

Annual Report
of
Accomplishments & Results
for
Colorado's FY1999-FY2006
Plan of Work

Colorado State University
Cooperative Extension

(Year-Seven)

FY 2005-2006

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Overview

The 2005-2006 fiscal year was a year of transition for Colorado State University Cooperative Extension. Our six core competency areas of Strong Families, Healthy Homes; Nutrition, Health, and Food Safety; 4-H and Youth Development; Community Resource Development; natural Resources and Environment; and Competitive and Sustainable Agriculture Systems continued to focus on specific issues relevant to Colorado as identified by local and state advisory committees. Leadership and membership on the 26 work teams solidified and specific plans for action were established. Each work team developed a logic model to guide their work. Specific plans for user fee generation and increased accountability through identified evaluation plans were established.

The university reorganization continued to progress with the hiring of the new Vice Provost for Outreach and Strategic Partnerships (VPOSP). The search for the new Extension Director began in the Fall of 2006. Simultaneously, Extension hired a new Director of Community Relations to oversee all marketing efforts. Under her guidance, Extension embarked on a series of focus groups throughout the state looking at both Extension work and its marketing efforts. A revised name and logo/word mark will be established once the outcome of the focus groups is assembled.

Extension also conducted a County Commissioner Survey this past fall. The results are as follows:

Cooperative Extension 2006 County Commissioners Survey Results

The first baseline County Commissioners Satisfaction Survey was conducted late in the fall of 2006. The survey design met two objectives. The primary objective was to gauge the overall satisfaction of the County Commissioners with Cooperative Extension agents, programs and the relationship with Colorado State University. The secondary objective was to gain initial client value, image and preference language to set the foundation for successfully marketing and sub-branding of Cooperative Extension. The simple survey instrument is attached for review.

A letter from Dr. Marc A. Johnson, Interim Director of Cooperative Extension, was sent to each County Commissioner and a packet including a letter and the survey instrument was sent to each Cooperative Extension County Director the last week of November 2006. Each County Director was asked to meet personally with his/her County Commissioners and introduce the survey, stress the importance of the feedback and the importance of the deadline of January 19, 2007 for return of the surveys. Surveys were returned directly from the County Commissioners to Meg Wilson, Director of Community Relations Cooperative Extension on the Colorado State University campus. Reminders were sent in early January and again close to the deadline to encourage response. The delayed decision to move forward with the survey combined with the weather presented challenges, however response was strong.

Summary of results

Thirty-six of fifty-nine Cooperative Extension counties served, or 61%, responding to the first Extension County Commissioner satisfaction survey. In the Northern Region 7 counties (41%) responded, in the Western Region 11 counties (61%) responded, and in the Southern Region 18 counties (75%) counties responded.

Satisfaction

Satisfaction, value-added, and the closeness of the relationship to the University were measured on a 4 point scale, Very Satisfied/Valuable/Close, Satisfied/Valuable/Close, Somewhat Satisfied/Valuable/Close or Not Satisfied/Valuable/Close.

The results of all 36 respondents rating Overall Satisfaction with the programs and services of CSU Cooperative Extension are as follows:

17 counties, 47%, were Very Satisfied,
17 counties, 47%, were Satisfied,
2 counties, 6%, were Somewhat Satisfied.

94% Very or Satisfied

No respondent indicated county dissatisfaction with Cooperative Extension programs and services. The mean satisfaction on a 4.0 scale was 3.42.

Program Value

The results of all 36 respondents rating the Value of Cooperative Extension programs to their citizens are as follows:

11 counties, 31%, rated programs Very Valuable,
20 counties, 56%, rated programs Valuable,
5 counties, 13%, rated programs Somewhat Valuable

87% Very or Valuable

No respondent indicated the county believed Cooperative Extension programs are not valuable. The mean value rating on a 4.0 scale was 3.17.

Relationship to Colorado State University

The results of 35 respondents rating the relationship between Colorado State University and their local Cooperative Extension office are as follows:

6 counties, 17%, rated the relationship Very Close,
21 counties, 60%, rated the relationship Close,
8 counties, 23%, rated the relationship Somewhat Close

77% Very or Close

No respondent indicated the county believed Cooperative Extension programs have no relationship or a dissatisfactory relationship with Colorado State University. The mean rating of this relationship on a 4.0 scale was 2.9.

Other evaluations

The themes in all open-ended questions where no prompts were provided regarding descriptors for Cooperative Extension agents and programs were consistent.

- community-based, available
- knowledgeable
- dedicated
- educational
- informative
- research-based

These indicate the values of Extension clients and the competitive advantage of CSU Extension.

Most frequent suggestions for Colorado State University improvement of Cooperative Extension

1. Reinstate funding and reductions! This was the overwhelming first response.
2. More accountability of fees and increased funding at the University. Why isn't Cooperative Extension funding more?
3. Market services, reach more people, make people aware of Extension Services, reach key groups, and advertise.
4. More outreach and involvement in public schools.

Despite all of the transitions of the past year and the significant work on marketing of Extension, Cooperative Extension agents and specialists continued to deliver research based information and education to the citizens of Colorado during the 2005-2006 fiscal year. Following is a summary of the work of our work teams within the six core competency areas. These results are organized by the Goals and Objectives of our original Five-Year Plan of Work.

GOAL I: An agricultural system that is highly competitive in a global economy.

Objectives:

- A.** Enhance the profitability of Colorado agriculture producers with an emphasis on increased business management skills through the development and adoption of:
 - 1) risk management tools; and, 2) comprehensive business plans including integrated resource management.
- B.** Enhance the diversification of income for Colorado agriculture producers by increasing the production of alternative and niche market crops: 1) crops not currently grown or in low production in Colorado; 2) increase production and value-added facilities in Colorado.

CSU Core Competency Area: Competitive and Sustainable Agriculture Systems

Key Theme – Agriculture and Business Management

Inputs

Rod Sharp	Grand Junction	1.0 FTE
Jeff Tranel	Pueblo	1.0 FTE
John Deering	Akron	1.0 FTE (2007 February 1 start date)
Norm Dalsted	Campus	0.6 FTE (Ag & Business Management)
James Pritchett	Campus	0.5 FTE (Agribusiness & Water Resource Issues)
John Deering	Akron	1.0 FTE (soft money through Jan 31, 2007)
Aaron Sprague	Holyoke	0.5 FTE (soft money through Sep 30, 2007)
Dennis Kaan	Akron	0.5 FTE (community development)

Others: Steve Koontz (marketing), Dawn Thilmany (niche markets and organic production), Jennifer Keiling-Bond (agribusiness and marketing)

Grants Awarded

Planning for Reduced Water Availability to Colorado Agriculture

Tranel, Jeffrey E. and R. Sharp
Western Center for Risk Management Education, \$39,448

Building Decision-Making Skills for Beef Cattle Producers

Tranel, Jeffrey E., R. Sharp, D. Kaan, J. Deering, C. Bastian
Western Center for Risk Management Education, \$4,999

Defining New Rural Clientele for Extension in the West

Tranel, Jeffrey E., J.P. Hewlett, R. Weigel, T. Rahman, T. Teegerstrom
Western Center for Risk Management Education, \$60,000

Outputs and Impacts

- Ag Lender Meetings – Speakers: Tranel, Koontz, Dalsted, Pritchett, Kaan, Sharp, Keiling-Bond. Held in La Junta, Monte Vista, Akron, and Greeley. Program-Water (summary of Water Roundtable activities and results from Pritchett’s study of economic contributions of irrigated agriculture), Alternative Enterprises (overview, wind power, solar power), Beef Cattle Outlook, Crops Outlook (feed grains, wheat, hay, potatoes, oilseeds), Local Economies (discussion of future). Attendance was 85 lenders from 25 institutions. Funded by registration fees of \$60 per person.
- Beef Cattle Management - “Management Issues for Your Cow Herd” Workshops. Speakers: Sharp, Tranel, 2 county agents. Held in Steamboat Springs, Craig, Meeker. Program - Increasing Production and Returns on Pastures, Cattle Market Situation and Outlook, Beef Cattle Diseases and Animal ID Program, What Can You Afford to Pay for Cows, Making Smart Decisions for Ranch Survivability, RightRisk Simulation. Funded in part by the Western Center for Risk Management Education.
- “Beef School”- ABM Speaker: Sharp. Held in Delta, Hotchkiss, Norwood. Topic - Economics of Herd Replacement.
- “Beef University”- ABM Speaker: Tranel. Held in La Junta. Topic - Management Issues Faced by Beef Producers.
- Drought - Workshops in Montrose, Cortez, Crowley, Lamar, Walsenburg, Trinidad, Canon City. ABM Members: Sharp, Tranel. Used *How Much Can You Afford to Pay for Cows* worksheet (development funded by WCRME).
 - Prevented planting - Worked with Risk Management Agency and Division Water Engineer. Tranel developed a reporting tool for farmers available on RMA website.
 - Colorado Water Availability Task Force - Tranel is co-liaison for CSU and member of Ag Subcommittee.
 - CSU Extension Drought Task Force. Weekly teleconferences for Extension personnel. Tranel co-chaired effort.
- Water Roundtables - State legislature (HB 06-1177) created 9 basin roundtables to facilitate discussions, coordinate water activities, and provide education to roundtable members and public. Sharp and Tranel are CSU liaisons to respective roundtables and serve on leadership teams. Also, assist in coordination of educational activities. Tranel and Sharp received funding to provide education to water roundtable members (WCRME). Tranel and Sharp submitted funding proposal (Colorado Dept. of Natural Resources) to conduct 14 town hall meetings to inform public and solicit feedback and to write and disseminate four quarterly newsletters on behalf of water roundtables.
- Colorado Conservation Tillage Association - Kaan is a Member and on Board of Directors. Plan annual conference and trade show. Average 400 attendees.
- Alternative Enterprise and Heritage Tourism - Member of committee to plan annual conference and trade show. Average 50 attendees.
- Morgan County Economic Development Corporation Business Accelerator Steering Committee - Review business plans from new business entrepreneurs and recommend business plan review committee.
- Northeast Region Citizen Corps Council - Plan annual regional Citizen Corps Council conference. Manage regional grant program for local Citizen Corps groups.
- Adjusted Gross Revenue – Lite (AGR-Lite) - Kaan and Deering worked with Western Center for Risk Management Education to successfully bring AGR-Lite crop insurance to Colorado. Work included conducting rating panel surveys and rating of crop mix by region for Colorado.
- Bio-Fuels - Bio-Diesel Project – Southwest Colorado. ABM Member: Sharp. Developed crop enterprise budgets.

Publications

- Influence of Free-Stall Bed Type on Prevalence and Severity of Hock Injuries in Commercial U.S. Dairy Cows*, Fulwider, Wendy, N.L., et. al. *Journal of Dairy Science* JOS – 06 – 0793. December, 2006.
- Feasibility of Alternative Agricultural Enterprises*. Sharp, Rodney L., J.P. Hewlett, and J.E. Tranel. Web-based Course, October 2006.
- Taxes for Agricultural Enterprises*. Tranel, Jeffrey E., J.P. Hewlett, and R.L. Sharp. Web-based Course, October 2006.
- Bar B Q Ranch, A RightRisk Lesson Guide*. Deering, John. September 2006.
- Colorado Feeder Cattle Basis Data*. Deering, John and D.A. Kaan. June 2006
- Producer Documentation Tool for Prevented Planting Applications to RMA*. Tranel, Jeffrey E. May 2006.
- Golden Plains Area Agricultural Handbook, 2006*, Edited by Kaan, Dennis A., Deering, John, Gebre-Amlak, Assefa, Meyer, Ron. February 2006.

Refereed Journal Articles

- Dalsted, Norman L., et. al., “Investment Analysis - Purchasing Cows and Heifers in a Strong Cattle Market.” *Journal of Society and Farm Managers and Rural Appraisers*. Spring, 2007
- Pritchett, J. and D. Thilmany. 2006. “The Cow That Stole Christmas? Exploring the Role of Media Coverage in Recent BSE Outbreaks.” *Western Economics Forum*. Vol 4. No. 2. pp:24-28.
- Pritchett, J., K. Johnson, D. Thilmany and W. Hahn. 2006. “Consumer Responses to Recent BSE Events.” *Journal of Food Distribution Research*.(forthcoming). June 15, 2006.
- Pritchett, J. and S. Hine. “Profitability Benchmarks: A Tool For Cooperative Educators.” *Journal of Extension*. (forthcoming) June 30, 2006.

Presentations

- Alfalfa and Pasture Grazing Economics* (Dalsted)
Colorado Hay Producers Conference, Sterling, CO (Dec 15)
- Resources Available to Develop Farm Businesses* (Dalsted)
Producer Meeting at John Love Ranch, Castle Rock, CO (Dec 9)
- Financial Strategies for Handling Drought* (Pritchett)
Colorado Ag Classic in Aurora, CO (Dec 7)
- Economic Impact of Dewatering Agricultural Lands* (Pritchett, Thorvaldson)
Nick Petry Educational Workshop. Sponsored by Western Center for Integrated Resource Management and National Western Stockshow Scholarship Foundation, Denver, CO (Dec 1)
- Insurance Tools for Livestock Producers* (Kaan, Deering)
Fall Trail Drive – Leading the Livestock Industry Forward, Various Locations (Nov)
- When the Well Runs Dry: Economic Impact and Farmers Responses to Changing Augmentation Rules* (Pritchett)
South Platte Forum in Longmont, CO (Oct 25)
- Colorado’s Competition for Water* (Pritchett)
Colorado State University’s Environmental Issue in Agriculture Course, Fort Collins, CO (Fall)
- 2006 Ag Lender Meetings* (Tranel, Koontz, Dalsted, Pritchett, Kaan, Deering)
La Junta (Oct 17), Monte Vista (Oct 18), Akron (Oct 18), and Greeley (Oct 19).
- Future Prospects for Colorado’s Irrigated Agriculture* (Pritchett)
Colorado State University Cooperative Extension Annual Forum. Fort Collins, CO (Sep 22)
- Extension Programs Pricing Survey Results* (Sharp)
“2006 Annual Extension Forum” in Fort Collins (Sept 20)
- Economic Outlook and Management of the Ogallala Aquifer* (Pritchett)
CSU Cooperative Extension Advisory Committee Meeting, Grand Junction, CO (Sep15)
- Issue and Opportunities for the 2007 Farm Bill* (Pritchett)
CSU Issues in Agriculture Class. Fort Collins, CO. (Aug 31)
- Economic Activity Generated by Irrigated Agriculture* (Pritchett, Thorvaldson)
Colorado River Basin Roundtable. Glenwood Springs, CO. (Aug 28)
- What Is The Right Risk For You and Your Business?* (Hewlett, Tranel)
Wye Mills, MD (Aug 23) and Bowie, MD (Aug 24).
- Using RightRisk in Risk Management Education* (D. Hoag, J. Parsons, Hewlett, Tranel)

CSREES in Washington, DC (Aug 15)

Colorado Producers' Preferences for the 2007 Farm Bill (Pritchett, Seidl, Umberger)
Soil and Water Conservation Society International Conference. Keystone, CO (July 24)

Colorado Producer Preferences for the 2007 Farm Bill (Pritchett)
Soil and Water Conservation Society 2006 Annual Conference. Keystone, CO. (Jul 24)

Colorado's Evolving Irrigated Agriculture: Economic Accounting and Impact Analysis (Thorvaldson, Pritchett)
Western Agricultural Economics Association Annual Meeting. Anchorage, AL (Jun 29)

The Status of Agriculture During Drought of 2006 (Tranel, R. Waskom)
Water Availability Task Force in Denver, CO (Jun 21, Jul 21, Sep 21)

Management Options During Drought (Tranel)
"Colorado Cattlemen's Association 2006 Annual Convention & Trade Show" in Pueblo, CO (Jun 20)

Colorado's Irrigated Agriculture: Economic Contribution and Likely Changes in the South Platte Basin (Pritchett, Thorvaldson) Roggen Farmer Cooperative Elevator Board of Directors Planning Meeting. Hudson, CO (Jun 12)

Profitability of Fruit Production in Colorado: Demonstration of an Analysis Tool (Sharp, Seavert)
Fruitgrowers Workshop in Grand Junction, CO (Jun 8)

Irrigated Agriculture in the Lower Arkansas River Basin: Economic Impact (Pritchett, Thorvaldson)
Arkansas River Basin Roundtable. Pueblo, CO (May 10)

Managing Risk to Safeguard Natural Resources & Financial Resources (Tranel, NRCS, FSA, R. Roath)
"2006 Drought: Management Tips to Sustain Recovery" workshops in Crowley, CO (May 9), Lamar, CO (May 10), Walsenburg, CO (June 7), Canon City, CO (June 8), and Trinidad, CO (June 14).

Understanding Risk and Risk Management Strategies Using RightRisk Simulations (Tranel)
Workshop for Pueblo County Vocational Agriculture students (May 4).

Colorado's Evolving Irrigated Agriculture: Economic Accounting and Impact Analysis (Thorvaldson, Pritchett)
Department of Agricultural & Resource Economics Seminar Series. Fort Collins, CO (Apr 28)

Southern Colorado's Irrigated Agriculture: Regional Economic Activity and Future Outlook (Pritchett, Thorvaldson) Southern Colorado Cooperative Extension Annual Meeting (Apr 20)

Adjusted Gross Revenue – Lite (Kaan)
Independent Bankers Association of Colorado Annual Meeting, Colorado Springs, CO (April 13)

Alternative Enterprises (Sharp)
Southwest Marketing Network Annual Conference, Grand Junction, CO (Mar 27-29)

Colorado State University Cooperative Extension Working With Colorado's Water Roundtables (Tranel)
Arkansas Basin Roundtable in Pueblo, CO (Mar 8)

Getting Ahead with Positive Relationships (Tranel)
Colorado Association of Lawn Care Professionals spring meeting in Denver, CO (Mar 7).

Outlook on the High Plains Aquifer: What's in store for irrigated agriculture? (Waskom, Pritchett, Schneekloth)
Great Plains Soil Fertility Conference Denver, CO (Mar 7-8)

Business Management on Small Acreages (Sharp)
Small Acreage Workshop in Grand Junction, CO (Mar 4)

Business Management for Small Scale Agriculture (Kaan)
Colorado Agriculture "Big & Small" Conference and Trade Show, Greeley, CO (Mar 2,3,4)

Herd Replacement: What Can You Afford to Pay for Cows? (Sharp, Tranel, B. Ekstrom, C. Mucklow)
"Management Issues for Your Cow Herd" workshops in Steamboat Springs, CO (Feb 21), Craig, CO (Feb 22), and Meeker, CO (Feb 23).

