school attracted 600-plus students to workshops with such titles as Clues to the Blues, Alcohol 101, and Tests You Don't Want to Fail. Coalition follow-up included an Extension-facilitated county-wide youth assessment and asset-building education in the community.
- In Logan County, Cooperative Extension conducts school-enrichment education for elementary, middle and high school classes using the Character Counts program. Third graders did hands-on lessons on team building, respect, trust, cooperation and citizenship – 77% of them could relate the "Pillars of Character" and illustrate examples of character in action. Middle school students experienced in-depth character-building activities with teacher follow-up; 72% of them increased their knowledge of character traits.

Colorado State University Cooperative Extension programs are helping Colorado producers

- **increase knowledge and skills related to managing a farm or ranch in today's agricultural risk environment;**
- **understand and use various risk-management tools available to them;**
- **maintain viable and profitable agricultural enterprises.**

The Costs...

- *The Colorado Agriculture Statistics Service reported that statewide farm debt in 2000 was \$3.8 billion, an increase of 16% from 1995. U.S. farm business debt exceeded \$200 billion for the first time at the end of 2003, and is expected to rise 3% in 2004, exceeding \$205 billion by the end of the year.*
- *Despite positive national farm forecasts, Colorado was hit hard the last few years by environmental and economic forces that caused stress for state agricultural producers. The western U.S. drought and the state's depressed economy affected Colorado's livestock, crops, feed grains and forage resources. Last year, the state harvested its smallest wheat crop since 1968 with an average yield of only 22 bushels per acre; corn acreage decreased with acres transferred to less water-demanding crops and potato production was critically affected in the San Luis Valley. Limited rangeland and resources forced 20% of the state's breeding cows to be sold off, which will require years of recovery efforts.*
- *USDA's Economic Research Service showed that in 2002, 46% of U.S. farm households had annual incomes below their expenditures – a disproportionate share of which are midsize farms and retired farmers for whom farm-derived income is often negative (averaging a loss of \$13,000).*

Helping Agricultural Families Reduce Operational Risk and Build Resilience

The business environment that agricultural producers operate in today puts the responsibility to manage risk squarely on their shoulders – it truly is the producer's "freedom to farm or fail." Price and income support programs are no longer the centerpiece of U.S. farm policy. The 1996 Farm Bill put into motion a plan to move agriculture to a market orientation, which increases risk exposure for farmers and ranchers. In addition to traditional sources of agricultural risk, such as weather, insect and disease problems, and other production issues, farmers now face increasing risk from market forces of supply and demand. Agricultural producers must take a strategic approach to managing risk in order to achieve long-term success in their operations. Risk management programs define five categories of risk: production, marketing, financial, legal and human. To survive in today's risk climate, agricultural operators must combine and manage all of their resources effectively. Cooperative Extension program outcomes have shown that agricultural producers who effectively manage their farm risk and increase their operational resiliency are consistently more profitable than average and are better able to preserve their farm's integrity and enhance the land's environmental sustainability. Cooperative Extension invests in

applied research and education to assist producers in managing livestock and crops to improve management strategies, develop viable management alternatives, increase production, reduce pests and disease, and enhance the quality and competitiveness of Colorado's food and fiber industries. Extension education also helps communities and local producers develop markets and value-added products in order to maximize return on production efforts.



Colorado State University Cooperative Extension programs are designed to help livestock and crop producers manage resources effectively to reduce risk and improve operational resiliency.

The Payoff...

In 1900 it took 35-40 hours of labor and 2½ acres of land to produce 100 bushels of corn-at about 40 bu/acre – using rudimentary equipment. Today, it takes 2½ hours of labor and one acre of land to produce 140 bushels of corn, using high-tech equipment such as a variable-rate planter and a hundred-thousand-dollar GPS-guided tractor. Farm population is only about 2% of America's population, but one farmer provides food and fiber for 129 people.

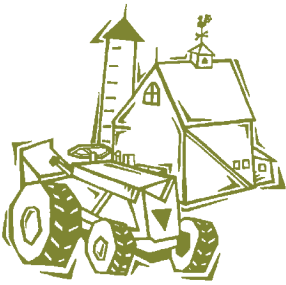
The food and fiber system represents 16% of the U.S. Gross National Product, and provides jobs for 17% of America's workforce – 90% of those off the farm. The majority of U.S. farms (96%) are still owned by individuals and family partnerships.

(U.S. Ag Statistics Service, 2000)

Farm income and risk management are major components of keeping a long-term agricultural enterprise functioning. Both large and small Colorado producers are taking steps to improve economic viability. 60% of producers manage risk by supplementing farm income with off-farm income.