Colorado's Irrigated Agriculture: Economic Activity and Future Prospects (Pritchett, Thorvaldson)
Colorado Cooperative Council Issues Conference. Colorado Springs, CO (Feb 3)

Market Outlook for Beef Cattle (Tranel)
Southern Rocky Mountain Ag Conference in Monte Vista, CO (Feb 3).

Herd Replacement: The True Cost (Tranel)
Southern Rocky Mountain Ag Conference in Monte Vista, CO (Feb 3).

Understanding Risk and Risk Management on a Western Ranch (Tranel, Deering)
2006 Farm, Ranch, and Water Symposium in Rocky Ford, CO (Feb 2).

Managing Stress in Challenging Times (Dalsted)
Colorado Cooperative Council, Colorado Springs, CO (Feb)

Colorado Council for Cooperatives. Director's Training. Tier 4 (Pritchett)
 Facilitator and session wrap-up speaker. Colorado Springs, CO (Feb 1 – 2)
What is the RightRisk for You and Your Business? (Sharp, Sprague, Deering, Hewlett)
 Colorado Farm Show, Greeley, CO (Jan)
Outlook for the Beef Industry (Dalsted)
 Pueblo County Cattlemen's Association, Colorado City, Colorado (Jan).
Colorado's Irrigated Agriculture: Economic Activity and Future Prospects (Pritchett, Thorvaldson)
 Colorado Water Congress Annual Meeting. Aurora, CO (Jan 16)
Regional Economic Contributions of Irrigated Agriculture (Pritchett, Thorvaldson.)
 Four States Irrigation Council Annual Meeting. Fort Collins, CO. (Jan 11)
Protecting Your Farming and Livestock Operations During Changing Times
 Parks and Open Space Ag Producers, Longmont, CO (Jan)
A Herd Replacement Decision Tool (Tranel, Sharp)
 Western Farm Management Extension Committee annual meeting in Sand Diego, CA (Jan 9)

Key Theme – Beef

Overview

During 2006 the CSU Beef Team began to coalesce more fully. A retreat was held in Frisco where members of the team discussed the mission and intent of the team effort. From this forum, the following actions items were assigned for action:

- Identify coordinator and other leadership;
- Establish Beef Team List Serve;
- Exec Committee meet with Lou Swanson;
- Review CSUBeef.Com;
- Fix internal communication;
- Establish monthly Ag Press article and annual schedule;
- Schedule 2-4 Beef Team meetings/yr;
- Summarize survey used at Fall Trail Drive meetings;
- Complete a Beef Expert and Structure inventory;
- Inform CSU affiliated departments of vision and goals of CSU Beef Team;
- Plan and calendar for relevant training;
- Establish Joint appointments and campus/field organizational structure;
- Finalize involvement of exterior partners in Beef Team;
- Review of Beef Team by outside group;
- Report and update on funding plan.

Inputs

John Scanga, Extension Meats Specialist
 Wendy Umburger, Extension Ag Economist
 Bill Wailes, Head, Department of Animal Sciences, Extension Dairy Specialist
 Tom Field, Professor, Department of Animal Sciences
 Mark Callahan, Computer Technologist, Department of Animal Science
 Roger Ellis, Extension State Veterinarian
 David Colburn, Logan County Director & Livestock Agent
 Bruce Fickensch, Kiowa County Unit Leader, Livestock, Ag. & Natural Resources Agent
 Robbie Baird-LeValley, Tri-River Area Livestock Agent
 C.J. Mucklow, Routt County Director & Agriculture Agent

Outputs

- Organizational meeting of extension personnel with beef extension interests and roles, Commitment to extension education activities, 25 attendees

- BEEF TEAM “Branding” Frisco CO, Retreat event to establish objectives, commitments, needs, and actions of beef extension, Committee assignments for action plans, Agenda for 2006-2007, action plans, 22 attendees (campus and outstate extension, other faculty, guests)
- 12 beef extension meetings achieved throughout the eastern plains area of Colorado, “Fall Trail Drive” townhall type meetings, funded by Colorado State Dept of Ag – (NAIS) Animal/Premise ID grant, Multiple speaker – topic format with centered information on Colorado Premise ID program, availability for producers to register premises at meetings, collection of survey information concerning needs and avenues for beef extension programs, attendance from 0 to 75 people (average 5-8)
- Reorganization and enhancement of CSU Animal Sciences “Beef.com” website, Promotion and opening of Cattleman’s Library reference book on website
- Local and area extension offices and personnel provided emergency and relief activities for much of eastern Colorado in the aftermath of back-to-back blizzard events, cooperation with Colorado beef industry organizations in providing listings for feed resources and accessing brewery by-product feeds for delivery to southeastern CO, media releases of educational information for management of livestock during winter conditions, direct beef producer meetings (3) in response to beef health and management issues
- Colorado Farm Show 2007 - Greeley CO, Beef Team organized and promoted the beef educational component, participated in radio announcements and programs on educational value of programs, 6 speakers with emphasis on cooperative-partnerships amongst beef industry segments and marketing avenues to capture increased value, 30-35 attendees
- Beef Team organization and participation in beef program for Southern Rockies Agriculture Conference in Monte Vista CO, animal health and diagnostic investigations topics concerning winter storm related issues, 25 attendees
- 4 beef producer meetings conducted in Golden Plains area concerning management of breeding programs for beef herds, attendance: low (1-6)
- 4 beef producer workshops concerning beef bull management and disease prevention conducted in eastern CO and western NE
- Extension livestock specialists were actively involved in the two eastern Colorado Beef Performance Tests and Sales
- Activation of “ask the specialist” window on the CSUBeef.com website and reception of at least one-weekly question from producers
- Activation of CSU BEEF TEAM listserv to communicate within the group

Impacts

- Generation of individual contacts by beef producers to campus and area extension offices
- More than 2000 bales of hay were dropped by National Guard helicopters to 18,000 cattle, thus avoiding a potential disaster to the livestock industry in Southeast Colorado.

Key Theme – Small Ruminants

Inputs

Team Leaders: Steve LeValley, Tom McBride

Team Members: Marvin Reynolds, Roger Ellis, Robbie LeValley, Bill Ekstrom, Marlin Eisenach, Rod Sharp, Leonard Pruett, Tony Knight, Jeri Parsons, John Scanga

Outputs and Impacts

- Colorado Junior Sheep Field Day – 250 youth and adults from all areas of Colorado; competitive judging evaluation for sheep and wool; educational programs provided for wool evaluation and live animal evaluation.
- Colorado Farm Flock Field Day – December 2006. Work team members provided educational program on topics of small business, nutrition, premises registration, electronic identification and small ruminant production practices. Sixty-five producers attended.

- Colorado Shearing School – Coordinated effort between Colorado State University Extension and Sunbeam Oster Company to provide an educational format to teach the basics of sheep shearing. Eighteen participants involved in the 2-day school.
- National Sheep Quality Audit – Colorado State University Department of Animal Sciences has been contacted by the USDA Sheep and Goat Center for a national quality audit. The audit will cover both meat production and wool. Visits will be made to all segments of the industry to elicit sheep and wool quality defects. Educational materials will then be developed to educate producers to reduce quality defects: \$36,000 grant received.
- Implementation of NAIS – There are 2500 small ruminant producers in Colorado (sheep and goats). USDA has contracted Colorado State Extension through the Colorado Department of Agriculture to conduct educational programs throughout Colorado on premises registration for youth and adult producers; provided mini grants to county proposals for educational opportunities at the county level (Grants received: \$118,000 NAIS 2005-2006; \$127,000 NAIS 2006-2007).
- Ram Breeding Soundness Programs – Provide complete breeding soundness examination for individual range rams in range and farm flock production units. The program tested over 1500 rams with an increased reproductive efficiency estimated at \$500,000 savings to Colorado sheep producers.
- Assessing the impact of NAIS with regard to beef, pork and lamb harvesting and rendering facilities in the United States. Sheep portion of the project will include visits to processors of lamb and mutton throughout the United States; Grant received: \$371,277.
- Colorado Ram Test – Twenty-fifth year for ram producers from Wyoming and Colorado to consign rams to 60-day performance test. Fourteen cooperators consigned 78 rams, data reported was average daily gain, weight per day of age, ribeye area, fat thickness and scrotal circumference.
- Colorado State Fair – Fifteen hundred contacts with youth and adult livestock exhibitors.
- National Western Stock Show – Two thousand contacts with livestock producers throughout the United States and Canada.

Key Theme – Dairy, Forages and Feed Grain Ag Systems

Situation

Crop producers need practical research based information on Dairy, forage, grazing irrigated improved pastures and Feed grains so that they can improve their business economic status through better management and adoption of more profitable crop or crop & livestock systems.

Inputs

Team Leader – Bruce Bosley

Team Members – Troy Bauder, Thad Gourd, Alan Helm, Ron Meyer, Joel Schneekloth, Merlin Dillon, Joe Brummer, Keith Maxey, Adrian Card, Tom Holtzer.

Additional campus connections

- Parker Water Project: Tom Holtzer – Team Leader, Neil Hansen & James Pritchett– Lead Researchers.
- Jerry Johnson, crop testing Extension Specialist, supports the barley and alfalfa variety performance trials.
- Don Obert, USDA-ARS barley variety development specialist in Aberdeen, Idaho, supplies experimental lines of barley.
- Phil Bregitzer, USDA-ARS aphid resistant barley development in Aberdeen, Idaho, supplies experimental lines of barley resistant to Russian wheat aphid.
- Ray Albrecht, Cargill Malt, supplied 14 lines for testing; supported by testing fees of \$1750.
- Jorge Delgado, USDA-ARS Ft Collins, provided \$3,000 support and N¹⁵ for testing N uptake in barley.
- Phil Westra, Weed Mgmt Specialist, provided information to growers at Conference.

Outputs

- Alfalfa and Forages Clinic – a two day intensive short course held in Sterling – 49 registrants
Bruce Bosley; Chair, Troy Bauder, Thaddeus Gourd, Alan Helm, Ron Meyer, & Joel Schneekloth

- Grazed pastures & organic alfalfa talks given at Colorado Conservation Tillage Association and Ag Big & Small conferences – 37, & 43 students - *Bruce Bosley*
- Forage Day at SRM Ag Conference attended by 96 growers, consultants and agency *Merlin Dillon*
- Grain Day at SRM Ag Conference attended by 102 growers, etc. *Merlin Dillon*
- The Western Alfalfa and Forage Conference held in Reno, Nevada. It was a collaborative effort among forage extension personnel from Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. I served on the planning committee and moderated one of the technical sessions at the conference. This was a very successful event with over 700 in attendance. *Joe Brummer*
- Presentations at the San Luis Valley Forage and Livestock Conference on Fertilization of Mountain Meadows (~80 in attendance) & a presentation at the ARDEC Forage Field Day on research activities related to the study of Roundup Ready alfalfa in Colorado. *Joe Brummer*
- Provide guidance on pasture establishment, management, and economics – 76 customers – *Bruce Bosley*
- Located an herbicide trial site for a company's weed management in a grazed irrigated pasture – *Bruce Bosley*
- Established a forage triticale variety trial on an irrigated field planned for spring grazing – *Bruce Bosley*
- Small plot, replicated, randomized variety performance trials conducted to compare commercial and experimental lines of barley, oats and alfalfa. *Merlin Dillon*
- Provided guidance on pasture establishment, management, and economics for Aurora Dairy, their forage advisors, and two of their contracting farmers. After the initial meeting, Aurora Dairy granted funds for the Agriculture Big and Small conference as well as established a scholarship at CSU for students enrolling in the new Organic Ag Systems major. – *Bruce Bosley, Keith Maxey, and Adrian Card.*
- 10 news columns were written on forage production and grazed pasture system topics and presented in 18 print media as well on two radio stations. *Bruce Bosley*
- Forage & pasture information was included in three newsletters published 368 customers. *Bruce Bosley*
- One newsletter sent with information promoting the SRM Ag Conference, new oat varieties available and small grain management *Merlin Dillon*
- A brochure was prepared and direct mailed to growers inviting registration and attendance at the Southern Rocky Mountain Ag Conference. Attendance was very good this year with 180 attending Potato Day; 102 attending Grain Day; 195 attending Keynote Speaker; 96 attending Alfalfa Day; and 245 attending Water Day
- Small Grain Research Report includes oats, oat hay and barley variety trial results *Merlin Dillon*
- Alfalfa Variety Trial Report includes alfalfa varieties *Merlin Dillon*

Impacts

- Evaluation results from the Alfalfa & Forage Clinic indicated that all respondents planned on using the information that they gained either sometimes or a lot during the upcoming year. On average, the students improved their understanding of forage production, pest, fertilizer, and water management and grazing systems topics by 2.7 points on a 10 point scale or about 27%. – *Bruce Bosley*
- Those attending the SRMAG Conference indicated they have increased their acreage of green manure cover crops from 1804 in 2004 to 3092 acres in 2005. 15 of 16 growers grew green manure crops on the same or on a larger acreage in 2005. Newer results are not yet tabulated.
- Those attending the SRMAG Conference indicated they have increased the acreage of compost application. Compost was used on 5317 acres in 2004 and increased to 7325 acres in 2005. Fourteen of seventeen growers indicated the same or larger acreage of compost application in 2005.
- Grants/other resources received.
 - Aurora Dairy's contributions demonstrate the fruit of our team's collaboration building efforts *Bosley, Brummer, & Maxey.*

- Farm cooperators participated in field trials by providing land and management resources: for drip irrigation study on potatoes and barley, and for irrigation surfactant trial on alfalfa. *Merlin Dillon*
- USDA-NRCS Conservation Innovation Grant (\$75,000 2-year) for drip irrigation on potatoes, barley and green manure sudan. *Merlin Dillon*
- Aquatrols grant to study surfactant effect on water availability and yield on alfalfa (\$7500/year). *Merlin Dillon*
- No-Till Crop Production Using a Kura Clover Living Mulch System, USDA-NRCS Conservation Innovation Grant, funded for 2 years (\$74,811) *Joe Brummer*. Co-investigators include Neil Hansen, Calvin Pearson, Wayne Cooley, Bruce Bosley, and John Murray.
- Integrating Living Mulches with No-Till Crop Production Systems, USDA-Western SARE, pre-proposal was selected for submission of full proposal which is still in review, funding for 3 years was requested (\$152,634) *Joe Brummer*. Co-investigators include Neil Hansen, Calvin Pearson, Wayne Cooley, Bruce Bosley, and Fred Miller.

Key Theme – Wheat-Based Cropping Systems

Inputs

Team members-Jerry Johnson, Ron Meyer, Sandra McDonald, Bruce Bosley, Brad Erker, Scott Haley, Frank Peairs

Outputs

- Over 2500 email messages sent to all clientele (producers, general public, CSU and other university collaborators, private company clientele, ag commodity groups, and government clients and collaborators- the Crops Testing clientele. Approximately 780 telephone calls to and from the same clientele. Information provided upon request from agents and other clientele. Crop, plant, soils, environmental, and crop variety trial information provided in different forms to agents and other clientele in different forms.
- Number of regular updates for agents and other clientele groups provided:
 - Eight crop variety technical reports and internet documents.
 - Thirteen wheat field day presentations (580 participants) – Lamar, Walsh, Brandon, Arapahoe, Burlington, Genoa, Akron, Yuma, Julesburg, Haxton, Bennett, Stratton, Orchard.
 - Eight wheat planting decision meetings – Vilas, 20 participants; Lamar, 20 participants; Kiowa, 30 participants; Burlington, 40 participants; Genoa, 30 participants; Akron, 50 participants; Dailey, 60 participants; Hudson, 30 participants.
 - Two dry bean field days (45 participants) – Burlington and Haxton
 - One sunflower variety testing meeting (12 participants)
 - One Blue Sun Producers meeting
 - One Ag Classic presentations (2x)
 - One High Plains Journal article
 - One ARDEC general public poster
 - Three meetings/talks to Mountain View Harvest Cooperative leaders
 - One presentation to the National Sunflower Assoc. meeting
 - One meeting with Agrotain representatives
 - One meeting with Anheuser-Busch representatives
- An Example of Using Probabilities to Compare Hybrid Sunflower Performance for Yield and Oil Content in a 2005 Colorado Irrigated Sunflower Performance Trial. Poster presentation to the National Sunflower Assoc. meeting, Fargo, ND.
- Colorado Conservation Tillage Association meeting, Greeley. Analyses of Colorado Wheat Variety Trials, 50 participants.
- Presentation to CWAC and CWGA research committees. 50 participants.