Farms with more than \$250,000 gross income are using more management tools to hedge risk – including grain storage, production revenue insurance, management education, price hedging, financing, personal equity, and e-commerce.

(USDA Economic Research Service, 2002)



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- Colorado State University Cooperative Extension staff from the state's northeast and southeast counties combined resources and expertise for a multi-discipline program titled "Positive Focus" to address issues created by the Eastern Plains' sharp economic decline. Extension staff in family and consumer sciences, agriculture, and 4-H youth development worked with financial institutions, government agencies, commodity groups, community colleges, faith agencies, mental health professionals, advisory committees and the media to design a program to help multi-generational rural families increase resilience under a stressful environment. Included were a media campaign, creation of a Web site, and seminars held in three locations that attracted 342 people. Participants reported they learned skills to help deal with conflict, decision making and stress. Evaluation of Extension educational programs for area producers showed that 72% enhanced profitability through development of risk management tools and 56% increased knowledge about integrating production practices with environmentally sound decision-making.
- A comprehensive curriculum – "Risk and Resilience in Agriculture" – created by Cooperative Extension specialists from Colorado, Montana and Wyoming, was designed to help agricultural families make a living in an increased risk environment. In northeastern Colorado, a concerted multi-year educational effort was undertaken to assist dryland agricultural producers through the program. Emphasis on a dynamic systems approach to production, grazing management, and integrating livestock and crop enterprises included creative ideas such as niche markets, specialty crops, on-farm recreation and direct marketing. Research from early adopters showed that a more profitable two-crops-in-three-years rotation system increased grain production by 75% with a corresponding increase in net-farm income of 25% to 40% while providing weed, soil and crop disease benefits.
- A farm manager must work closely with a knowledgeable lender to ensure the farm maintains positive cash flow and a sound financial base. To assist in this task, Cooperative Extension agricultural business management specialists conduct annual educational sessions for lenders, insurance agents, commodity brokers, and others. Last year, 52 participants from South Dakota, Nebraska, Wyoming, Kansas and Colorado heard presentations on drought, crop insurance, legislation and risk management, and all reported increased knowledge on one or more of these topics. To help producers learn about the risk-bearing capacity of their operations, Colorado Extension staff received a grant to create "Right Risk," a simulation designed to enhance alternative decision-making. Of 857 ag producers and land managers reached last year through Extension programs, 80% reported enhanced profitability through use of risk management tools and/or business plans.

Colorado State University Cooperative Extension programs are helping Coloradans

- **strengthen the management, productivity and health of the state's forage, range and grassland resources;**
- **sustain grassland systems that add to and enhance the state's diverse natural resources;**
- **learn best management practices that contribute to well-managed grazing lands.**

The Costs...

- *U.S. Natural Resources and Conservation Service studies show that 30% of America's agricultural land, about 112 million acres, is eroding at excessive rates; other problems such as urban sprawl and salinization also threaten cropland productivity and long-term soil health. Between 55-60 million acres of soil are affected by build-up of salts caused mainly by irrigation of poorly-drained soil.*
- *A recent NRCS Inventory showed that U.S. cropland decreased by 39 million acres since 1992, rangeland decreased by 10 million acres, and between 1992-1997, the U.S. converted about 11.2 million acres of ag land to development. In Colorado, nearly 1.35 million acres of agricultural land were converted to other uses during that 5-year period.*
- *Both overgrazing and undergrazing can result in rangeland or grassland problems. Overgrazing can lead to a bare packed ground surface very susceptible to movement of water and erosion. Undergrazing can cause the pasture to grow weedy and then animals graze selectively on the most nutritious, palatable plants ignoring the rest; this causes uneven plant regeneration and reduced sustainability of grazing land.*

Strengthening Health and Management of Colorado's Range and Grasslands

The nation's forage, range, pasture and grassland resources, covering about 55% of the land area in the United States, make a vital contribution to the nation's environment and to its economy. Most important are the irreplaceable benefits provided to the public – food and fiber, wildlife habitats, aesthetically pleasing landscapes, and environmental protection for soil, water and air. Grasslands play an important role in environmental quality by providing biodiversity of plant and animal populations, wildlife habitat and green space around expanding urban and suburban areas; they reduce soil erosion and prevent stream and groundwater contamination. Forages and grasslands are a foundation for sustainable agriculture by serving as an economic and environmental safety net. Rangeland contributes directly to the economic, social and environmental sustainability of rural America. Livestock producers and small-acreage landowners who make use of pastures and grazing realize direct economic benefits for themselves and their communities. The forage-livestock industry contributes more than

\$60 billion in farm sales annually, and the \$11 billion hay crop is the third most valuable U.S. crop after corn and soybeans. In the last decade, government programs and land-grant university research and education have helped America's agricultural producers make remarkable improvements in soil and land conservation. Adoption of effective conservation practices including conservation tillage, terracing and contour farming cut soil erosion by nearly one-third. Cooperative Extension scientists and educators continue to work with landowners and producers to provide education for stewardship of forage and grassland resources.