- Colorado Sunflower Administrative Committee presentations (2) to the research sub-committee. 12 participants.
- Refereed Articles
 - Haley, S.D., J.J. Johnson, F.B. Peairs, J.S. Quick, P.H. Westra, J.A. Stromberger, S.R. Clayshulte, B.L. Clifford, J.B. Rudolph, A. Giura, B.W. Seabourn, O.K. Chung, Y. Jin, and J. Kolmer. 2006. Registration of 'Bond CL' wheat. *Crop Sci.* 46:993-994.
 - Haley, S.D., J.J. Johnson, F.B. Peairs, J.S. Quick, P.H. Westra, J.A. Stromberger, S.R. Clayshulte, B.L. Clifford, J.B. Rudolph, B.W. Seabourn, O.K. Chung, Y. Jin, and J. Kolmer. 2006. Registration of 'Protection' wheat. *Crop Sci.* 46:995-996.
 - Haley, S.D., J.J. Johnson, F.B. Peairs, J.S. Quick, P.H. Westra, J.A. Stromberger, S.R. Clayshulte, B.L. Clifford, J.B. Rudolph, A. Giura, B.W. Seabourn, O.K. Chung, Y. Jin, and J. Kolmer. 2006. Registration of 'Bond CL' wheat. *Crop Sci.* 46:993-994.
 - Haley, S.D., J.J. Johnson, F.B. Peairs, J.S. Quick, P.H. Westra, J.A. Stromberger, S.R. Clayshulte, B.L. Clifford, J.B. Rudolph, B.W. Seabourn, O.K. Chung, Y. Jin, and J. Kolmer. 2006. Registration of 'Protection' wheat. *Crop Sci.* 46:995-996.
- Refereed Books and Book Chapters
 - Jerry J. Johnson and Scott D. Haley. 2006. Variety Selection. Chapter, 2006 Wheat Production Handbook. Edited by Frank B. Peairs and produced by The Colorado Association of Wheat Growers: 9-16.
 - Jerry J. Johnson. 2006. Keys to High Yields of Irrigated Winter Wheat in Colorado. Chapter, 2006 Wheat Production Handbook. Edited by Frank B. Peairs and produced by The Colorado Association of Wheat Growers: 67-72
- Technical Bulletins, Technical Reports, and Manuals
 - Johnson, J.J. and S.D. Haley. 2006. 2004-2005 Colorado Winter Wheat Variety Performance Trials. Plainsman Research Center 2005 Reports. Colorado State University Agric. Exp. Stn. Technical Report TR 06-02:1-11.
 - Johnson, J.J., S.D. Haley, F. Peairs, N. Tisserat, D. Hanavan, A. Berrada, M. Stack, C. Pearson, T. Walker. 2006. Making Better Decisions, 2005 Colorado Winter Wheat Variety Performance Trials. Colorado State University Agric. Exp. Stn. Technical Report TR 06-09.
 - Pearson, C.H., Brick, M.A., Johnson, J.J., Ogg, J.B., and Johnson, C.L. 2006. Pinto Bean Variety Performance Test at Montrose, Colorado. Colorado State University, Agricultural Experiment Station Technical Report Western Colorado Research Center 2005 Research Report TR 06-06:21-22.
 - Johnson J. J., H.F. Schwartz., M.A Brick., K. Otto, C. Johnson, J. Hain, and M. McMillan. 2006. Making Better Decisions, 2006 Colorado Dry Bean Variety Performance. Colorado State University Agric. Exp. Stn. Technical Report TR 06-12. October 2006.
 - Johnson J.J., Berrada A., Pearson C.H., Meyer R., Hain J. and Johnson C. L. 2006. Making Better Decisions, 2005 Colorado Corn, Soybean, and Sunflower Performance Trials. Colorado State University Agric. Exp. Stn. Technical Report TR 06-01 January 2006.
- Proceedings - Abstracts
 - Haley, S.D., I.H. DeLacy, and J.J. Johnson. 2006. Multilocational (1990-2006) analysis of Colorado winter wheat yield trial data. In *Agronomy abstracts*. ASA, Madison, WI.
- Refereed Proceedings/Transactions
 - Haley, S.D., J.J. Johnson, P.H. Westra, and F.B. Peairs. 2006. CLEARFIELD* winter wheat (*Triticum aestivum*) cultivar development, commercialization, and introduction in the western Great Plains region of the USA. In C.F. Mercer (ed.) *Proc. 13th Australasian Plant Breeding Conference*, Christchurch, New Zealand, 18-21 April 2006.

- Web, Digital or other Electronic Media

- Crop Variety Performance Websites for Colorado Crops

- *2004-2006 Making Better Decisions, Colorado Winter Wheat Variety Performance Trials*
 - *2004-2006 Making Better Decisions, Colorado Dry Bean Variety Performance*
 - *2004-2006 Making Better Decisions, Colorado Hybrid Corn Performance Results*
 - *2004-2006 Making Better Decisions, Colorado Soybean Variety Performance Results*
 - *2004-2006 Oilseeds Information Page*
 - *2004-2006 Making Better Decisions, Hybrid Sunflower Performance Results*
 - *2004-2006 Making Better Decisions, Colorado Alfalfa Variety Performance Results*
 - *2004-2006 Spring Wheat, Barley, and Oats Variety Performance Results*

- Other Extension Publications

- *J. Johnson, J. Hain, and C. Johnson. 2006. 2005 COLORADO WINTER WHEAT TRIALS. Colorado State University Cooperative Extension Golden Plains Area Agricultural Handbook 2005. Vol. VIII, p.14.*
 - *J. Johnson, J. Hain, and C. Johnson. 2006. WINTER WHEAT VARIETY SELECTION IN COLORADO FOR FALL 2005. Colorado State University Cooperative Extension Golden Plains Area Agricultural Handbook 2005. Vol. VIII, p.14.*
 - *J. Johnson, J. Hain, and C. Johnson. 2006. 2005 COLORADO SUNFLOWER PERFORMANCE TRIAL RESULTS. Colorado State University Cooperative Extension Golden Plains Area Agricultural Handbook 2006. Vol. VIII, p.37.*
 - *J. Johnson, J. Hain, and C. Johnson. 2006. 2005 DRY BEAN TRIALS. Colorado State University Cooperative Extension Golden Plains Area Agricultural Handbook 2006. Vol. VIII, p.45.*

- Popular Magazine Articles

- *Johnson, J.J. 2006. 2005 CSU Bean Variety Trial Summaries. Colorado Bean News. Winter 2006. Vol. 18, Issue 1.*
 - *Johnson, J.J., and S.D. Haley. 2006. 2006 Colorado Winter Wheat Variety Performance Trial Results. Performance trial results help Colorado wheat producers make better variety decisions. Colorado Wheat Farmer. Vol. 48, NO.2.*
 - *Johnson, J.J., S.D. Haley, and B. Erker. 2006. Making better decisions, 2006 Colorado winter wheat performance trials, 2006 Colorado certified seed directory. High Plains Journal (insert). August 14, 2006.*
 - *Johnson, J.J., and S.D. Haley. 2006. 2006 Making better decisions winter wheat variety selection for fall 2006. Colorado Wheat Farmer. Vol. 48, NO.2.*
 - *Johnson, J.J., S. Brase, A. Helm, R. Meyer, and B. Bosley. 2006. 2006 Collaborative on-farm tests (COFT) complement performance trial results. Colorado Wheat Farmer. Vol. 48, NO.2.*
 - *S.D. Haley, and Johnson, J.J. 2006. Colorado wheat variety database now available for download. Colorado Wheat Farmer. Vol. 48, NO.2*
 - *Johnson, J.J., S.D. Haley, D. Hanavan, and C. Yahn. 2006 Colorado Wheat Field Days Set for June 13-20. Colorado Wheat Farmer. Vol. 48, NO.1.*
 - *Johnson, J.J. Colorado Wheat Field Days 2006. CCTA JOURNAL. May 2006.*

- Newsletters

- *Johnson J.J., and S.D. Haley. 2005. Colorado winter wheat variety performance trials. Agronomy News, From the Ground Up Extension Newsletter, Vol.25, Issue 1. Soil and Crop Sciences Department, Colorado State University.*

- Relationships established with local, state, or federal agencies

- *Colorado Seed Growers Association*

Foundation Seed Committee
Colorado Wheat Administrative Committee
Colorado Wheat Growers Association
Colorado Wheat Research Foundation
Colorado State University Research Foundation
Colorado Bean Network
Colorado Dry Bean Administrative Committee
National Sunflower Association
Colorado Sunflower Administrative Committee
Great Plains Canola Improvement project (KSU)
Arkansas Valley Research Center, Rocky Ford
Plainsman Research Center, Walsh
Southwest Research Center, Yellow Jacket
San Luis Valley Research Center, Center
Western Colorado Research Center, Fruita
USDA-ARS Central Great Plains Research Station, Akron
USDA-ARS Wheat Physiologist, Fort Collins

Impacts

Annual crop value for crops tested and results transferred to clientele is over \$1 billion. Genetic impact on crop yield averages 1.2% per year and an estimated half of that amount can be attributed to Colorado crop variety testing, and our wheat and dry bean improvement programs.

GOAL II: A safe and secure food and fiber system.

Objectives:

- A. Promote food safety across the food chain from production through consumption.
- B. Provide certification training for food handlers.

CSU Core Competency Area: Nutrition, Health, and Food Safety

Key Theme – Food Safety Education

Objective 1: Increase the proportion of consumers who follow key food safety practices.

Objective 2: Improve food employee behaviors and food preparation practices that directly relate to foodborne illnesses in retail food establishments.

Objective 3: Increase the proportion of high risk consumers and their caregivers who follow key food safety practices.

Situation

Foodborne illness in the United States is a major economic burden and cause of human suffering and death. While foodborne illnesses are often temporary, they can be serious causing hospitalization, long-term disability, and death. The economic and social consequences of foodborne disease in relation to health care costs and loss of worker productivity are quite large. Hospitalizations due to foodborne illnesses are estimated to cost over \$3 billion each year in the United States. The yearly cost of lost productivity is estimated at between \$20 and \$40 billion. It is estimated that foodborne contaminants cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the U.S. each year. The public health challenges of foodborne disease are changing rapidly as a result of newly

identified pathogens and vehicles of transmission, changes in food production, and an apparent decline in food safety awareness. According to the Healthy People 2010 Initiative, emerging pathogens, improper food preparation, storage, and distribution practices, insufficient training of retail employees, increasingly global food supply, and an increase in the number of people at risk because of aging and compromised capacity to fight these diseases may all play important roles in the incidence of foodborne disease.

Inputs

Team Leaders – Mary Schroeder and Edie McSherry

Team Members – Laura AuYeung, Jane Frobose, Joy Akey, LuAnn Boyer, Glenda Wentworth, Jeanne Rice, Elisa Shackelton, Lois Illick, Sheila Gains, Patricia Reyes

- User fees were generated for 44 food handler trainings conducted using the following programs used by Las Animas, Larimer, Sterling, Brush, Fort Morgan, Pueblo, Tri-River area, Routt, Denver, Arapahoe counties:
 - ServSafe Manager Certification Training
 - Food Safety Works for Retail Food Establishments
 - Food Safety Works for Food Bank Member Agencies
- Colorado Trust grants were awarded to teach food safety classes to food workers in the Tri-River area, Gunnison and Moffet Counties. As a result, the agency, Comunidad Integrada, is an additional resources available to help reach underserved audiences.
- Collaboration to arrange release time for 65 employees to attend a worksite food safety education program.
- Contract with Food Bank of the Rockies to conduct safe food handler trainings.
- Local partnerships with Environmental Health Departments, Extension Offices, schools, local businesses and organizations such as health clinics, WIC, program, Visiting Nurses, pre-schools, Social Services, etc. to reach a broader range of consumers/specific audiences and assist with community-sponsored events.

Outputs

- Desktop trainings conducted to provide trainings to Extension Agents (2 trainings/16 agents)
- County Extension websites updated to include access to the most current CSUCE food safety fact sheets and national food safety web sites that address consumer concerns.
- Publications. New tri-fold *Processing Chile Peppers Safely* was developed and added to the Extension Nutrition Resources section.
- Media. Work team members contributed food safety-related articles, media releases as community-outreach to the public. (36 articles; 66 media outlets/415,700 consumers reached)
 - Provided food safety consultation to newspaper/media (15 occasions)
 - KKTU television interviews on food safety. (7 segments)
- Safefood Newsletter. The SafeFood website received >110,000 hits for food safety information.
- Displays. Extension agents provided food safety displays, (77 displays; 2,250 participants.) Examples include: Cinco De Mayo festival; farmers markets, community health fairs, county fairs, parenting expos, food pantry, etc.) Topics: be food safe; farm safety for kids; emergency preparedness; *Food Safety Works*, food safety for food pantry items, food safety during pregnancy; handwashing; safe food preservation-pickling and jam-making demo.
- Collaborative meetings. Meetings were conducted with Regional Health and Human Service Agencies to collaborate food safety education efforts in local communities.
- Marketing flyers.
 - Flyer was developed for the Food Safety Works program.
 - Flyer was developed advertising county Extension food safety resources.
 - Volunteer Recruitment Advertisement for the Master Food Safety Advisor Program was developed and placed on the Extension website.
- ServSafe Instructor Certification (1 agent)
- Safe Thermometer Use for EFNEP program (2 classes/12 participants).
- Worksite Wellness. (2 trainings/65 employees)
- Food Safety for Professionals (5 trainings/80 professionals).
- Food Safety when Cooking for Groups. (4 sessions/31 participants).

- Volunteer Master Food Safety Advisor trainings. (15 trainings/ 5 new volunteers; 1 recertification training/29 continuing volunteers)
- Volunteer Time. \$123.50 in-kind donations. 1,142 hours/ 2,161 consumer contacts/198 volunteers. Classes attended (205 consumers).
 - Food Preservation (11 classes).
 - Food Preparation and Preservation at Altitude (2 classes).
 - Farmers Markets. Provided food safety information weekly to consumers.
 - Holiday Food Safety (3 classes). Developed Pikes Peak Gift Guide and Recipe Booklet incorporating food safety principles and tested home food preservation recipes. (4 classes).
 - Turkey 101 class. Taught consumers safe preparation and handling of turkey.
 - Candy Making at Altitude. (25 participants).
 - Making Sauerkraut (17 participants).
 - Assisted in testing recipes for development of new *Pepper Jam and Jelly* booklet.
 - Assisted in development of *Preserving Chile Peppers* trifold.
- Consumer food safety questions. A total of 1,953 consumer food safety-related questions were answered via phone calls, emails and face-to-face.
- Children-Project Handwashing: Food safety and the importance of handwashing for prevention of foodborne illness. (26 trainings/1,503 children/148 parents)
- 4-H Program. Food safety for volunteers who run the county fair concession booths.
 - (35 new leaders/parents/ 21 refresher training).
 - Youth: (14 trainings; 126 participants).
- Child Care Providers: Food safety for Head Start workers (15 trainings; 195 participants).
- Food Safety for Pregnant Women. English and Spanish classes for pregnant women were pilot tested in March/April 2006 (3 classes; 13 women). Extension agents will conduct trainings for health professionals who work with pregnant women in 2007 and make these materials available for distribution to their pregnant clientele.
- Food Safety for Seniors. Desk-top train-the-trainer program conducted with Extension Agents in March 2006 (12 agents). Agents will help conduct these classes to seniors in their local communities in 2007.

Successful efforts to reach new and/or underserved audiences.

The *Food Safety Works* safe food handler program materials are available in both Spanish and Chinese in order to better reach those audiences who do not speak English.

- *Food Safety Works* class for Spanish-speaking food workers (4classes).
- Spanish-speaking employees of cafeteria at local beef packing plant received Spanish food safety information (17 employees).
- *ServSafe* Certification class taught in Chinese (8 participants).
- *Food Safety Works* class for low-literacy youth (4 participants).
- *Eat Well for Less* food safety curriculum for food workers at mental health institute. (6 classes/45 participants).
- *Dining with Diabetes*-food safety lesson (5 classes/65 participants).
- *Food Safety During Pregnancy* class for Spanish-speaking women. (2 classes; 13 women).
- Newspaper articles on food safety (Listeria) were translated into Spanish and printed for Hispanic audiences.
- Utilized newspapers and Hispanic Comunidad Integrada agency to market “*Making Safe Cheese-Queso Fresca*” workshops to local Hispanic consumers. Grant funding enabled use of an interpreter to help deliver the workshop. (19 participants)
- New food handler training opportunity developed by partnering with Regional 10 Health and Human Services to facilitate the *Food Safety Works* in Delta, Montrose, Ouray, Gunnison, San Miguel and Hinsdale Counties.
- Utilized bilingual food safety teaching materials (Fight BAC, dairy council, *CSU Food Safety During Pregnancy*, and INP materials.)

Impacts

- Food Handler trainings conducted using the following three programs (70 trainings/1,137 participants):

- ServSafe Manager Certification Training
 - Food Safety Works for Retail Food Establishments
 - Food Safety Works for Food Bank Member Agencies
- Knowledge and Awareness. Pre and Post surveys of the worksite programs revealed participants gained new knowledge and awareness and planned to make modest changes in their behavior to reduce the risk of food borne illness.
 - Consumer Classes and trainings were conducted in the area of food safety. 18 classes/248 consumers. Participants gained awareness and knowledge related to practicing personal hygiene, cooking foods adequately, and keeping foods at safe temperatures. Participants stated they planned to incorporate skills and change food handling behaviors.
 - Consumers who visited a food safety display booth learned food safety principles through active participation in games/questions that left them with a prize/incentive to encourage adoption of new food safety behaviors.
 - Positive responses were received from new use of monthly radio public spot announcements on food safety.
 - Positive verbal testimonials from program participants after attending safe food handler trainings.
 - Larimer County *Food Safety Works* pre/post surveys show the following results:
 - 93% - Plan to make positive changes in safe food handling
 - 94% - Increased self-confidence to work in food service related jobs.
 - 96% - Increased knowledge and awareness in one or more categories of safe food handling practices.
 - 79% - Increased knowledge and awareness in three or more categories of safe food handling practices.

GOAL III: A healthy, well-nourished population.

Objectives:

- A. Coloradans will increase their knowledge and adoption of practices which promote healthy lifestyles.
- B. Communities will improve their capacity to address health and nutrition related needs.

CSU Core Competency Area: Nutrition, Health, and Food Safety

Key Theme – Health Promotion/Chronic Disease Prevention

Situation

- Approximately three out of four Colorado adults have one or more key cardiovascular risk factors: high cholesterol, high blood pressure, overweight or obesity, diabetes or currently smoke.
- Cardiovascular disease is the leading cause of death in Colorado. It accounts for 32 % of all Colorado deaths. Colorado has the fourth highest percentage of sudden cardiac death in the nation.
- Twenty-nine percent of Coloradoans have high cholesterol.
- Twenty-two percent of Coloradoans have high blood pressure.
- The number of persons with type 2 diabetes in Colorado has increased over 70% in the past ten years. The Colorado Department of Public Health and Environment (CDPHE) estimates that 143,000 persons are diagnosed with diabetes, but another 74,200 are likely to have the disease and not know it.
- Northeast Colorado has a higher aging population and a high incidence of heart disease and cancer.

Inputs

Team Leaders – Jennifer Anderson and Shirley Perryman

Team Members - Sheila Gains, Jane Frobose, Mary Ellen Fleming, Joy Akey, Barbara Martin-Worley, Bonnie Sherman, Luann Boyer, Glenda Wentworth, Amy Hart

- Fact Sheets updated through CSU Extension included:

9.306	Guide for Daily Food Choices	Anderson/Curtis	Revised	9/06
9.315	Fat-Soluble Vitamins	Anderson	Revised	11/06
9.338	Food vs. Pills	Anderson	Reviewed	4/06
9.363	Weight Loss Programs/Products	Anderson/Young	Reviewed	5/06
9.364	Weight Loss Diet books	Anderson/Young	Reviewed	5/06
9.370	Herbals for Health?	Anderson/Braithwaite	Revised	5/06

Outputs

- Healthy Heart Beats Newsletter available quarterly at <http://www.ext.colostate.edu/pubs/healthyheart/hhbmenu.html>
- Healthy Eating article published monthly in Denver Post; authored by CSU Extension Specialist.
- Family Matters Newsletter available monthly: 15,000 copies distributed statewide.
- Lillian Fountain Smith Conference, June 13-14, 2006, Fort Collins, CO: Training opportunity which provided updated nutrition information to Extension.
- Small Changes Make a Big Difference (currently under revision by a FSHN graduate student as a research project from a grant through CDPHE): Extension agents presented a poster on diabetes at CSU Colloquium on Health Promotion and Disease Prevention on 4/13/06 and at the National Centers for Disease Control Diabetes and Obesity Conference 5/15-19/06.
- Extension Specialist, Jennifer Anderson, was a speaker at the CSU Research Colloquium on Health Promotion and Disease Prevention Colloquium held in Fort Collins.
- Dining with Diabetes classes offered across Colorado.
 - Example: Series of 3 classes (4 classes per series) offered from Otero County with participants from both Otero and Crowley Counties. Series of 2 classes held in Bent County. Approximately 60 people participated in these classes.
- Northeastern Colorado offered 55 programs that addressed diabetes, child nutrition, adult nutrition and overweight prevention through strength training and reached approximately 2150 people.
- Annual Northeast Colorado Diabetes Health Fair was attended by 71 people and 826 individuals attended other health fairs where they learnt about using the Plate Method for diabetes meal management
- Agent in El Paso county presented programs on nutrition and exercise for obesity and chronic disease prevention including: MyPyramid, Whole Grains, Reducing Fat Intake, Increasing Calcium Intake.
- WIN Kids (Wellness in Kids): in Eagle Co The goal of the WIN Kids (Wellness in Kids) through the University of Wyoming Cooperative Extension Service was to enhance the well being of individuals by improving their attitudes and behaviors related to food, physical activity, and body image. The activities implemented incorporated nutrition and body image education in The Youth Foundation's Academic Soccer Club program. A COPAN grant was obtained through the Eagle River Youth Coalition to conduct and deliver the program.
 - The total number of youth that attended was 308. The total number of sixth graders participating was 132 with the average attendance of 12. Eighty nine percent of the audience was Latinos. The total number of seventh graders was 176 with an average attendance of 14 per day. Ninety seven percent of seventh graders were Latinos. The sixth grade resulted in 75 females attending compared to 57 males. While the seventh grade had 101 males and 75 females attend throughout the program duration.
 - Pre-post tests were used to evaluate whether behaviors have changed regarding food, physical activity, and body imaging. There was some measure of desired change from the pre to the post tests. Twenty one sixth graders took the pre-test with the average score of 53.57%. Only ten sixth graders took the post-test with the average score of 60.83%. Out of those ten youth, only 7 of them had taken both the pre and the post test. The seventh graders faired a bit better with 14 pre-tests scores averaging 55.95%

and ending with 16 post test scores averaging 64.58%. Nine out of the 16 seventh graders took both the pre and post test.

- StrongWomen™: To date 14 Colorado Extension agents have been trained to be StrongWomen™ Program (SWP) leaders. Classes have been taught by 10 of those Extension agents.
 - January to May: 9 Extension agents taught 18 sessions which ranged from 11 weeks to 13.5 weeks with the average being 12 weeks. Each session holds 2 classes per week. A third session is encouraged on their own at home. (It is recommended that sessions last for 12 weeks but 8 weeks is acceptable.) Those 9 Extension agents taught 1, 2, 3 or 4 sessions during that time period. Fees ranged from \$0 to \$50. Some share their user fees with the Sr. Center or the Church if that is the location for the classes. When the \$0 and the shared fees are removed the average fee charged was \$33. Registration ranged from 4 to 20 participants. Actual attendance per class ranged from 3 to 17. One Extension agent did use a trained volunteer to conduct the SWP classes..
 - May to November: 5 Extension agents taught 6 sessions which ranged from 11 to 12 weeks. Each session holds 2 classes per week. A third session is encouraged on their own at home. Only 1 agent taught 2 sessions during this time and one of those sessions was taught by a trained volunteer. Fees ranged from \$0 to \$49. One agent shared her fees with the Sr. Center—the class location. When the \$0 is removed, the average fee charged was \$48. Registration ranged from 4 to 16. Actual attendance per class ranged from 4 to 16.
 - August to December/January: 6 Extension agents taught 11 sessions which ranged from 8 to 13 weeks with the average being 10 weeks. Those 6 Extension agents taught either 1, 2 or 3 sessions for this time period. Two Extension agents used trained volunteers and in this case neither agent taught a class herself but was available to the volunteer. Fees ranged from \$0 to \$50. One agent shared her fees with the church and the Sr. Center—the class location. When the \$0 and the shared fees were removed, the average fee charged was \$40. Registration ranged from 4 to 22. Actual attendance per class ranged from 1 to 14.
- Bent County Nursing Service provided a grant allowing Dining with Diabetes classes to be taught.
- Even Start/La Llave Family Resource Center enrolled monolingual individuals in Dining with Diabetes classes (see #5 above.)
- Senior Centers and churches in several counties coordinated with Extension agents to allow StrongWomen™ classes to be taught.
- COPAN provided grant funds to facilitate Community Healthy Eating and Active Living Coalitions in Eagle Co.
- Wendy Rice in La Plata county noted the following organizations as partners: COPAN, School District Health, Senior Center, County Personnel Department, Fort Lewis College, Farm to School Partners, local medical health care providers, local businesses, San Juan Basin Health Department, South Ute Indian Tribe, Local Restaurant Association, city and county government, local media.

Successful efforts to reach new and/or underserved audiences.

- Translated articles in Family Matters Newsletter into Spanish.
- Some Dining with Diabetes classes were taught in Spanish. Several examples included Alamosa and Saguache Counties which reached 22 people.
- Cooperative Extension-based Food Stamp Nutrition Education (FSNE) at CSU provided classes, demonstrations, and educational activities on nutrition, food choices, food buying and preparation, and food resource management to Food Stamp recipients and potential applicants. Programming was offered in 20 counties.

Impacts

- The demand for StrongWomen™ classes to be repeated is high. The number of classes offered throughout the state is growing. Registration totaled 369 people.

- FSNE reached 5117 people through class series and single lessons. There were 897 class graduates who received an average of 4.9 lessons. Additionally, 1582 people attended some classes, but did not graduate. Utilizing newsletters and displays, an additional 79,108 people reached through nutrition education efforts.
- General Overview/Summary for Cooperative Extension-based FSNE:

During the 2005-2006 program year, Cooperative Extension-based FSNE program continued to provide comprehensive nutrition, food safety and food resource management education to limited resource audiences through CSU Cooperative Extension. Programming was provided in twenty Colorado counties; however, several counties were under-served or un-served for the majority of the year due to staff turnover. Altogether, six county FSNE Agent positions (out of 16 total positions available) were filled during the 2005-2006 program year. With the influx of new educators, and new/modified curriculum options, it was an exciting and productive year of fresh ideas and staff.

During FFY 2006, 1,829 people were reached through in-depth class series (897 class graduates, attended 4.9 class meetings; 932 people attended at least one class, but did not graduate); 3,288 direct contacts through single events; 16,901 indirect contacts through nutrition newsletters; and 62,207 indirect contacts through exhibits and displays.

The strongest evaluative data are from adult in-depth class series which measure behavior change as a result of the program. Program graduates improved their eating habits and nutritional intake while extending their limited food dollars. Following are some highlights:

- 89% reported a positive change in some aspect of their eating habits, as measured through analysis of pre/post 24 hour food recall
 - 46% increased their intake of fruits and vegetables
 - 38% reported more often choosing fruits and vegetables as snacks
 - Participants increased their combined daily fruit and vegetable consumption by an average of 0.8 servings pre- to post-program
 - Participants increased their intake of dairy foods by an average of 0.2 servings pre- to post-program
 - 25% improved physical activity levels (participating in physical activity \geq 30 minutes/day)
 - 36% reported they less often “super-sized” meals eaten at fast food restaurants
 - 56% reported more often reading nutrition labels before purchasing food
 - 75% showed improvement in one or more food resource management practice (planning meals, comparing prices, does not run out of food, shops with a list)
 - Program graduates reported an average savings of \$66.92 on their monthly food bill
- Due to the nature of the program and a positive relationship with the school administration, the Integrated Nutrition Education Program (INEP) previously funded through grant dollars for the Wray Schools, was adopted by the school board as part of the school budget. This created a stable, long-term funding source to allow the program to continue to grow and positively impact families and their students and the entire community.
 - The success of the WIN Kids program as stated by Amelia Wood, Academic Soccer Coordinator, “The kids were interested and enjoying the program even though it was health and it was the end of the day, to me that is success. Also, for me part of our goal with the Academic Soccer Program is to keep kids interested in school and sports. I think that the health program only added to that goal, and for many of these kids they will remember many of the health tips even if it does not show in the data. Remember, we were successful in keeping kids in a program after school instead of at home baby sitting or outside on the street getting into trouble, that is a huge success.”
 - Received from a StrongWomen™ class participant: “HURRAH!! I just received my yearly Bone Mineral Density (BMD) test results, and they're better than last year's!!! So, I may not be able to be 40 years old again, but I won't let my BMD get worse. Thank you for your support and for committing your time to the Strongwomen/Strong Bones class. Sign me up for the next class!!!!”
 - A Healthier Weigh health and fitness challenge was held in Northeast Colorado for 10 weeks beginning in January. 21, 3-person teams participated by recording weekly steps using a pedometer and completing 8

lessons on nutrition, health and fitness. A weigh-in was held at the beginning and weigh-out at the conclusion but no weekly weighing was held. Lessons were available via the Extension website, by attending a live 30 minute program, or by receiving a copy of materials or having them faxed. All teams completed the challenge with cash awards presented at the conclusion. During the program, participants walked 11,270 miles and lost a total of 417.9 pounds. Due to the success of the program, it is being held again in 2007 and expanded to Logan, Washington and Yuma counties.

Key Theme – Promoting Food Security for Limited Resource Audiences

Situation

Colorado's economic situation has increased the possibility of food insecurity for growing numbers of families and individuals. Cooperative Extension has several unique opportunities to address these issues. One of the opportunities is that Extension has a solid relationship with a number of community agencies and county departments in many counties.

The work team's overall goal is to develop and implement educational programs that promote food security for limited-resource audiences. Priority areas include food resource management, meal planning, hunger prevention and awareness, individual food security, and community food security. Women, children and minority groups are seen as important target audiences

Inputs

Team Leader – Susan Baker

Team Members – Colorado Extension Agents

Partners

Food Science and Human Nutrition Department

City of Westminster

Adams County Social Services

Adams County Office of Community Development

City of Northglenn

City of Wheat Ridge

Salvation Army SilverCrest

Colorado Department of Public Health and Environment, Diabetes Control Program

Facilities

City of Westminster

Adams County Social Services

Adams County Office of Community Development

City of Northglenn

City of Wheat Ridge

Salvation Army SilverCrest

Outputs

- Offered class series in the Tri River Area as well as tried to become a guest speaker about nutrition topics with other agencies that target low-income audiences. One hundred and six participants completed one of 16 class series that were offered. One hundred sixty seven attended one of 17 one-time presentations.
- The work team developed a 70 slide power point presentation and a 4 page handout that could be adapted to include statistics about hunger specific to individual counties. The tools were designed to be used by agents from varied backgrounds and in various locations. Las Animas and Huerfano Counties focused on hunger awareness, presenting parts of the power point and using the handout to motivate service organizations and 4-H clubs to do something to help the food banks and soup kitchens that were already functioning in their communities. Approximately 39 people attended.

- 4 sessions with 139 people attending
 - Food Security Needs Assessment presentation (2 times) total of 36 people attended
 - Hunger in Our Neighborhood (1 time) 75 people
 - Food Security and Cooperative Extension- (1 time at Colorado Food Bank Association) - 28 people
- Mesa and Montrose Counties collaborated with Young Parents Program, Gateway Youth Services, Passage Charter School and Teen Companion Program to target pregnant and parenting teens as well as teens on emancipation track. Lesson series and one time talks to one hundred and sixty one youths.
- Adams County Food Security Needs Assessment was completed in 2006. Adams County Social Services contributed \$10,000 to the Office of Community Development to support the Adams County Needs Assessment.

Impacts

- Immediate (learning) changes- 100% of participants indicated an increase in awareness of local hunger situations and an equal number were surprised to learn that the majority of those suffering from hunger(access by all people at all times to enough food) were from households with at least one member working.
- Short/medium term (action) changes-one service group and one 4-H club committed to providing nonperishable food to the local food banks on a regular basis.

A 4-H leader in Huerfano County was so touched by the difficulties of the local food bank in keeping enough food on hand that she encouraged each club at the council meeting to be responsible for collecting food on a monthly basis.

- **ERS evaluation system reports that of those who completed the lesson series**
 - **92% changes at least one practice that brought their food choices closer to the 2005 Dietary Guidelines or MyPyramid**
 - **16% increased their vegetable consumption and 34% increased their fruit consumption**
 - **!7% increased dairy consumption**
 - **3% decreased fat consumption**
 - **families self-reported saving an average of \$54 on groceries a month**
 - **37% super-sized meals less often but 59% remain unchanged**
 - **25% had increased their level of activity**

GOAL IV: Greater harmony between agriculture and the environment.

Objectives:

- A. Increase the adoption of research based best management practices to control weeds, insects, disease and nematodes for wise use of agriculture chemicals and for ground water protection.
- B. Increase the effective management of pests in agriculture systems and landscapes.
- C. Enhance wise soil management decision making.
- D. Enhance adoption of research based management practices in the green industry of Colorado.
- E. Improve the rangeland management skills of Coloradans who manage public and private land.

CSU Core Competency Area: Natural Resources and the Environment

Key Theme – Environmental Horticulture-Sustainable Landscapes

Situation – Summary

The demand for sustainable landscape information from both the commercial and home horticulture arena continues to grow in accessibility of information and depth of expertise. Property stewardship issues center around reducing inputs and maintenance requirements including water conservation and irrigation management, pest management strategies, plant species selection, including native plants, invasive plant species, and other appropriate landscape maintenance practices.

Sustainable landscape management information is also in demand from Colorado's growing population which is locating outside of urban areas. The need to address contemporary environmental and natural resource problems with new approaches that are economically sound and environmentally advantageous in this urban-to-rural continuum is critical. Of primary concern to many of these new land owners are weed issues and using native species to revegetate disturbed areas, rejuvenate old pastures or improve the integrity of existing native plant communities.

Inputs

Colorado Master Gardeners

Team Leader – David Whiting

Team Members – Colorado Extension Agents in Horticulture

Native Plant Masters

Team Leaders – Barbara Fahey, Irene Shonle, Susan Rose, Curtis Swift

Team Members – Yvette Henson, Tom Hooten, Linda Langelo, Linda McMulkin, Laurel Potts

Outputs/Impacts

Colorado Master Gardeners

- 1500 volunteers (receiving 17,400 educational contact hours)
- 59,700 volunteer hours provided
 - 20,200 hours with individuals
 - 12,100 hours at booths and clinics
 - 5,700 hours giving classes
 - 6,500 hours in greening projects
 - 2,200 hours working with youth
 - 1,500 hours preparing print media
 - 400 hours writing articles
 - 300 hours preparing information for electronic media
 - 6,300 hours providing program support
- 81,400 individual contacts (13% with the green industry)

Native Plant Masters

What is a sustainable landscape and why is it important in Colorado?

Sustainable landscapes use site-appropriate native plants and can reduce the need for water, maintenance time and pesticide use. Research demonstrates that xeriscapes including natives and adapted non-natives can reduce water usage by 60%. Natives can also be beneficial because they are environmentally adapted, hardy, provide food and shelter for wildlife and maintain local biological diversity. However, many residents need education in selecting plants appropriate to Colorado landscapes. New residents find that their landscaping and gardening experiences often do not apply to Colorado's environmental conditions relating to soils, climate, elevation, and water quality and availability.

Why are non-native weeds a problem in Colorado?

Invasive, non-native weeds are a critical concern in many Colorado communities and threaten native ecosystems. Loss of native plant communities and exotic plant invasion costs money. Estimates are that the United States spends \$137 billion per year in controlling weeds and mitigating damage. Noxious weeds are moving into valued ecosystems and displacing native plants at an alarming rate. Invasive species are a factor in the decline of 49% of all imperiled species. Each year, invasive species advance by 1.7 million acres per year. Invasive plants are found on 133 million acres across the country.

What is Colorado State University Cooperative Extension doing about these problems?

The Native Plant Master Program was created in by Colorado State University Cooperative Extension in Jefferson County in 1997 to address these critical issues. The mission of this program is to educate the public about the biological and human values of Colorado plant resources. The primary focus is to teach participants about the two key issues described above: 1) use of natives as sustainable landscaping materials in an arid environment, and 2) the ecological impact of weeds that threaten native ecosystems.

Trained volunteers and/or Extension staff teach the field-based courses that make up the Native Plant Master Program. Courses are held at local open space parks and other public and private lands. The texts used include a Native Plant Master manual tailored for each course site. The cost is \$90 per course and each twelve hour course is made up of three, four-hour sessions. Courses are offered at \$50 per course to participants who agree to teach at least 30 people per year in public programs about Colorado plants. Participants who pass three courses and satisfy the teaching requirement become certified Native Plant Masters.

What impact has the Native Plant Master Program had on these issues?

The Native Plant Master Program has generated significant public participation and educational impacts. Last year, the Jefferson/Gilpin County program resulted in 7,431 educational contacts made by course graduates using information from Native Plant Master courses. As a result of their participation in the program, course graduates developed or expanded: 1) landscaping plans to use natives (66% of respondents) and 2) weed management plans (60%). These plans impacted a total of 2,318 acres. Seventy-four percent of respondents used at least one Colorado State University Cooperative Extension resource in developing their plans.

The Native Plant Master Program has been recognized for innovation and excellence at both the national and local levels. The program was recognized by the Association of Natural Resource Extension Professionals with a National Program Leadership Award in 2002. The Native Plant Master Program received the Excellence in Higher Education award from the Colorado Alliance for Environmental Education in 2004.

Key Theme – Pest Management

Situation

Data from the Plant Health Care industry indicates that less than 10% of landscape pests warrant the use of a pesticide. In a survey by the International Society of Arboriculture, 90% of urbanites don't see a role for pesticides in landscape maintenance. However 80% will use an insecticide if bugs are on their trees. This gap between perceived standards for society and what applies to the individual makes pest management education difficult.

Understanding pest management strategies is a primary educational need identified by home gardeners and the landscape maintenance industry workers. Understanding which pests, and under what situations, pesticide use would be warranted is often more complex than the simple answers home gardeners and many landscape maintenance workers desire.