Photo courtesy of USDA NRCS

Colorado State University Cooperative Extension's educational efforts help landowners and agricultural producers learn best management practices for forage, range, pasture and grassland stewardship.

The Payoff...

Two of the most important benefits of grasslands are the control of soil erosion and the preservation of water quality.

They provide perennial ground cover that helps protect the environment in a wide variety of ways – reduced runoff, increased infiltration that recharges aquifers, stream-bank protection, diverse flora and wildlife habitat, renewable biomass crops, aesthetically pleasing landscapes, carbon sequestration, and disturbed area stabilization and reclamation. Properly grazed pastures and grasslands have a safe level of vegetative cover remaining to increase water infiltration, protect the soil from rain-drop impact and reduce the speed of water flow across the soil surface.

(Natural Resource Conservation Service, 2003)

Almost 75% of the nation's wildlife live on private land, most of which is open-space rangeland and grassland on farms and ranches. These highly diverse lands, extending from eastern pastures and hay fields to western prairies and deserts, provide habitats for a multitude of plant and animal life, including 20 million deer, 500,000 pronghorn antelope, 400,000 elk, wild horses, and a number of endangered species. Songbirds, pheasants, and countless smaller animals thrive in these habitats. They also play a vital role in providing open space, air and water quality, and a variety of recreational opportunities.

(Agricultural Council of America, 2002; American Forage and Grassland Council, 2001)



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- Productive rangelands are key to economic sustainability of western agriculture and the foundation of the U.S. forage-livestock industry with its 60 million beef and dairy cattle and 8 million sheep that contribute more than \$60 billion in farm sales annually. Range livestock production represents almost one half of Colorado's total agricultural receipts. The predominant land use in the state's Southeast Region is for range livestock, especially cow-calf operations, which are dominated by season- or year-long use of pastures. Cooperative Extension provides education to help producers understand forage issues, supplemental water requirements, soil fertility, nutrient availability, business management and how to make fullest use of resources at their disposal.
- Producers in western Colorado, like in many parts of the West, have experienced conflict over livestock grazing on public lands. In Colorado's Tri-River Area, Cooperative Extension, the U.S. Forest Service, Bureau of Land Management, Natural Resources Conservation Service and ranchers designed a "Range Management School" to address this conflict. The primary objective of the School is to help grazing permit holders evaluate forage and changing range conditions while improving communication between federal land managers and ranchers. Of the more than 2,000 permittees, federal land managers, environmentalists and private range owners who have attended, 86% reported increased knowledge about how to integrate production practices with environmentally sound decision-making; 65% reported reduced production costs due to improved or more efficient management practices. The School has directly impacted improved grazing management on over 4 million acres of public land.
- In fast-growing Larimer County, public open-space managers, homeowners associations and small-acreage residents have joined farmers as land stewards, and many want to return the land to native habitat. Cooperative Extension with the Natural Resources Conservation Service, presented a five-day short course titled "Shifting the Picture: Prairie Improvement and Re-vegetation." Two dozen participants experienced hands-on studies at project sites performing resource inventories and developing re-vegetation plans; all reported increased knowledge about enhancing the quality of natural resources on their land.
- For three years, Cooperative Extension in Routt County had received increased requests to help with an expanding grasshopper infestation. After researching control methods and providing information on best options to landowners and residents, the Extension agent coordinated treatment on 30,000 acres of land using a method developed by the University of Wyoming that used less pesticide, achieved 85% to 90% control, and saved landowners \$70,000 over conventional control methods.

Colorado State University Cooperative Extension programs are helping Coloradans

- **understand and meet the challenges of rapid growth and changing land-use patterns;**
- **increase knowledge and skills related to the challenges of living on a few acres;**
- **address growth-related issues and develop land-management plans.**

The Costs...

• *The state demographer predicts that Colorado will continue to experience a significant population growth in the upcoming decades – from 4,335,000 in 2000 to 6,000,000 by 2020. Colorado has 5 of the U.S.'s 10 fastest growing counties. The Denver Regional Council of Governments says that the Denver-metro area is expected to grow more than 33% from 1995 to 2020. In that same period, the amount of developed land is expected to grow by more than 100%, or over three times the amount of population growth.*

• *A 2001 CSU survey found that implications of growth on local land and natural resources were the most pervasive concerns of Colorado County Commissioners. A 1999 Talmey-Drake Research Poll of Colorado registered voters revealed that growth and sprawl issues were their top concerns. Low-density sprawl has been shown to eliminate open space, increase traffic congestion, displace wildlife habitat, cost cities and counties millions of dollars in increased infrastructure and services, and often destroy the very features of the natural landscape that were valued in the first place.*

• *The Colorado Department of Agriculture reports that agricultural lands were converted to urban expansion, low-density residential, or other uses at the average rate of 270,000 acres a year for the past ten years.*

Helping Citizens Manage Property Investments & Address Land-Use Issues

Colorado is part of the region that is characterized as the fastest growing area on earth (measured by population increase). Moderate climates, scenic features, natural amenities, and access to recreation stimulate rapid population growth in all areas of the Rocky Mountain West. What were once considered primarily ranching and farming lands are now dominated by urban sprawl.

For some long-time residents, the growth process is painful as traffic increases, open space sprouts new housing developments, neighborhood shops are replaced by “super stores,” housing costs rise, and communities grapple with the need for additional services and schools. Many new immigrants take up residence on small acreages and find themselves responsible for managing unfamiliar parcels of land and meeting new rural challenges. In some traditional rural communities, residents struggle to survive as the traditional agricultural economic base changes and they often watch young people migrate to cities in search of higher-paying jobs and greater

opportunities. In this climate of disparate values, management of land and natural resources poses particular challenges to the people and communities of Colorado. One audience targeted for Cooperative Extension programs in meeting land-use challenges is the “small acreage” owner. More than 20,000 Colorado landowners manage more than 1 million acres in small farms, ranchettes and tracts of land ranging in size from one to 100 acres. Cooperative Extension’s goal is to assist them in becoming more proficient in management of natural resources, more knowledgeable about the challenges of Colorado rural living, and more aware of the economic opportunities their land might provide.



Photo courtesy of USDA NRCS.

Colorado State University Cooperative Extension provides objective, policy-neutral information to communities and governments as they grapple with growth, quality of life, and sustainable resource use.

The Payoff...

A group of Cooperative Extension educators from eight western states including Colorado, developed the program, "Living on the Land," targeted at "lifestylers"—those who live on small acreages for the pastoral, back-to-the-land lifestyle. The comprehensive curriculum helps staff teach soil, water, plant and animal management in a way that can be customized to meet local needs.

(CSU Cooperative Extension ePOWER, 2004)

Last year in Colorado, almost 6,600 small-acreage owners requested land-management assistance. Of those, 52% reported they adopted best management practices for successful rural living including livestock nutrition, pest control, and pasture and weed management; 48% reported an increase in their knowledge on how to maintain or enhance the quality of natural resources on their land; 33% of those who attended programs on economic opportunities appropriate for small operations indicated they learned about enterprise possibilities, and 26% said they increased income by adopting new economic activities for their acreages.

(CSU Cooperative Extension ePOWER, 2004)



- With more and more residents choosing to live on the land, demand has increased for information and technical assistance to help this growing and diverse audience understand the importance of land stewardship. In northwestern Colorado, Cooperative Extension's Small Acreage Team undertook a major effort to provide small-acreage owners education about water and soil issues, weed and pasture management, property rights & fencing laws, organic-crop production, pesticide safety, living with wildlife, and horse care and management through workshops, newsletters, bulletins, news articles, Web sites and videos. With Agricultural Experiment Station staff they also designed "The Western Small Acreage Expo," a multi-county event that attracts 600-800 people annually and offers hands-on demonstrations, lectures and exhibits to help regional small-acreage owners improve land management.
- Extension staff in many of Colorado's Front Range counties designed educational programs for realtors and appraisers—usually the first point of contact with new landowners – to provide continuing certification credits and up-to-date information on rural land management, weed and natural resource issues and local land-use requirements. 100% of the participating realtors noted that they would incorporate one to three topics into their work with landowners in the immediate future including fencing & zoning requirements, water usage, animal carrying capacity and weed control.
- Rural landowners who own forest acreages have benefited from collaborative efforts among Cooperative Extension, the Colorado State Forest Service, Colorado Division of Wildlife, Natural Resources Conservation Service and others. For the past several years, this group has offered in-depth workshops to address the challenges of maintaining forest health, timber management and fire prevention on private land. A survey of participants showed that 100% increased their understanding of the challenges of rural living and 70% increased their knowledge about natural resource and forest management, including tree thinning practices.
- Southwest Colorado has a high influx of new residents who are interested in niche-market operations for specialty crops and high-quality agricultural products from their small acreages. Collaborative efforts between Cooperative Extension, government agencies and the private sector established demonstration plots, weed-management symposiums, field days and commercial applicator workshops. A new position for an Extension horticulture agent in that area of the state allowed renewed relationship building, a focus on organic and other sustainable practices for smaller operations, creation of a farmer's market, participation in community-supported agriculture and increased viability of small-scale agriculture.
- Following workshops aimed at helping Front Range small-acreage owners improve their land management practices, a survey showed that 100% of respondents said they would develop a weed-management strategy for their property, 88% said they would adopt xeriscaping practices, and 60% said they would develop a wildlife plan.