Inputs

Team leaders - H. F. Schwartz and Thad Gourd
Team Members – Colorado Extension Agents and Specialists

Outputs

- Phase 1 Advanced Master Gardener Diagnostic training by 4 instructors for 2 counties and 30 students - M.Small & C. O'Meara
- Phase 2 Advanced Master Gardener Diagnostic training by 8 instructors for 5 counties and 55 students - (M.Small & C. O'Meara
- Plant Pest and Disease Diagnostic Workshop for 4 Green Industry groups - M. Small
- Regional website built for Master Gardener Diagnosticians - C.O'Meara
- Field work for 5-year USDA-ARS Areawide IPM for Russian Wheat Aphid and Greenbug project completed.- F. Peairs
- Russian wheat aphid resistant feed barleys demonstrated at 12 on-farm locations in Colorado and Nebraska - F. Peairs
- Wheat and Sunflower Insect and Disease Nurseries to Evaluate Pesticide Efficacy - R. Meyer with N. Tisserat and others
- Pasture herbicide trial, field crop and turf pest diagnostic support in northeast counties - B. Bosley
- Hosted Alfalfa and Forages Clinic in Sterling - chaired by B. Bosley
- Weed diagnostics, management and education via meetings, publications and workshops - I. Shonle
- Helped create new noxious weed ordinance for Gilpin County - I. Shonle
- Helped develop an Emergency Use label for Carzol thrips control by onion farmers in Colorado - B. Hammon
- Demonstration on pruning to protect limber and bristlecone pines from white pine blister rust – B. Jacobi
- Soybean Rust and Soybean Aphid Monitoring and Reporting to Pest Information Platform for Extension & Education (PIPE) – H. Schwartz, M. Bartolo, R. Meyer, M. Stack, W. Cooley
- PIPE Coordinator for the western U.S. and Canada during 2006 and 2007 – H. Schwartz
- Organized a national committee to address research and extension needs for onion thrips and IYSV – H. Schwartz
- Pheromone monitoring in NE Colorado counties - R. Meyer
- Follow-up to USDA-ARS Areawide IPM for Russian Wheat Aphid and Greenbug project (regional IPM manual) - F. Peairs
- Canada Thistle management and field day near Bennet - T. Gourd
- Weed management and education on small acreage (T. Gourd), noxious weed emphasis - K. Nye, I. Shonle
- Tri-River Master Gardener training with emphasis upon pest management, pesticide use, alternatives - C. Swift, S. Rose
- Leadership in Montezuma County and elsewhere on education and management of tamarisk - T. Hooten
- Cereal Leaf Beetle survey of clientele and organizations in SW counties - R. Hammon & T. Hooten
- Organized Organic Growers Club in Montezuma County - T. Hooten
- Insect diagnosis of more than 400 specimens at the Tri River Lab - B. Hammon
- Disease and insect diagnostics at the main campus (>500 samples) Blunt and Camper
- Noxious weed management with BLM & the Forest Service for the Uncompahgre Plateau – W. Cooley
- Development of an electronic, multi-access key for the identification of small grain pests – N. Tisserat & R. Koski
- Survey of greenhouse production areas for diseases and insects (Pottorff, Swift, Tisserat, Blunt)
- Phase 3 Advanced Master Gardener Diagnostic training by 6 instructors for 8 counties - M.Small & C. O'Meara
- Turf Site Visit Diagnostic Project to train staff in 9 counties – T. Koski, N. Tisserat, C. Wilson, M. Small & C. O'Meara
- Improved Pythium disease management of Poinsettia in greenhouse production with the use of biopesticides treatments – L. Pottorff
- Banded Elm Bark Beetle role in Dutch Elm Disease and national elm trial with 16 other states – B. Jacobi
- Provided timely and professional response to Durango author on insect image identifications - T. Hooten and B. Hammon
- 2007 Colorado Weed Calendar placement in each Cooperative Extension office in Colorado to improve awareness, identification and management of noxious weeds – P. McCarty
- Colorado participation in the Pest Information Platform for Extension & Education (PIPE), <http://sbrusa.net/> - H. Schwartz et al.
- Beet curly top resistant evaluation and distribution of more than 8000 plants to 750 gardeners and farmers - B. Hammon

- o Work on Landscape IPM featured in AHS publication *American Gardener* with “One on One” interview feature

Publications (distributed to 25 – 3000 clientele, depending on targeted audience)

New publications and other products released

- Quarterly issues of Colorado Bean News – pest mgmt input from various specialists - coordinated by H. Schwartz
- NE Radio Broadcasts, Fence Post, High Plains Journal Releases on Pests - B. Bosley
- Worker Protection Series distributed more than 44,000 subscribers of organization newsletters and magazines, trainings in workshops - S. McDonald
- Professional Meeting Abstracts, Proceedings, Posters and Presentations – various agents & specialists
- 15 research and extension publications on Russian Wheat Aphid and dry land pest management results - F. Peairs et al.
- 6 reasearch and extension publication on turf and ornamental diseases – N. Tisserat et al.
- Conducted trials that identified more effective methods to manage several insects important in landscape/residential settings (e.g., banded elm bark beetle, European earwig, poplar twig gall fly) – W. Cranshaw
- Produced book (Guide to Colorado Insects) that can assist with identification of many common insects found in the state; designed to aid in youth education efforts – W. Cranshaw
- Developed IPM plan for Bent’s Old Fort National Historic Site – W. Cranshaw
- Provided over 500 additional insect images to the national data base IPM Images/BugWood. Total now (1382) is largest and most diverse single contribution of insect images – W. Cranshaw
- Two publications on tree diseases – W. Jacobi

New publications & other products in development:

- *Iris yellow spot virus* and thrips of onion, Plant Disease Feature Article - H. Schwartz - coauthor
- Created a new website for workers involved with IYSV and thrips of onion: www.alliumnet.com - H. Schwartz
- Manual on turfgrass diseases (in development with B Corwin- Missouri) – N. Tisserat et al.
- Eleven new fact sheets involving arthropod issues in Colorado; will improve diagnostics of new (Japanese beetle, European paper wasp) or potential (Emerald ash borer, brown recluse spider) pests affecting the state – W. Cranshaw
- IPM Calendar for 2008 to highlight Pest Management Work Team resources and successes – S. McDonald, H. Schwartz & Team.

Publications under revision

- Compendium of Onion & Garlic Diseases and Pests, 2nd ed. - H. Schwartz & S. K. Mohan – senior editors
- 12 Extension fact sheets related to arthropod pests of landscape plants and residential areas – W. Cranshaw

Grants – (individual and multi-agent/specialists)

- Various Pest-Crop-Other Projects funded by commodity groups, agrichemical co., User Fees (all team members)
- USDA - Pest Management Alternative Program for \$173,000 for Onion IYSV & Thrips – H. Schwartz, W. Cranshaw, K. Mohan
- EPA - Straw Mulch Management for \$124,000 for Onion IYSV & Thrips - H. Schwartz, W. Cranshaw, R. Khosla
- USDA Crops at Risk - Improved Management of Russian Wheat Aphids in Barley by Integration of Biological and Cultural Controls with Aphid- Resistant Cultivars (with Kansas and Nebraska, CSU share \$98,592) - F. Peairs
- Gilpin County funded \$4000 towards weed cost-share program and weed education - I. Shonle
- RREA Grant with NW Big Country RC&D to place 50 copies of the 2007 Colorado Weed Calendar in each Cooperative Extension office in Colorado – P. McCarty
- Tamarisk Action Group grants of \$21,000 were generated, in addition to \$2,000 in user fees for pests - T. Hooten
- Vegetable pest management of \$8,500, including Colorado Onion Association & Pesticide Companies - B. Hammon
- CE Venture Capital Grant for Home Use Pesticide Database of \$7,500 - B. Hammon
- CE Venture Capital Grant for Turf Site Visit Diagnostic Project of \$7,500 - C. Wilson, M. Small & C. O’Meara
- An electronic, multi-access key for identifying diseases, arthropods and abiotic disorders of small grains \$45,000 – N. Tisserat, R. Koski, and W. Lanier

- A comprehensive genome resource center for identifying high consequence plant pathogens – J. Leach, N. Tisserat, (with Nebraska and TIGR \$1,000,000)
- Genome sequencing of *Pythium ultimum*, a ubiquitous plant pathogen – N. Tisserat (with TIGR \$897,000)
- Survey of Colorado production areas for high consequence pests - L. Pottorff, C. Swift, T. Blunt and N. Tisserat (\$17,200)
- \$7500 from Premier Horticulture of Canada for disease management of Poinsettia – L. Pottorff
- Development of *Polistes dominulus* as a potential biological control agent, Organic Farming Research Fund – W. Cranshaw (\$8500)

Impacts

- o Pre and post tests administered to Master Gardener diagnosticians showed a 30% increase in knowledge following training- M.Small & C. O'Meara
- o Pre and post tests administered to Master Gardeners showed a 100% increase in pesticide and entomology knowledge following training on the west slope - C. Swift, S. Rose
- o A late season assessment of Master Gardener diagnosticians showed a 10% increase in skills - M. Small & C. O'Meara
- o Pre and post tests administered to clientele showed a 85% increase in knowledge of weed law, ID, impact - I. Shonle
- o Spider Myth story on the Brown Recluse presence in Colorado by investigative reporter Brian Maass at CBS4 Denver - J. Julian
- o RWA resistant feed barleys had superior yields relative to the susceptible standard (Otis) at 10 demonstration locations in Colorado and Nebraska, mostly under severe drought conditions.- F. Peairs et al.
- o Pythium disease of Poinsettias was reduced 5 to 10% by the use of biopesticides treatments in greenhouse production; Premier Horticulture plans to contract research services from the Adams County Commercial Greenhouse Program Team – L. Pottorff

Key Theme-Small Acreage Management

Inputs

Team leaders – Dennis Lamm and Ed Page
 Team members – Colorado Extension Agents

Outputs and Impacts

- o The Country Acres Resource Team's "A Manual For Success" for small acreage owners was revised. The manual contains 30 chapters on topics ranging from land use codes to pasture management. The manual is available in printed or CD format. Two Small Acreage Management workshops were held in September 2006 by the CART team members. Approximately 75 landowners attended. Topics included weed, pasture and wildlife management and windbreaks.
- o A small acreage oriented tour was held in Delta County for the Tri River Area in June with over 70 people in attendance (tour attendance was cut off due to inability to handle greater number of people). The focus of the tour was the diversity and productivity of agriculture that can take place on small acreage operations or with direct marketing. The operations or discussions included were: 1) organic pea seed production, season extension through utilization of hoopouses, and alternative tillage methods such as use of rotary spaders; 2) production and direct marketing of elk and buffalo meat and derivative animal products; 3) discussion of production techniques including several orchard mulching studies and multiple marketing techniques for orchard products; and 4) the development of native seed foundation stocks to re-vegetate areas of the Uncompahgre Plateau. Tour evaluations were very positive and additional tours were requested. A Tri River Area SAM newsletter serves in excess of 600 clients and is delivered to six counties.
- o A project begun in September 2006 by the state small acreage group was to revamp and further develop the CSU Small Acreage web site. This project is still in process and will continue to be so into the future to bring better and most current information to the landowning public.
- o Adrian Card and Bob Hamblen, in Boulder County collaborated to create the first CSU-CE online course through CSU Continuing Ed - Weeds: ABCs of Small Acreage Management. The Boulder County Extension

Small Acreage Management Volunteer Program had 19 active volunteers who provided 163 hours of service regarding weed mgt, weed ID, grazing mgt, and fire mitigation. There were 44 clients served by SAM volunteers in 2006. SAM volunteers collaborated to create 19 framed 3-D noxious weed samples (preserved in silica gel and sprayed with floral preservative) for educational use by Extension and other agencies in Boulder County. Adrian made 20 site visits in 2006. Evaluations showed 90% of clients reporting found the information and service provided was very useful.

- The Boulder County Extension Small Acreage Management website contains many of the same factsheets and other resources used by Adrian and SAM volunteers and is updated on a regular basis: <http://www.coopext.colostate.edu/boulder/AG/smallacreage.shtml>. The boco_small_acreage@colostate.edu listserv reached 106 subscribers with a quarterly newsletter. SAM volunteers wrote several articles in each edition. The newsletter is also on website.
- The Big and Small conference is a cooperative effort of CSU Extension agents in the northern area of the Front Range and southern Wyoming. A 3-day (March 2-4, 2006) conference planned primarily by Extension faculty from Colorado and Wyoming was held in Greeley, Colorado, focusing on produce, organics and small acreage management, respectively. More than 225 different people registered and attended. Topics in the small acreage conference included water quality and water rights, equine management, government resources, pasture management, home-raised products, farm safety, nutrient & business management, profitable egg production, weed management, livestock opportunities, heritage turkeys, dead animal disposal, and Chem Sweep. Conference evaluations were very positive.

Key Theme-Water Resource Management

Inputs

Team Members:

Joel Schneekloth – Regional Water Resource Specialist, Cooperative Extension- NE Region
Troy Bauder – Water Quality Specialist, Department of Soil & Crop Sciences
Reagan Waskom – Water Resources Specialist, Colo. Water Resources Research Institute
Loretta Lohman – NPS Information and Education Coordinator, Cooperative Extension
Luis Garcia – Associate Professor, Department of Civil Engineering
Neil Hansen – Associate Professor, Department of Soil and Crop Sciences
James Pritchett – Associate Professor, Department of Soil and Crop Sciences

Financial Resources

Funding for the efforts in this plan includes the following sources: Ag. Chemicals and Groundwater Protection Program; USDA-CEREES Water Quality Section 406 – Region 8 Programming; Colorado state USDA-NRCS; and USDA National Research Initiative – pending.

Partnerships and Collaboration

Other partners in this plan include additional faculty that work in water resources within the Colorado State University system. Other primary partners include USDA-NRCS state and regional irrigation experts and scientists at USDA-ARS and well as several conservation and water conservancy districts.

Outputs and Outcomes

- **Limited irrigation water management.** This program targets irrigated producers, state and local agency personnel, municipalities and water policy makers. This is a research and extension project. Research incorporates alternative irrigated crops that require less irrigation and cropping systems with limited amounts of water. Educational outputs to date include field days and workshops. These extension outputs educate producers, agency personnel and water policy makers on limited irrigation practices and management to sustain irrigated agriculture in a region with increased competition for and declining water resources. Educational outputs under review and development include a series of fact sheets dealing with limited water. Field days at these sites attracted over 250 participants in 2006 and will also be held at each of the locations in 2007.

- a. Project sites
 - i. Irrigation Water Optimization Project (IWOP): sites at ARDEC, NCWCD, farmer managed site near Gilcrest
 - ii. USDA-ARS Experiment station at Akron
 - iii. Farmer managed site Burlington
 - iv. Iliff/Proctor cooperative project – new in 2007
 - b. Funding (~\$1,750,000):
 - i. Two state and one federal NRCS/CIG
 - ii. Republican River Conservation District
 - iii. USDA-CSREES-NRI
 - iv. Parker Water and Sanitation District
 - v. CAES
 - vi. Conservation Districts funding and involvement
- **Agricultural Water Basin Roundtables.** The basin roundtables program targets water policy makers and water users within the State of Colorado incorporating regional roundtable discussions with local interests in water. Nine extension educators located regionally are the educational liaisons for each of the roundtables. Each of the roundtables discusses issues related to each of the river basins water issues. Currently, they are seeking potential projects to support through State resources dedicated by the legislature. Currently, Cooperative Extensions is developing a program that will educate basin residents on the roundtables and issues that they are investigating.
 - **Water, Well & Septic System Training Package for CSUCE Agents:** An educational package that was first introduced in 2005 to inform new and indigenous rural residents on methods to preserve and protect water and water quality around their well water source was successfully utilized this past year. The package contains elements that are targeted at individual well owners and elements that are designed to help Cooperative Extension field staff conduct programming for these well owners in their counties and regions and is described at: <http://wsprod.colostate.edu/cwis435/WQ/privatewellpackage.htm>. Fifteen counties within Colorado used the educational package to conduct programming in their areas. Five mini-grants were funded for this topic that reached over 550 well owners in seven counties. The majority of participants reported increased knowledge about well function and protection. The programs resulted in over 250 well owners testing their wells for the first time. Partners included the Colorado Water Well Contractors Association, County Health Departments, and American Groundwater Trust
 - **Summer USDA-NRCS and Extension Agent Summer Irrigation Workshop.** This program targets NRCS field staff and Extension Educators with interest or responsibilities in water resources. This 5-day summer workshop includes field demonstrations and classroom teaching. The field demonstrations encompass irrigation management issues and show actual field results of different irrigation management techniques. These workshops focused on water management issues that the participants regularly encounter in their job. The overall objective of this workshop is to improve the knowledge of agency personnel with current and future irrigation management issues. The 2006 workshop trained 20 NRCS and Cooperative Extension field staff that directly advise landowners on methods of improving their irrigation water management for water conservation and water quality improvement. A comprehensive curriculum was used that included topics from soil-plant-water relationships to water quality to irrigation scheduling. Trained participants reach hundreds of producers annually who manage tens of thousands of irrigated acres.
 - **Water education summer tour.** This program targets Research and Extension Specialists and Extension Educators. This program targets different water basins each year with an onsite tour and discussion with local agencies regarding relevant water issues. The 2006 tour was a two and half day in depth look at water issues within the Republican river basin in the northern region.
 - **Educational meetings.** Several meetings were held with the support of the water resources team. These included the Ogallala Aquifer Symposium, South Platte Forum, Central Plains Irrigation Short Course and the annual Crops Training. Numerous other meetings were attended and presentations made at meetings that were supported by other groups. These meetings had attendance ranging from 25 to 250 in attendance.
 - **Coal Bed Methane_Using The Land and Water Inventory Guide** developed by the NPM regional project, an educational program was conducted in the Raton Basin to help landowners and policy

makers understand and correctly respond to CBM water discharges in the Cucharas and Purgatorie watersheds. A workshop attended by approximately 10 landowners, a water quality monitoring workgroup, and a mini-grant supported monitoring program are the results of this on-going effort. As a result of this increased awareness the Huefrano County Commissioners sanctioned a monitoring workgroup to begin monitoring the Cucharas River for irrigation water quality parameters. NRCS, county and industry resources are leveraged for this effort. Additionally, presentations and assistance has been given to an Agricultural Water Quality Workgroup formed by the Colorado Dept. of Public Health and Environment. This workgroup is charged with developing a draft narrative water quality standard for irrigation water quality.