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Colorado State University Cooperative Extension programs are helping Coloradans

- **enhance investments in gardens, yards and landscapes through research-based information and best management practices;**
- **increase knowledge and skills related to the challenges of gardening in arid and semi-arid environments.**

The Costs...

- *Demand for urban water is becoming a critical issue in the arid West. It is estimated that 35% to 60% of the water used in western U.S. metropolitan areas during the summer is applied to landscaped areas, including lawns. Landscape plant selection, and irrigation system design, maintenance and management techniques are key factors in determining water usage.*
- *According to data from the Plant Health Care Industry, more than 90% of the pesticides typically applied in landscape maintenance are unwarranted and have little to no benefit. Homeowners who strive for the perfect lawn have been accused of using four to six times more chemicals per acre than farmers do, and may use twice as much water as turf needs to survive. Excessive or careless fertilizer or pesticide applications contribute to water-quality problems.*
- *Replacing sod lost to poor management or drought costs an average of \$1-\$1.50 per square foot, or \$1,500 for a 1,000-square-foot lawn; replacing sod consumes more water than maintaining the current landscape.*

Enhancing Landscape Investments Through the Master GardenerSM Program

Gardening is one of the most popular hobbies in America. According to the National Gardening Association, each year homeowners spend almost \$40 billion taking care of their yards and gardens. Landscapes, gardens, parks and green spaces provide economic, environmental and social benefits. In Colorado, maintaining trees, shrubs, lawns and flowers helps the environment, increases property values and generates \$2.2 billion to the state's economy. Since its beginning in 1975, the Colorado State University Cooperative Extension Master GardenerSM Program has responded to increasing demands from the gardening public for trustworthy, science-based information. Each year advanced and novice Master Gardeners take part in training provided by professional horticulture staff. Once trained, they "give back" hours and expertise expanding the capabilities of Extension staff to answer consumer horticultural questions and multiplying Cooperative Extension's ability to reach a greater number of clientele. Their volunteer efforts include staffing information desks at Extension offices, Farmers' Markets, county fairs, nurseries, clinic sites and garden shows; making field visits and public presentations, answering telephone calls, and writing for mass media and newsletters. Master Gardeners also serve as catalysts to encourage community gardening activities. They coordinate and participate in school and service projects; horticultural therapy programs through prisons, hospitals, senior and disability

centers; and career-development efforts through schools, prisons, detention centers and youth programs. Cooperative Extension's use of trained knowledgeable talent in a volunteer network enhances Coloradans' quality of life by extending knowledge-based education throughout Colorado communities to foster successful gardening, enhance environments, and strengthen green industry partnerships.



The Cooperative Extension Master Gardener Program uses trained volunteers to provide Coloradans with research-based horticultural information.

The Payoff...

In addition to being a popular hobby, gardening can add dollars to the value of a home. Two university studies found that homebuyers value a landscaped home up to 11.3% higher than its base price. Another survey showed that landscaped curb-appeal raised a home's value by 4.4% and a landscaped patio by 12.4%.

Research by USDA found that a large front-yard tree increased the sales price of residential property by 1% or about \$25 each year annualized over a 40-year period. A large tree on public property pays back taxpayers nearly \$60 per year in environmental benefits.

(Clemson University, University of Michigan, 2002; USDA Forest Service, 1999)

Colorado green industry leaders readily recognize that Cooperative Extension Master Gardeners directly impact the success of local gardeners.