- **Irrigation Management Demonstration Site**_An on-farm site was used to demonstrate water monitoring equipment for producers. This site was located near Joes, CO. Field days included installation, utilizing the monitoring equipment and removal of the equipment. These field days were attended by approximately 15 local producers. At the end of the season, the cooperater estimated that pumping savings for his operation approached \$30,000 that season and would have been more if he would have utilized the system more during the early part of the growing season. Five producers that attended the field days adopted this technology during the growing season.
- **Agricultural Chemicals and Groundwater Protection Program.** The Water Team partners with the Agricultural Chemicals and Groundwater Protection Program to conduct educational programs on issues related to agricultural chemicals and groundwater quality. Groups addressed include crop and livestock producers, commercial applicators, chemical dealers, weed districts, crop consultants, crop and livestock producers, agency personnel, homeowners, real estate professionals, and urban chemical users. One focus of this effort is applied research and demonstration in irrigation and nutrient management.
 - During 2006, the Groundwater Program cooperated with field Extension staff to conduct irrigation and nutrient management demonstrations on farmer fields. Irrigation management demonstrations included using ET from atmometers and weather stations, and WaterMark[®] soil moistures for improved irrigation scheduling. The ET work is conducted in cooperation with the Colorado Climate Center to promote and improve the crop water use (ET) reports provided by the Colorado Agricultural Meteorological Network (CoAgMet). See www.CoAgMet.com. This work includes making sure ET reports are visible, usable, and accessible to as many Colorado irrigators as possible.
 - As part IWOP, a limited irrigation research and demonstration study was initiated in the S. Platte River basin. Declining water supplies due to drought, urban transfers, and alluvial well shut downs have reduced irrigation water supplies below the amount necessary to meet full ET needs of most crops grown in the area. Limited and full irrigation on grain corn with three populations and limited irrigation of winter wheat following onions are demonstrated. A cover crop demonstration is also included to address soil erosion control on permanently dried-up lands. Over 200 participants stopped at the demonstration site during a CCWCD water tour and learned about limited irrigation strategies.

Impacts

Mini-grants - Colorado has chosen to offer mini-grant opportunities to CE field and campus faculty to encourage educational programs and extend research information on topics related to water and water quality. Generally, these are limited to \$2,000 for a one-year period and are primarily viewed as seed money for new ideas or money to leverage more outreach from existing research projects. These grants are funded by the CSREES Water Resources State Funds and the Agricultural Chemicals and Groundwater Protection Program. In 2006, seven proposals were accepted with the following themes:

- Bacteria and Well Education Program for Gilpin County – resulted in 77 people testing their wells for bacteria. County Health Dept. resources were leveraged for the testing.
- Coal Bed Methane (CBM) Impact Monitoring in Huerfano County – resulted in increased awareness of high sodium levels in water for irrigation water supplies in the Cucharas River Watershed.
- High and Dry Demonstration Garden in Western Colorado (San Miguel) – demonstrates native species for landscapes that can be grown without irrigation. Funds were used to plant garden with volunteer help.
- El Paso County Well sampling and education program sampled over 90 private wells and increased the knowledge level of 95% of participants in workshop.
- Mesa County Irrigation Audit Program – conducted 63 irrigation audits covering 28.3 acres of turf. 33% of people responding to an outcome survey used the “10% procedure” for watering their lawns. If the turf appears drought stressed, the time is increased by 10% using the seasonal adjust/water budget feature on the controller. If the turf looks great, the time is cut back by 10%. Continuing to cut back by 10% until dry areas appear allows you fine tune the system. These people were able to cut back on the amount of water applied and still show improvement in the appearance of their lawn. An estimated potential water reduction of 21,208,045 (65 acre feet) resulted from the 2006 program.
- No-till Corn Production Using a Kura Clover Living Mulch System (campus) – dramatically (up to 90%) reduced sediment load from surface irrigated corn compared to conventionally grown corn. Our mini-grant seed money resulted in NRCS/CIG funding to continue this project into the future.
- A Water Saving Tips for Western Colorado Landscapes DVD – an 30-minute informational DVD was produced in cooperation with Rocky Mt. PBS. The DVD provides step-by-step, hands-on instruction for people to reduce water consumption in everyday living. It has been aired on local government access TV regularly and 30 to 60 second segments will air on nightly news during spring of 2007. These media outlets will reach tens-of-thousands of viewers.

GOAL V: Enhanced economic opportunity and quality of life for Americans.

Objectives:

- A. To integrate the Youth as Assets framework into all youth development programs with an emphasis on developing life long skills.
- B. Enhance the ability of Colorado parents to control their own anger and react with appropriate guidance to their young persons.
- C. Enhance the ability of Colorado communities and citizens to prevent youth violence.
- D. Enhance the quality of youth and family serving programs in Colorado and create more supportive policies in areas affecting youth and families.
- E. Increase rural economic diversification with special emphasis on existing business retention/expansion, small and home-based business emphasizing value-added agriculture, eco-tourism, forestry, and appropriate technologies and business/community mutual support.
- F. Enhance the ability of Colorado citizens to ensure financial security in later life.

CSU Core Competency Areas: (1) 4-H and Youth Development; (2) Strong Families, Healthy Homes; (3) Sustainable Community Development

Key Theme- 4-H Youth Development

4-H Club Program

Outputs

- Youth in Organized Clubs- 17,034
- Number of Clubs - 1184
- Special Interest/Short-term Programs/Day Camps – 8,241
- Overnight Camping – 1418
- School Enrichment Programs – 74,694
- School Age Child Care Programs – 10,973
- Total 4-H Enrollment – 109,034

Leadership and Volunteer Development

Situation

Positive youth development occurs from an intentional process that promotes positive outcomes for young people by providing opportunities, relationships, and, externally, through the delivery of projects and curriculum designed according to the best practices of youth development. Some conditions that must be addressed include:

- Constant negative attitudes and behaviors by some volunteers.
- Increase volunteer interest in the 4-H program.
- Lack of knowledge as to volunteer expectations, responsibilities and duties as an organizational leader; project leader or superintendent.
- Division of responsibilities, roles, power and authority
- Improvement of volunteer skills through training
- Matching volunteer interests with tasks at hand
- Follow-up and evaluation with volunteers to make appropriate changes
- Communications with volunteers.

Outputs

- Training programs for volunteers. Trainings provide resources for leaders to learn about subject matter and also provide a network of opportunity for leaders to share across county lines.
- Statewide horse and livestock leader trainings, These programs explain animal science 4-H programs and teach volunteers how to use the project to teach life skills to youth via the experiential learning model.
- Publications related to Leadership and Volunteer Development – newsletters, flyers.
- Orientation packet, Volunteer Leader Handbook, or mandatory new leader training before beginning tenure as a leader.
- All volunteers are expected to follow the code of conduct as developed by the Volunteer and Leadership Development Committee.
- Organized Trainer's Toolbox emphasizing statewide youth development training
- Project-specific committee and group meetings held with parents and volunteers to address the problems
- Evaluations of 4-H program from the volunteer's perspective
- Fall State Leaders' Forum at which volunteers are trained.

Impacts

- Broader awareness of the animal sciences program, other 4-H opportunities, and learning to apply the experiential learning model.
- Improved communications through the leader notebooks and activity calendars, policies and procedures, and youth development information .

- Empowered volunteers through project tip sheets, check-lists and record book workshops
- Increased volunteer effectiveness, knowledge and skills related to working with people, teamwork, and group process.
- Increased knowledge and/or skills related to planning, organizing, and/or decision making.
- Increased awareness of the legal implications of leading a 4-H club which improved risk management practices
- Increased volunteer utilization of the experiential learning model.
- Increased volunteer satisfaction as a leader.
- Increased volunteer retention in our 4-H program.
- Improved inter-generational relationships between 4-H members and Sr. Citizens through a gardening project.
- Lowest complaint rate by volunteers due to the increased awareness of their ownership and importance to the program
- Increased volunteer enrollment
- Increased volunteer commitment and involvement following training programs
- Increased alignment of volunteers with program philosophy - “4-H is more than winning the ribbons.”
- Improved matching of volunteer skills and interests with program needs in fundraising and donor relations.
- Improved working relationships among groups and individuals.
- Increased volunteer satisfaction and greater access to needed resources.
- Increased user fees generated. Increased level of support from County Commissioners and other community supporters. Increased local grants

Curriculum and Project Team

- Electronic Record Books introduced. Pilots in livestock/horse, general/FCS e-records. Evaluation input form agents, leaders, parents and youth. State-wide training on how to complete e-records. Evaluation tool developed.
- Projects revised and updated - 5
- Project Selection Guide—work has begun on redoing the guide.
- Judges training throughout the state, update to 4-H Judges’ Guides
- Updated the Consumer Choices Handbook, added Consumer Bowl to State Contests

DARE to be You Bridges Program (AEC Award Program)

Outputs and Impacts

Poor relationships and lack of trust between families and school personnel can create barriers that have long term effects on how well children succeed in school. This ultimately affects the well being and development of children. These effects can include poor educational outcomes, stress, depression, substance abuse and other problem behaviors. This was especially true in the two test populations: small communities of the Navajo tribe in New Mexico, Utah and Arizona, and the diverse population of rural, southwestern Colorado.

The DARE to be You Bridges project brings families and school systems together during the meaningful early years of learning to build a strong social and educational foundation for children. This is accomplished by a series of workshops, staged in a neutral community setting, which unite the 5- to 7- year old children, their families and school staff.

For adults (parents and teachers), the workshops focused on family and classroom management skills, thereby improving environments to promote self-efficacy, self-management skills, improved family and classroom relationships and the social and cognitive developmental levels of the child. It also focused on building positive relationships between the schools and families to decrease barriers that interfere with school success. For children, the program focused on self-efficacy development, self-responsibility, cognitive-social development, communication skills, problem-solving/decision making, and empathy development. It also strengthened child-teacher and child-parent relationships.

The DARE to be You Bridges program is implemented over 11 weeks. Parents, children and teachers participate in a two hour class each week. In addition, dinner is provided for the families which encourages social interaction between school staff, families and DARE to be You staff. All family members were encouraged to attend. Age appropriate DARE to be You activities are conducted for siblings. Two adult family members were eligible for stipends on the completion of the 20 hour workshop.

The program was tested over four years in two markedly different socio-economic and cultural settings: small rural Navajo communities in Utah, Arizona, and New Mexico where the population is 99% Navajo families attending community based schools and a separate population in Southwestern Colorado, also rural with mixed ethnic cultures including Anglo, Hispanic and Native American. Families/teachers/schools wishing to participate were randomly selected into experimental (participating in workshops) and control groups. Both groups completed follow-up surveys for up to 18 months.

The evaluation of the DARE to be You Bridges program showed that the program had important and significant effects in several areas that are linked to providing increased bonding to and success in school and long term protective factors against substance abuse, school dropout and even violence.

Although there were many additional positive trends, the results reported below showed statistically significant changes over time between control and experimental groups.

For **parents and other adult family members**, parent-teacher communication increased more for the parents in the intervention group than the control group at the 12 month followup. Intervention parents reported that the school was a more welcoming environment for families and they perceived more of a family-school alliance (over the control group.) Parents with higher dosages showed higher changes in the positive direction. These are important because parents are more likely to provide concrete support to their children's success in school when (a) they believe it is a part of their role as parents, (b) there is good communication with the school.

Parents in the intervention group, especially with over 18 hours of workshops, improved significantly more than the control group on feelings of self-competence at the 12 and 18 month survey. A measure of depression showed control parents increasing in depression at the 12 and 18 month follow-up surveys and experimental parents decreasing in depression ($p = .09$). It also showed statistically significant increases in positive perceptions of social support for the experimental parents over the control parents. And this increased as dosage of the program increased. These factors have both been shown to be directly related to risk and resiliency of children as related to numerous problem behaviors.

Parents showed significant increases in democratic, nurturant disciplinary practices (i.e., use of reasoning and consequences) over time and intervention parents showed even greater increases in child-centered practices than in the control group.

Teachers reported significant decreases across time in aggression and activity in the intervention **students**. Teachers also reported that **intervention children** showed more increases in social skills (self-control and cooperation). When the teachers and the students are both in the experimental groups, the differences in perceptions between control and experimental children becomes statistically significant. Experimental teachers perceive experimental children as statistically significantly higher in social skills.

Interviews by evaluation staff also show that **teachers** feel a much stronger relationship with the families, and more support by them, after participating together in the DTBY Bridges program.

Confidential interviews done by evaluation staff and steering committee members with both teachers and parents showed that there was definitely an increase in empathy for each other. The most generalizable comment during the evaluation was how much they had in common and a pervasive sense of mutual support.

Teachers participating in the program maintained or increased their endorsement of a collaborative relationship with parents whereas control teachers beliefs moved, over time, in the direction of believing that schools were more responsible for children's education and less willingness to involve parents.

Children results included increase in social skills and behavior management. Teachers reported significant decreases across time in aggression and activity in the intervention students. Teachers also reported that intervention children showed more increases in social skills (self-control and cooperation). When the teachers and the students are both in the experimental groups, the differences between control and experimental children becomes statistically significant. (Experimental teachers perceive experimental children as statistically significantly higher in social skills).

Children showed an increased positive perception of their school. This variable increased significantly in the intervention group with each follow-up and remained stable (did not increase) for the control group.

The reported improvement in social skills and behavior management and the self-reported increases in favorable perceptions of school in the experimental groups are significant given recent research showing increased school engagement in grades 1-3 is a strong protective factor into adolescence in terms of school dropout and involvement in high risk behavior.

DARE to be You “CARE to Wait” Program

Outputs and Impacts

The DARE to be You program is also in its fifth year of research on adapting the model with families with middle school youth to reduce teen pregnancy and STDs.

The DARE to be You (DTBY) “Care to Wait” program is a multilevel, sex education/abstinence education program designed for 12–14 year olds and their families. The goal of the program is to reduce teen pregnancy and risky sexual behaviors in teens by enhancing individual resilience factors – particularly self-efficacy, decision-making, and peer refusal skills – and strengthening their families – notably communication about intimacy and sex, HEALTHY relationships, and monitoring. The DTBY “*Care to Wait*” curriculum is based on the model DTBY curriculum that has shown to be effective in building resiliency factors for other problem behaviors such as substance abuse.

Twelve to 14 year old youth and caregivers in their families are recruited in rural Montezuma County in southwestern Colorado and Denver, Colorado, then are randomly assigned to the DTBY intervention or a control group. The two sites are quite different, demographically: The urban Denver site is 92% African American, 45% single, and 69% female; whereas the rural Montezuma County site is 78% Caucasian, 22% Hispanic and Native American, 5% single, and 47% female. The sites were selected to check the effectiveness of the program in both isolated, underserved rural areas as well as an urban setting. The DTBY intervention participants (parents and their 12- to 14-year old children) complete 20 to 24 hours of workshops. Control and intervention groups are given surveys at baseline and 6-, 12-, 18- and 30-month follow-ups. Surveys measure descriptive information, sexual attitudes and behaviors, impulsivity/risk taking, self-efficacy, future orientation, peer orientation, refusal skills, family relationships, parent monitoring, validity of responses and differential attrition.

Parents in the DTBY group, compared to controls, talked to their teens more often about intimacy and sex, and were more likely to monitor their teens’ activities. **Youth** in the intervention group showed statistically significant improvements in their ability to deal with peer pressure, their confidence (self-efficacy) that they would use the skills and they showed lower rates of initiation of sex than the control group. They also showed a statistically significant rate of secondary virginity as compared with the control group.

This data supports the importance of the emphasis on development of resilience and family factors in the DTBY curriculum. The ability to defuse peer pressure, maintain open family communication and parental monitoring was strongly linked with positive effects on early adolescents’ sexual behavior.

Multiple Sites Implementing The DARE To Be You Program For Families With Preschool Youth. (SAMHSA model program and listed on the National Registry)

In addition to the research programs outlined above, the DARE to be You program continues to train implementation sites for the model preschool program. We are currently collecting data from over 12 of these sites which is showing that the model continues to have strong results in reducing risk and enhancing resiliency factors in young families in rural and urban settings and in multiple cultures.

K-12

Inputs

Team Leaders – Jan Carroll and Ann Hall

Team Members – M. Baldwin, H. Bowman, J. Dixon, T. Fey, K. Grimes, S. Holden, L. Hooker, D. Linsley, T. Mason, P. Neelan, B. Nobles, M. Pike, B. Saltzer, J. Sennhenn, I. Shonle, L. Taylor, V. Tranel, J. Vrabec, J. Wallace, G. Wentworth, K. Wolfe, L. Yoder,

Outputs

See next page.

K-12 Contribution Reports for 2006

Agent		Delivery Method					
Last Name	First Name	School Enrich.	School Age Child Care	Other	Funding	Content	
Baldwin	Mary	x	x	x		Citizen program, Off-Track program, Cloverbud, NWSS tours	
Bowman	Holli	x	x		K-12 & Venture Cap	Knowledge of 4-H, photography skills	
Dixon	Janice	x	x			NWSS field trip, plant science, leathercraft, nutrition, gardening, financial focus, measuring	
Fey	Tom	x				NWSS tours, Ag in classroom, entomology, Farm Day, Earth Gardens, Mini Greenhouses	
Grimes	Ken			x	JCPenney + local	Strengthening the Village Project, 4-H gardening farmer's markets, Botanical Gardens	
Hall	Ann		x		JCPenney, K-12,+ local	photography, scrapbooking, rockets, geology, leathercraft, leadership, reading & math	
Holden	Sheryl		x		K-12 & local	Knowledge of 4-H, nutrition, hand washing, sanitation, safety in the kitchen, food groups and healthy snacks.	
Hooker	Larry	x	x		Urban Expansion	NWSS, Embryology, Entomology, Mini Greenhouses, IFYE, Ag in the Classroom	
Linsley	Dessa	x	x			Day trips-"4-H Fun Days", 4-H Livestock Expo, workshops, Meeker FFA	
Mason	Tom	x	x		Urban Expansion	NWSS tours, EN/OR, Babysitters Training Human ecology	
Neelan	Pam		x	x	Urban Expansion	new 4-H Club afterschool & 4-H Adventure Camp-summer 3 days	
Noakes	Brenda	x	x		K-12 Grant	SACC programs through summer, entomology, embryology, Clover Camp	
Nobles	Bill	x	x		K-12 Grant	Marketed 4-H, 4-H Fridays Program, GPS/GIS, bicycling, cake decorating, knitting, quilting, cooking, conservation tour	
Pike	Michele		x				
Salzer	Bob		x		JCPenney	Introduced 4-H Afterschool programs to District 9-R, purchased school supplies and clothes for low income kids	

Sennhenn	Jan		x	x	ESRI Grant	Nutrition and wellness classes, Water Conservancy presentations, GIS/GPS, workforce preparation classes
Shonle	Irene		x		K-12 Grant	Life skills, problem solving, respecting others, attitude awareness, social interaction, good behavior
Taylor	Lisa	x	x	x	K-12 Grant	Responsible pet care, behavior, attitudes, decisions, social action, economic civic, environmental
Tranel	Vanessa		x	x	K-12 + local	new 4-H Club afterschool & 4-H Adventure Camp-summer 3 days
Vrabec	Jonathan	x				Bug Breakthrough Curriculum, Mini Greenhouses, Embryology, Ag in Society, Farm Day
Wallace	Joyce	x	x		Urban Expansion	NWSS tours, EN/OR, Babysitters Training Human ecology
Wentworth	Glenda			x		"Babysitting Basics Training Program"
Wolfe	Kathy	x	x	x	JCPenney & K-12	BASECamp, Health Rocks!, Cloverbud, hand washing, Seven Small Victories curriculum
Yoder	Linda			x		"Farm Safety 4 Just Kids Day Camp, life skills, safety awareness & responsibility
Totals		22	13	17	8	

Key Theme-Growing Strong Colorado Families (renamed and combined -Early Childhood and Out-of-School Age Care and Strengthening Youth through Families)

Situation

Colorado has many challenges related to child and family success. The child abuse and neglect rates are higher than the national average, the school completion rate is among the poorest in the nation, and the number of children in poverty has increased in the past five years. Poor parent-child relationships, disorganized homes, abuse and neglect, poor attachment and non-nurturing parenting styles are directly linked to the major problem behaviors that occur in youth. Recent decades have also marked a growing demand for early childhood care and education programs. This demand stems in part from drastic changes in the U.S. labor force, especially the growth in mothers' labor force participation. The growth of women's labor force participation in the United States dictates that many parents must employ new strategies to meet children's care and education needs.