This in turn supports the success and growth of the Colorado Green Industry whose wholesale value of goods and services exceeds \$2 billion annually – accounting for over one-fourth of the state's agriculture industry. The Green Industry employs more than 36,000 people with an annual payroll in excess of \$450 million. This sector is one part of the economy that reaps the benefits of Colorado's population growth from homeowners with abundant disposable income. The average household in Colorado spends from \$200-\$600

annually on yard care and gardening supplies. (Colorado Department of Agriculture, 2003)



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- Colorado State University Cooperative Extension makes a major yearly investment in basic training for Master Gardeners. Attention focuses on retaining skilled Master Gardeners by increasing volunteer options and educational opportunities. Quality training allows volunteers to expand community outcomes and proactively address environmental issues such as water and energy conservation, alternative pest management, waste management and chemical reduction. An evaluation of the recently upgraded hands-on curriculum showed that it put Master Gardeners onto a fast track for critical thinking skills and diagnostic abilities. Last year, 1,700 Colorado Master Gardeners supported Cooperative Extension horticulture programs in 34 counties by providing 72,000 hours of volunteer time worth more than \$1,000,000.
- Pueblo County Master Gardeners answered more than 1,300 calls on garden and landscape management during last year's growing season. They also answered questions from a large percentage of the 12,000 people who frequented the local Farmers' Market. Through a recent clientele survey requesting feedback on the Master Gardeners' perceived knowledge, ability to make recommendations and value of program, responses indicated that 90% planned to follow the recommendations provided by Master Gardeners and 100% agreed that the program services were valuable. The survey indicated a value of each educational assistance at approximately \$76 per client making the total value of all telephone and field calls approximately \$100,000 to Pueblo County clientele.
- For the past 10 years, the Boulder County Jail's one-acre garden has provided inmates an opportunity for community service. Master Gardeners and other volunteers spend countless hours planning, networking, gathering resources and working in the garden. They share a common labor experience – and a problem-solving environment – with the inmates. In addition to the dividends reaped in human development for volunteers and inmates alike, the thriving garden produces between 12,000-19,000 pounds of produce each year, which translates to about a \$7,000 annual savings for the Jail's food budget.
- Community gardens blend combine healthy behavior with the ability to share produce with neighbors, senior centers and shelters. Denver County's team of Master Gardeners participate in the national "Plant A Row for the Hungry" Program, which involves gardeners in community hunger issues and allows them to share the harvest. Each year plans are made to grow more produce to donate to Denver food banks. In nearby Boulder County, Master Gardeners and other volunteers donated 3,017 pounds of fruits and vegetables from the Jubilee Garden to Community Food Share of Boulder County.

Colorado State University Cooperative Extension programs are helping Coloradans

- **improve their food-resource-management skills by stretching food dollars and making healthful food choices;**
- **increase food security and improve overall health of the state's limited-resource populations.**

The Costs...

- *Food insecurity occurs whenever the availability of nutritionally adequate and safe foods is limited or uncertain. In 2002, 12 million U.S. households (more than 35 million individuals) reported limited access to sufficient food because of inadequate resources. In Colorado, 436,000 people including 182,000 children were food insecure; of these, 42,000 experienced hunger.*
- *Hunger has a big effect on children's health – a Food Research & Action Center survey showed that hungry children from low-income families suffer from two to four times as many individual health problems, including fatigue, irritability, and inability to concentrate as low-income children whose families do not experience food shortages.*
- *The Census Bureau reports that a family of two adults and one child in Colorado must make \$20,448 per year to be self-sufficient. The National Low Income Housing Coalition reports that a minimum-wage worker must work 133 hours a week to afford a two-bedroom apartment in an urban area like Denver. At this income level, after other payments, a family has only a few dollars left for food each month.*

Helping Colorado Families Stretch Food Resources and Improve Nutrition

One of the most disturbing aspects of life in a wealthy country like America is the persistence of hunger — the recurrent and involuntary lack of access to sufficient food due to poverty or constrained resources, which can lead to malnutrition over time. While starvation seldom occurs in this country, children and adults do go hungry and chronic under-nutrition does occur when financial resources are limited. Many established food programs help provide a safety net for many low-income families, but the mental and physical changes that accompany inadequate food intake can have harmful effects on learning, development, productivity, physical and psychological health, and family life. A 2002 U.S. Census Bureau survey revealed that 11.1% of U.S. households were “food insecure,” or lacking resources to access enough food to fully meet basic needs. Adults in food-insecure households often run out of food, or reduce the quality of food their family eats, or feed their children unbalanced diets, or skip meals so their children can eat, in order to adjust to the economic problems that threaten the adequacy of their family's diet. The survey showed that those at greatest risk of being hungry or on the edge of hunger live in households that are headed by a single woman, are Hispanic or Black and have incomes below the poverty

line. Also, households with children experience food insecurity at more than double the rate for households without children. “Food security” – a term used to describe assured access at all times to enough food for an active, healthy life – is the most basic of human needs.