There is also a great emphasis in Colorado on providing parents with the skills needed to be more engaged in their child's school experience. Parents require effective parenting skills that foster the development of a nurturing environment and create strong bonds between parent and the child. Ineffective parental behaviors and practices have been correlated with higher risks for youth problem behaviors. The two work teams developed both family and professional development programming. In addition, there are several initiatives in place to improve the educational status of early childhood providers. The team plan of work involves providing high quality research based training and education to child care providers, parents and agencies working with families. It also involves dissemination of research based child care information through multiple media sources.

Input

Team Leaders – J. Benavente, A. Bruce, C. Cerbana, ME Fleming, L. Illick
Team Members – Colorado FCS Agents

Partners

Adams County - Adams County School District 50, Adams County Social Services Department, Partnership for Healthy Communities, Northglenn Build a Generation, Goodwill Industries Denver, Qualistar, City of Brighton, City of Thornton,

Catholic Charities, Head Start Region 8

CFERT – ADAD, Department of Corrections, Qualistar, Early Childhood Councils, School Districts, Professional Associations, Head Start, Region VIII Head Start

Eagle County - Health & Human Services

Morgan County - Morgan County Family Center, Morgan County Day Care Association, Morgan County Design Team (MCDT), Ft. Morgan Head Start, Centennial Mental Health, Morgan County Department of Human Services, and District 13 Courts, Morgan County FCE, Brush High School

Pueblo County - Child First Resource and Referral Agency, Pueblo Consolidated Child Care Pilot, Senior Resource Development Agency (SRDA), Pueblo StepUp, AARP, Hope for Children, Irving Elementary -- District 60, Avondale Elementary – District 70, Catholic Charities, Colorado Prevention Partners, Fair Housing Task Force, Environmental Protection Advisory Committee to PACOG, Consumer Credit Counseling, City-County Health Department

South East Area - Tri-County Family Care Center.

San Luis Valley: The Even Start La Llave Family Resource Center, The Delta Center Alternative High School, Head Start

San Luis Valley Early Childhood Council Board of Directors, San Luis Valley Prevention Coalition, Rio Grande County Prevention Coalition, Adams State College, Trinidad State Junior College, Public Schools, Public Health Nurses, Day Care Centers, Banks, Mental Health, Rocky Mountain Prevention Research Center, Law Enforcement, County Commissioners

Volunteers

Adams County: Brighton Senior Center volunteers, City of Thornton volunteers

Pueblo County: Family and Community Educators, Master food safety advisors

Facilities

Adams County - Adams County Parks Department, Adams County School District 50, Adams County Social Services Department

CFERT – Adams County Extension, Morgan County Extension, Pueblo County Extension, San Luis Area Extension

Pueblo County - Class rooms at Pueblo Community College; Class rooms at Head Start building

User Fees - Total user fees contributed by team **\$6,222**

Grants - Total Grant monies **\$652,059**

Adams: HMI *Family Success in Adams County* Grant will expand the capacity to deliver professional development and family centered programming (curricula supported by the this and other work teams) in Adams County - \$488,067 per year for 5 years.

CFERT – ADAD contract for parenting & prevention services -- \$160,892

Pueblo: ADAD contract for services -- \$2500 for grant year, TTI (tobacco grant) contract -- \$600

Campus Connections

Campus - Karen Barrett (HDFS), David MacPhee (HDFS), Ann Bruce (HDFS), Karen Kaminsky (SOE), Brian Butki (HES), Christine Cerbana, Bridget Ohl, Sandra Tinsman

Outputs and Impacts

The Growing Strong Colorado Families Work Team’s responses to the situation statement fall under two separate headings:

I. Community Based Processes (Training, Workshops, Technical Assistance and Meetings) and

II. Information Dissemination (Publications, Articles, Newsletters, Media Contacts, Resources)

Under the Community Based Processes are two separate education strategies - Parent Education and Professional Development. Community Capacity Building is another important Community Based Process and some examples are described in I. C. Before Parent Education or Professional Development events can be implemented relationship building must occur. This is accomplished through meetings, presentations, committee memberships, teleconferences, phone and e-mail contacts, technical assistance and participating in community needs assessment.

Below is a summary of the data extracted from COERS and from the Contribution Reports. Details are provided in the type of programming delivered to audiences as well as graphic representation of demographics, total population served and audiences served by counties. Information is also provided with regard to the professional development engaged by our team members. This represents our team’s efforts in capacity building as we expand the menu of programs we can deliver to Colorado families and professionals. This is described in Section III.

I. Community Based Processes (Trainings, Workshops, Technical Assistance and Meetings)

Total of **12,593** people served

A. Parent Education

114 Facilitation of Partners in Parenting classes (**Adams, Alamosa, Larimer, Morgan, Pueblo, Weld**)

7 Facilitation of Strengthening Families 10-14 classes (**Adams**)

75 Facilitation of Second Time Around grand parenting classes/support groups (**Adams, Pueblo**)

13 Facilitation of Make Parenting a Pleasure (**Larimer**)

4 Coordination of Partners in Parenting, Second Time Around TOT events (**Arapahoe, Larimer, Lincoln, Morgan**)

B. Professional Development

62 Facilitation of training events

- 5** Results Driven Training (**Adams, Morgan, Pueblo**)
- 1** Family Development (**Adams**)
- 6** SKILLS (**Arapahoe, Douglas, Eagle, Garfield, Jefferson, Larimer**)
- 29** Better Kid Care (**Boulder, Pueblo, Southeast Region**)
- 11** Stress/Charmed (**Jefferson, Larimer, Mesa, Morgan, Weld**)
- 10** Others -RETHINK, Discipline, Brainwise etc. (**Denver, Chaffee, Larimer,**

Southeast Region)

7 Coordination of training events (**Adams, Arapahoe, Douglas, Eagle, Lincoln, Morgan, Weld**)

C. Community capacity building – accomplished through meetings, presentations, committee memberships, teleconferences, phone and e-mail contacts, technical assistance and participating in community needs assessment.

- **Adams County** – membership of agent in Community Initiative lead to offering of Strengthening Families 10-14 Program
- **Arapahoe County** - Community meetings to identify agency/non-profit partners for Fox Crossing Community (Unincorporated Arapahoe County) were conducted three times ; two community meetings co-sponsored by CFERT resulted in PIP training for community partners; person-to-person follow up was conducted to support local needs assessment and community partner development in school districts attending 1 day Partners in Parenting training
- **CFERT** – provided technical assistance in parent education program development and implementation for Highland Elementary, Beattie Elementary, Cache La Poudre Elementary and New Beginnings Church; collaboration with Center for Family and Couples Therapy, HDFS to provide training for graduate students
- **Eagle County** – membership of agent in Early Childhood Council lead to development of a strategic plan to enhance current programs and develop the needed service capacity; an Early Childhood Study was conducted that included comprehensive look at early childhood which included the four domains of 1) family support, 2) Early Care and learning, 3) Health & Safety, and 4) Social-Emotional Development.
- **Pueblo County** – membership of agent in Consolidated Child Care pilot resulted in several program offerings for early childhood professionals; membership in Community Grandparents Initiative led to 3 legal forums and 2 support groups that CSU-CE was directly involved in
- **San Luis Valley Area** - membership of agent on Early Childhood Coalition (Consolidated Child Care Pilot) and the Even Start/La Llave Family Resource Center Steering Team has facilitated the scheduling and presentation of Day Care Provider Training (SKILLS, Stress Management,, Brainwise) and Partners in Parenting Classes; the agent is called upon on a yearly basis to present parenting classes for the Even Start/La Llave parents

II. Information Dissemination (publications, articles, newsletters, media contacts, resources)

11 Articles

47 Newsletters developed (Consumer Connections, Parenting Matters, Baby’s First Wish, Kiddie Letter, LinkAges)

279,110 Total newsletters disseminated

57,127 Total resources disseminated

117, 400 Media contacts (state wide total)

III. Professional Development - Internal capacity building

9 extension agents and 3 specialists trained to facilitate Family Development Credential program (**Adams, Boulder, Denver, Fremont, Mesa, Morgan, Pueblo, San Luis Area, Southeast Region, Campus**)
1 specialist trained to facilitate Make Parenting A Pleasure Curriculum Training-of-Trainers (**Campus**)
1 agent trained to present Parents in the Law curriculum to teen parents (**Morgan**)
3 agents and 2 specialists trained to facilitate Children In The Middle (**Adams, Chafee, Pueblo, Campus**)
1 agent participated in Tobacco/Second-hand Smoke Education, Community Readiness Model, Data-Driven Decisions, and Pandemic Flu online course (**Pueblo**)

IV. Conference Presentations

Some team members also conducted presentations/workshops at various conferences in- and out-of state:

- Colorado Child Care Conference Presentation on Adult learning principles
- Colorado Child Welfare Conference on Grandparents Raising Grandchildren issues and strategies
- Correctional Education Association Conference
- Region VIII Head Start Home Visitor's Institute
- Region VIII Head Start Conference
- Loveland Child Care Association Summit

Specific Efforts to Reach New and/or Underserved Audiences

Adams County: Partnered with at-risk school and several community organizations to reach largely Hispanic audience for Strengthening Families 10-14. Completion rate for this series was 90%; partnered with Goodwill Industries Denver Adams County Challenge program to provide child discipline sessions during work force preparation classes.

CFERT –Partnered with Poudre School District to provide parenting classes to pregnant teens and teens with young children; partnered with the Department of Corrections to train parent educators who will be facilitating parenting classes for the incarcerated population

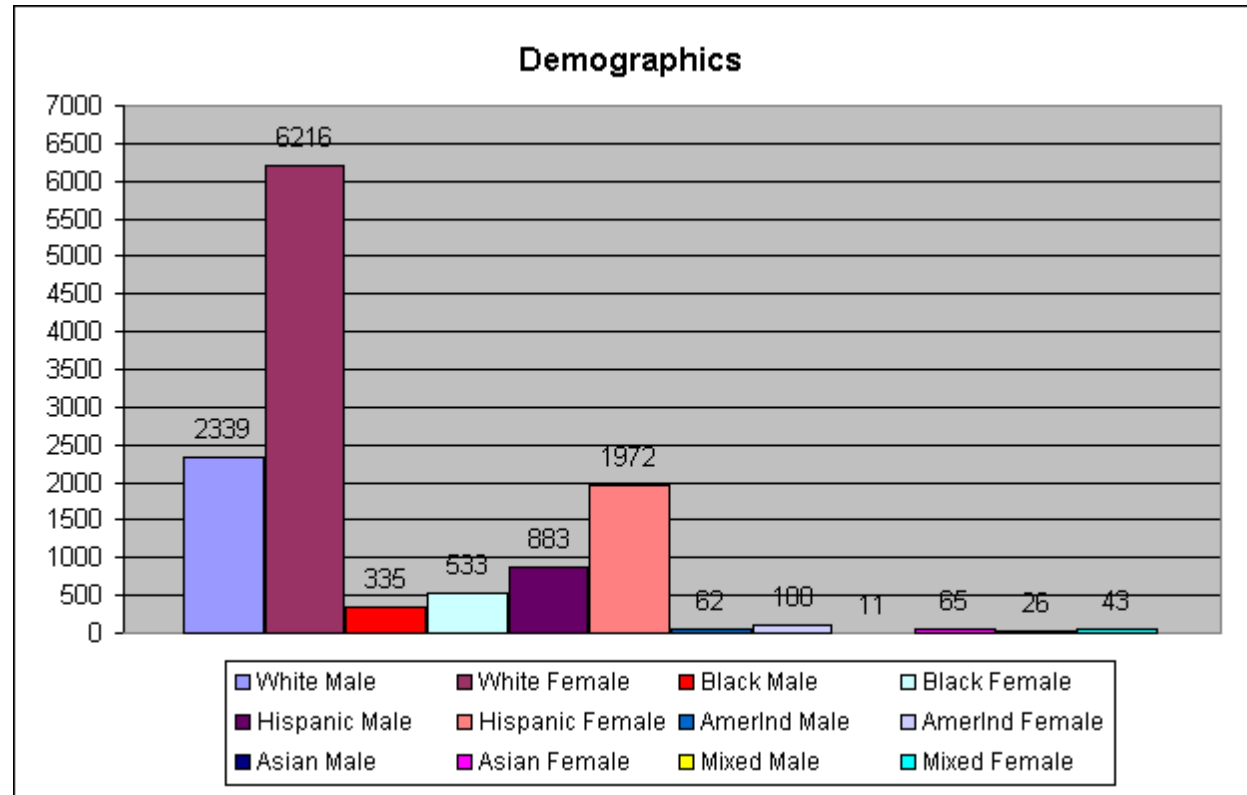
Morgan County - One of the programs on Living A Charmed Life was presented in conjunction with the Morgan County Day Care Association monthly meeting. If they were members of the association, their registration fee was paid by the association; Partners in Parenting workshop was held at Fort Morgan Head Start so that child care can be provided on site during the class and a lite supper is served prior to the class. This makes it easier for parents to attend as they don't have to feed the family before coming nor get children to a sitter. Class is offered taught in Spanish so both English and Spanish classes are at the same time but in different classrooms. Child care and supper are done together.

Pueblo County: Through a relationship with the Foster Care Department of the Department of Social Services, more men and minorities have been reached in the PIP classes; GRG and Family Community Educators (FCE) have increased the number of the older population reached.

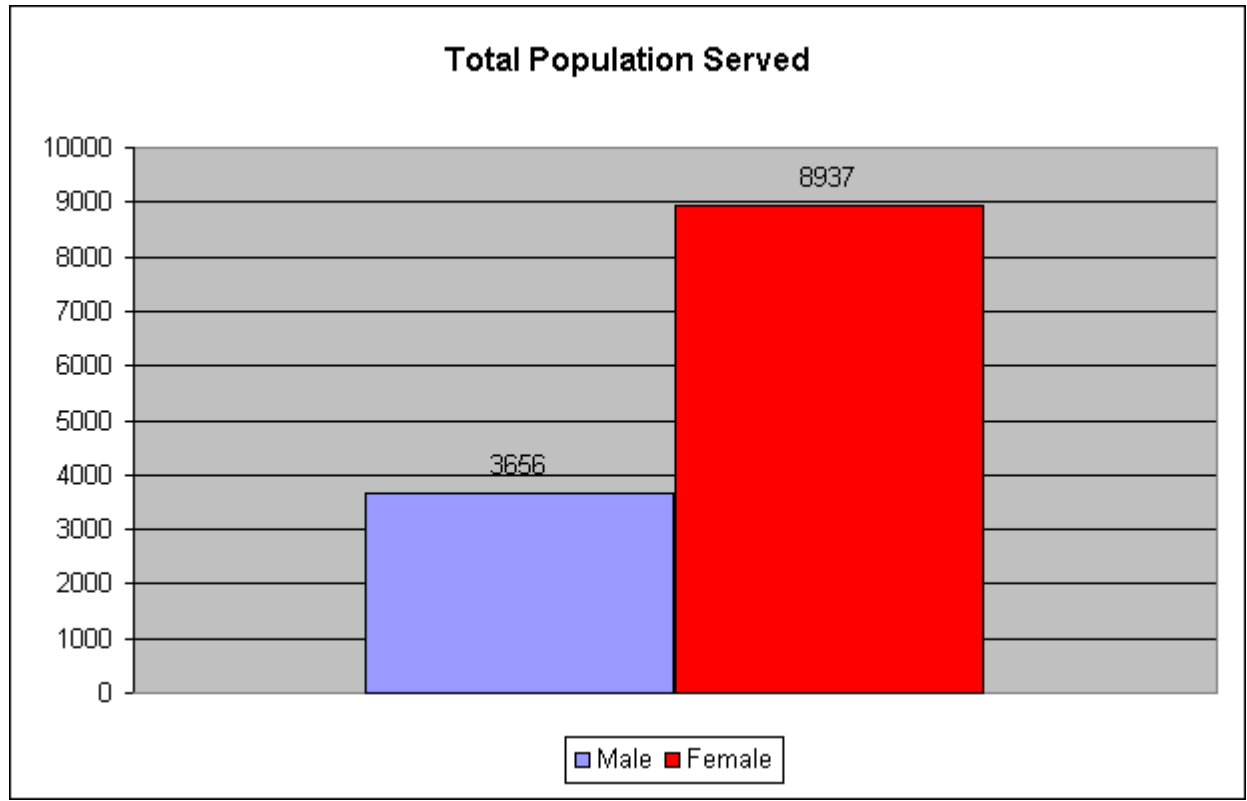
San Luis Valley: One Partners In Parenting Class was taught completely in Spanish for a monolingual audience.