Colorado State University Cooperative Extension, in cooperation with the U.S. Department of Agriculture, provides Nutrition Education Programs that target at-risk audiences most likely to be undernourished, in poor health or with poor nutrition habits, and in need of assistance.

The Payoff...

A national cost-benefit analysis of the Extension Food and Nutrition Education Program proved substantial economic impacts. Behaviors taught and measured in EFNEP programs including decreased intake of sodium and fat, reduced weight, increased intake of fiber, fruits & vegetables and improved physical activity and other behaviors could contribute a yearly \$30,000 savings per person if heart disease was avoided, \$28,000 per patient if diet-related cancer was avoided, and \$22,000 if stroke was avoided.

(Virginia Tech University, 1999)

Across the country, for every \$1 invested in Extension Food and Nutrition Education Programs, from \$8-\$10 in benefits from reduced health-care costs can be expected. A CSU study showed an average return of \$7.06 for every federal dollar invested in teaching nutrition and resource management to those who receive and are eligible for food stamps.

(Extension Committee on Policy, 2003; CSU FSNEP Cost Benefit Study, 2003)

Increasing the food stamp participation rate helps local economies as well as recipients; each \$5 in federally-funded benefits generates approximately \$10 in economic activity.

(USDA Economic Research Service, 2002)



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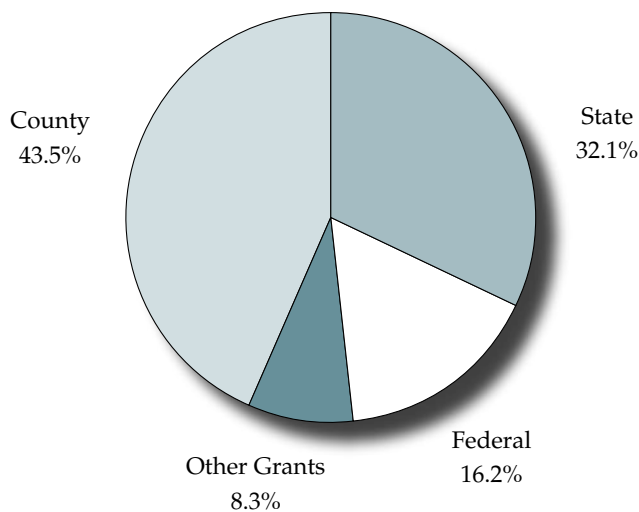
- Administered by Cooperative Extension and funded by the U.S. Department of Agriculture through the Colorado Department of Human Services Food Stamp Program, the Colorado Food Stamp Nutrition Education Program (FSNEP) primarily addresses the problem of food insecurity among limited-resource Coloradans who receive food stamps. The Colorado FSNE Program is committed to providing at-risk audiences such as children, the elderly, immigrants, emergency food assistance participants and welfare recipients with nutrition, food safety and food-resource-management education aimed at promoting food security and overall health. Each year, the program reaches more than 6,000 adults & seniors through classes, demonstrations & other methods, and 17,000 children through child care & school programs.
- The Adult FSNEP program has improved the nutritional well-being of low-income Coloradans and increased their ability to manage food resources – 88% of adult FSNEP graduates reported a positive change in their eating habits and improvement in nutrition practices; 77% showed improvement in one or more food-resource-management practices (planning meals, not running out of food, using a shopping list, etc.); also 64% showed improvement in food safety practices.
- 10% of all Americans or 26.9 million people receive food stamps; 60% are children or elderly. The average length of food stamp usage is two years, and half of new recipients use them six months or less. In 2002 in Colorado (*last available data*), federal funding for food stamps contributed \$165,442,169 to the state's economy.
- Hunger relief advocates say the best assistance is helping people help themselves. Cooperative Extension's Food and Nutrition Education Program (EFNEP), funded for 34 years by the U.S. Department of Agriculture, is designed to teach limited-resource families with young children how to make healthy food choices, stretch their food resources, and use safe food-handling practices. National EFNEP data reveal impressive improvements in participants' food-related behaviors – more than 100,000 "graduates" across the country show that 83% improved one or more food-resource-management practices; 87% improved one or more nutrition practices; and 67% improved one or more food safety practices. EFNEP has also proven effective in increasing the dietary intake levels of six key nutrients that are often limited in the diets of low-income individuals (protein, iron, calcium & vitamins A, C, B-6), increasing the servings of grains, and decreasing consumption of fats and sodium.
- One of the many consequences of poverty is the lack of money for food. Learning "food resource management" is key to stretching food dollars and making healthful food choices. As a result of what they learned in the programs, FSNEP participants reported an average savings of \$75.64 on monthly food bills; EFNEP graduates reported an average savings of \$52.80 per month on food bills.

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Grand County 210 11th St., Extension Hall, Fairgrounds, Kremmling 80459-0475	(970) 724-3436	San Miguel-W. Montrose 1120 Summitt, Norwood 81423-0130	(970) 327-4393
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Huerfano County 401 Main St., Suite 101, Courthouse, Walsenburg 81089-2045	(719) 738-2170	Summit County 37 County Road 1005, Frisco 80443-1270	(970) 668-3595
Jackson County 312 5th St., Walden 80480-1077	(970) 723-4298	Teller County 112 North A St., Cripple Creek 80813-0368	(719) 689-2552
Jefferson County 15200 W. 6th Ave., Suite C, Golden 80401-5018	(303) 271-6620	Washington County 181 Birch Ave., Courthouse Annex, Akron 80720-1513	(970) 345-2287
Kiowa County County Courthouse, 1305 Goff, Eads 81036-0097	(719) 438-5321	Weld County 525 N. 15th Ave., Greeley 80631-2049	(970) 356-4000, ext. 4465
		Yuma County 310 Ash, Courthouse, Suite B, Wray 80758-1800	(970) 332-4151

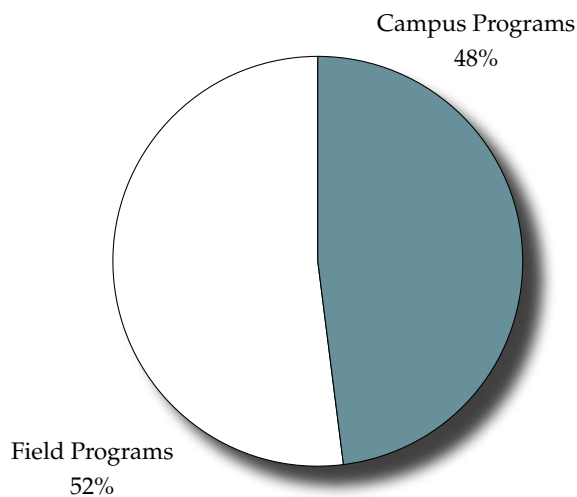
2003-2004

Cooperative Extension Funding



Total Funding = \$24,165,014

Appropriated Budget



Appropriated Budget = \$10,615,014

Cooperative Extension is the off-campus educational arm of Colorado State University. The Cooperative Extension system, a nationwide educational network, is a partnership of county, state and federal governments working cooperatively with the private sector. The Smith-Lever Act established state Extension Services as a third program branch, along with resident instruction and research, of the land-grant universities in each state. Cooperative Extension agents and specialists are faculty of Colorado State University. They work with local constituents throughout Colorado in planning, developing and implementing the educational programs of Cooperative Extension. Volunteers also have an important role in the delivery of Extension programs. Cooperative Extension programs serve Coloradans wherever they live.

Funding for Cooperative Extension is provided from multiple sources: federal, state, county and non-tax monies. Federal funds are allocated to the states on the basis of law and formula. Additionally, some federal funds are earmarked to meet special national priority needs. Cooperative Extension receives state funds from Colorado State University's allocation through the Colorado Commission on Higher Education as part of the state's higher education budget. County commissioners appropriate annual budget funds to support the operation of the Cooperative Extension office in their county. Some funds are received from non-tax sources such as program grants and cost recovery fees.

Colorado State University Cooperative Extension is a dynamic flexible organization dedicated to delivering quality, relevant programs most needed by people throughout the state. Extension engages a responsive network of citizens, scientists and educators who can anticipate and address local needs and problems. We focus on programs in the areas in which we have a research base and can make significant contributions. Our six statewide priority programs are:

- *Enhancing Families and Communities
- *Growing Horticulture in Colorado
- *Improving Nutrition, Food Safety and Health
- *Integrating Natural Resources
- *Strengthening Youth Development
- *Sustaining Agriculture and the Environment