V. People Served by Ethnicity:

White	Male	2339
	Female	6216
Black	Male	335
	Female	533
Hispanic	Male	883
	Female	1972
AmerInd	Male	62
	Female	108
Asian	Male	11
	Female	65
Mixed	Male	26
	Female	43

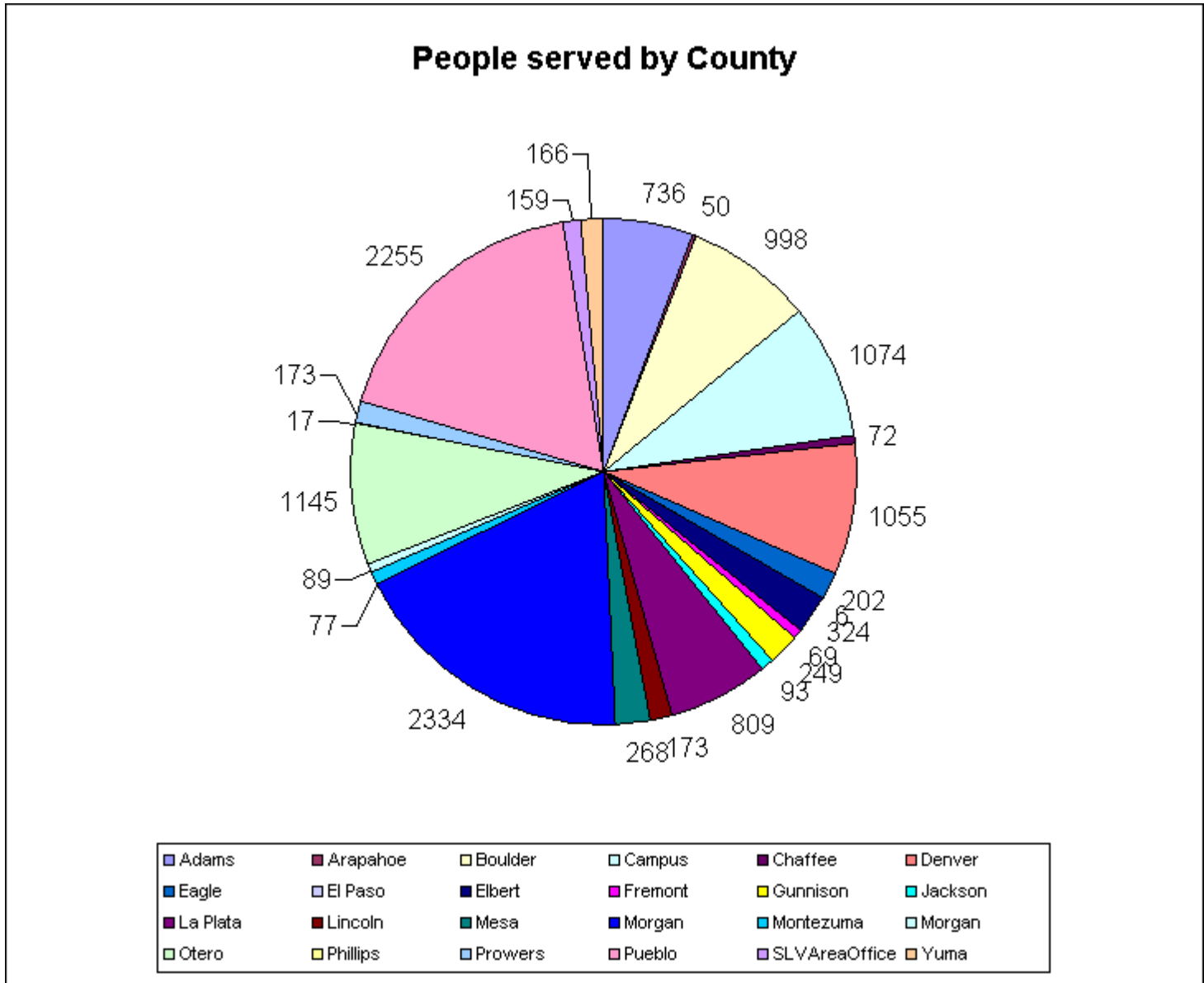


Total **Male** **3656**
Total **Female** **8937**



Adams	736
Arapahoe	50
Boulder	998
Campus	1074
Chaffee	72
Denver	1055
Eagle	202
El Paso	6
Elbert	324
Fremont	69
Gunnison	249
Jackson	93
La Plata	809
Lincoln	173
Mesa	268
Morgan	2334
Montezuma	77
Morgan	89
Otero	1145
Phillips	17
Prowers	89
Pueblo	77
SLVArea	2334
Office	159
Yuma	166

12593



Impacts

CFERT - Partners In Parenting Impacts

- Significant changes from pre to post intervention on parental report of using spanking ($p=.008$), with a drop from 23% to 15% of parents reporting use of spanking.
- More parents reported using time out as a form of discipline after taking part in the parenting classes
- Significant increase in the number of parents reporting that they talk to their children about drug

- Significant increase in the number of parents reporting that their family has fun together

- Parental stress among these parents did decrease
- Parents provided positive feedback regarding the parenting classes and the facilitator(s)
- Parents are significantly more empathic
- All respondents agreed or strongly agreed that they had gained greater knowledge and awareness of parenting and of alcohol, tobacco, and other drug use by youth, as well as that their participation in PIP would help them be a better parent and that they plan to use the information that had been presented.

PIP outcomes with incarcerated participants:

- Increase in parental efficacy; parents reported an increase in confidence with their parenting skills
- Increase in the value of being a parent, meeting their child's needs
- Increase in parenting knowledge

PIP classes provided by Department of Corrections' facilitators trained by CFERT in **Denver, Fremont, Pueblo, and Logan counties**.

Additional Impacts for Parent/Family Education

Adams County - 86% of participants reported plans to implement new learning in the next 60 days; in Grandparent support group cohort, 80% reported success in implementing new parenting practices that resulted in improved family functioning; end of year survey of Grandparents indicates improvement in participant involvement in child's school and increased awareness of public policy issues relevant to their lives.

Pueblo County - increase in awareness, knowledge, attitudes, skills, aspirations for PIP; an increased awareness of the role of parents and parenting techniques in the prevention of drug and alcohol; 100% of the parents educated agreed to a smoke-free home pledge

Morgan County - 100% attending RETHINK classes reported they gained techniques for managing anger
Partners in Parenting - 100% showed an increase in using positive forms of discipline compared to survey completed at start of the workshop; 100% reported practicing skills learned with children during the 6 weeks of workshop
Partners in Parenting

Key Theme – Healthy Colorado Homes

Situation

- Poor indoor air quality can be a serious health risk for Coloradans, all of whom should take the appropriate steps to protect themselves and their families, according to air quality and respiratory health experts.
- Many factors play a part in determining indoor air quality, including pollutants generated by materials and/or products used within the home, pollutants that enter from outside the home, and activities of the home's occupants.

- The majority of counties in Colorado fall into EPA Zone 1, which means that these counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter), the level at which EPA recommends mitigation to reduce the risk of lung cancer.
- A home can be a family's greatest asset, yet many homeowners do not know why and how to take the necessary measures for maintaining the integrity and value of their home, as well as ensuring the safety of its occupants.

Inputs

Team leaders – Ken Trembley, Elisa Shackelton, Laura Au-Yeung

Team members – Colorado State University Extension FCS Agents

Campus resources - Nancy Banman, Steven Reynolds, and April Mason

Additional resources –

- CSUCE support: \$4,990
- Radon education grant from Colorado Department of Public Health and Environment: \$30,108
- Healthy homes grant from USDA/HUD: \$5,589

Outputs

- The work team created the *House Records Organizer* which will be used to teach Colorado residents the importance of preventative home maintenance and record keeping. A total of 250 copies were printed. A training for Agents was held during Fall 2006 to introduce the notebook and to recommend ways of using it to generate user fees. Copies were also available at Extension Forum along with a poster describing the notebook.
- Four *Housing and Design* newsletters were written and distributed to all CSUCE employees. The newsletter focuses on healthy homes issues such as indoor air quality, preventing accidents in the home, cleaning techniques, and innovations in the housing field. Updates are also provided on housing-related activities in Colorado.
- Four mailings to county offices consisting of *Home Indoor Air Quality Records*, *Healthy Indoor Air for America's Homes Ten Year Report*, *Help Yourself to a Healthy Home*, and *Healthy Homes DVD*.
- Radon display at Extension Forum.
- Agent workshop in Fall 2006, providing copies of the *Meth Toolkit* and *Healthy Indoor Air for America's Homes Training Manual CD*.
- Specialist published the article "Healthy Indoor Air for America's Homes" in *Housing and Society*.
- The fact sheets *Improving Air Quality of Your Home*, *Preventing Carbon Monoxide Problems*, *Stretching Decorating Dollars*, and *Safer Housing for the Elderly* were updated. There are currently 18 housing fact sheets receiving approximately 5,000 hits each a year, resulting in a total of about 90,000 hits in 2006.
- Radon training manual (including two CDs) continued to be distributed to county agents.
- Developed a Healthy Colorado Homes Web site.

County Level

- Conducted workshops on a variety of housing issues, including healthy homes, mold, and radon.
- Led public meetings on indoor air quality issues.
- Delivered an indoor air quality program to mothers.
- Presented radon education programs to county employees.
- Conducted a class on radon for real estate agents.
- Answered phone calls on healthy homes and indoor air quality questions.
- Worked directly with residents to assist with the identification and removal of mold.
- Worked directly with residents to assist with radon mitigation.
- Provided radon resistant construction information to local contractors and residents.
- Created and used radon display boards at county fairs, air quality seminars, builder's conferences, and senior centers.
- Distributed free radon test kits individually and in public settings such as a strong women group.
- Published columns and press releases in local papers related to the topic of healthy housing.
- Utilized radio as a source of dissemination on indoor air quality.
- Presented a radon lunch-n-learn

Efforts to reach new and/or underserved audiences.

- The work team has been making available housing materials in Spanish, such as *Hogar Samo*. The team has also located some excellent resources online from research-based sources such as other state Extension systems and government agencies.
- Community presentation at Silverton—a remote, high poverty community.
- Presentations at senior centers.

The below data show the number of people impacted by radon education activities:

Number Impacted	Activity
<u>1,566</u>	Delivered a radon education program to a group.
<u>11,985</u>	Presented a radon display in a public setting.
<u>3,096</u>	Provided easy public access to EPA, CDPHE, CSU or other research-based radon education resources.
<u>165,359</u>	Utilized local media sources to promote radon awareness and testing.
<u>1,282</u>	Provided free radon test kits.
<u>424</u>	Consulted with an individual or group regarding specific radon concerns.
<u>121</u>	Assisted an individual or group with follow-up information following a radon test.
<u>58</u>	Encouraged/assisted an individual with the re-testing process following an initial test indicating a high radon level.
<u>128</u>	Provided a resident with radon mitigation information following testing indicating a high radon level.
<u>104</u>	Assisted local residents with information related to building radon out during new home construction.
<u>59</u>	Worked with/provided radon programs for local real estate professionals.
<u>1,085</u>	Worked with/provided radon programs for local health professionals.
<u>55</u>	Presented radon information at a professional conference.
<u>7,000</u>	Extension resources (newsletter and radon fact sheet)
<u>192,322</u>	Total

Impacts

- An increased number of homes in Colorado are being tested annually for radon.
- Homes with elevated radon levels are being mitigated in Colorado.
- New homes are being built with passive radon resistant systems.
- A larger number of calls are being received related to housing issues.
- The press is publishing columns about home safety and indoor air quality issues.
- Lung cancer risks are decreased every time a mitigated for radon.
- Accidents in the home are reduced as a result of following safe housing practices.

Key Theme – Family Economic Stability

Situation

During one of the richest times in U.S. history, individuals and families are suffering from excessive consumer credit indebtedness, are saving less, and filing bankruptcies at an increasing rate. Real income has declined. Specifically, in Colorado the following needs were identified:

- Individuals and families in Arapahoe County are suffering from excessive consumer credit debt.
- Metro Denver’s exposure to job losses in technology is twice the national average.
- In Jefferson County Section 8 Housing directors identified that residents with Individual Development Accounts (IDAs) or receiving other local services from the Lakewood Housing office would benefit from

financial management information.

Mortgage foreclosure and per capita personal bankruptcy continue to increase, especially in Northern Colorado. With increased bankruptcy and foreclosure, families are facing homelessness. Colorado currently has the highest foreclosure rate in the United States.

Workers' confidence in their ability to save for retirement has declined and fewer individuals are planning for their retirement than before. Workers may be counting on employer-provided retirement benefits. At the same time, employers are cutting back provisions of these benefits, making it less likely that retirees will receive them. Thus, workers are increasingly challenged to provide for their own retirement years through flexible retirement plans at work and additional savings out of their current income. Non-biased education programs that are not selling a service/product, are needed to assist workers in making complex financial decision regarding their investments and retirement plans.

Additionally, education programs are required that focus on planning for end-of-life issues. Large proportions of Americans get sick and die without leaving a will or advanced health care directives. Young adults are not receiving adequate formal training in financial management in the school systems; therefore, financial management education is needed by people of all income levels and backgrounds.

Inputs

Team leaders - Laurel Kubin, Larimer County; Jacque Miller, Larimer County; Mary Snow, Jefferson County

Team members - Kaye Kasza, Southeast Area – Bent County; Jane Frobose, Denver County; Sheila Gains, Arapahoe County; Karin Niedfeldt, Chaffee County; Glenda Wentworth, Eagle County; Pam Neeland, Pueblo County; Wendy Rice, La Plata County; Joy Akey, Golden Plains Area – Yuma County; Laure Au-Yueng, Summit County; Janet Benavente, Adams County; Sylvia Bonham, Gunnison County; Rhonda Follman, Tri River Area – Mesa County; Giesele Jefferson, Golden Plains Area – Washington County; Jean Justice, Southeast Area – Otero County; Karen Massey, Routt County; Gale Miller, Custer and Fremont County; Elisa Shackelton, Moffat County; Bonnie Sherman, Golden Plains Area – Phillips County

Additional Local Inputs

The FES work team has been successful at engaging the following community leaders and organizations:

- The Area Agency on Aging in Chaffee County sponsored LSYFF for \$1000 and provided the meeting place
- Local attorneys, health professionals volunteered to teach LSYFF sessions
- User fees were generated by many of the classes
- Celeste Kling, a Fort Collins attorney, assisted in providing agent training regarding legal issues of wills, advance directives, and estate planning.
- Professional involved in providing portions of the agent in-service on bankruptcy and fraud included George Shoemaker, Center for Financial Education and Consumer Credit Counseling; Lisa Curtis, Denver District Attorneys Office; and Fred Joseph, State Securities Commission.

Additional Campus Connections

The FES work team gained support from the following:

- Vickie Bajtelsmit, College of Business provided an agent in-service training on investing
- Dr. Carol Makela, School of Education, provided an agent in-service training on credit.
- Dr. Manfred Diehl and Dr. Christine Fruhauf are partners in the Rocky Mountain Conference on Aging on Aging in the Workplace: Maximizing a Valuable Resource

Outputs

Colorado State University Cooperative Extension, specifically the Family Economic Stability (FES) Work team, implemented programs targeted at helping participants develop a plan to manage their finances and plan for the future. These programs also helped people think about the importance of organizing their financial records, communicating their wishes with family members, and preparing necessary documentation.

Some of the programs attended were:

- 163 participated in programs related to estate planning and record organizing, such as *Legally Secure Your Financial Future* and *Who Gets Grandma's Yellow Pie Plate*.

- 218 participated in basic money management classes including the use of the *Save Some, Spend Some, Share Some* curriculum.
- 157 participated in education programs related to planning for retirement, including *Invest for Your Future*, *Saving for Retirement*, and *Funding Long Term*.
- 59 participated in the program *Small Steps to Health and Wealth*.

Additionally, staff across the state of Colorado participated in the following activities:

- Provided a booth in Larimer County at the Financial Fitness Fair
- Discussed Cooperative Extension financial management class opportunities with the Larimer County Latino Task Force.
- Appeared as a guest speaker on local Cable TV, featuring dispersal of non-titled property decision making.
- Joined the Larimer County Foreclosure Prevention Task Force.
- Updated the Arapahoe County Extension website to include direct access to the most current CSUCE financial management fact sheets. Links were added to help clients find information from the local Sheriffs department, District Attorney, Attorney General, and various non-profit organizations providing credible financial and credit management advice.
- Met with the Arapahoe and Douglas Works program director to explore collaborative programming efforts in providing financial management education to clientele.
- Toured the Bank of Young Americans and reviewed their youth financial management programs.
- Answered 111 requests for information about financial management or consumer purchasing (walk-ins, emails, and telephone calls).

On a regional level the following activities were initiated:

- Four counties (Larimer, Boulder, Weld and Morgan) joined together to begin planning a new initiative to address the issues of aging and finances through an annual Conference on Aging. The first conference will be held October, 2007, focusing on Aging in the Workplace: Maximizing a Valuable Resource.

On a state level the following activities were initiated:

- Provided a presentation to a special task force of the Colorado and Wyoming Credit Union Association regarding the financial management programs provided by Cooperative Extension.
- Provided 6 hour train the trainer for Colorado State Patrol Academy Instructors utilizing *Save Some, Spend Some, Share Some* curriculum. The CSP instructors then provided training in two hour session during in-services for new cadets and field officers.
- Developed interactive class examples for teaching the *Invest for Your Future* curriculum.
- Provided agent training for the *Legally Secure Your Financial Future* program via telephone conference and internet. 28 agents participated in the four hour training to assist them in implementing and evaluating the program.
- Coordinated agent in-service training on investing basics. A total of 15 agents attended the 16 hours of training.
- Coordinated agent in-service training on credit, bankruptcy, consumer fraud, and investment fraud, a 12 hour training attended by 15 agents.

Multi-state efforts included:

- Engaged in the eXtension Financial Security for All Community of Practice (FSA CoP). Jacque Miller served on the FSA CoP Leadership Team and was responsible for the Frequently Asked Questions (FAQs) component. She worked with Family Resource Management Specialist nationwide to publish 250 FAQs for the eXtension website on personal finance. FSA CoP Leadership Team, included North Dakota, Ohio, South Carolina, New Jersey, Vermont, and Colorado. An additional 38 other states committed to the FSA CoP.

Efforts to Reach New and/or Underserved Audiences

Attempts to reach out to new audiences were made by the FES work team by linking to other Extension programs reaching underserved audiences, such as the FSNEP. This work team continues to build partnerships with a variety of agencies to reach new and underserved audiences including:

- Weld County the Area Agency on Aging and the Salida Senior Center
- Fort Collins Habitat for Humanity

- Larimer County Sheriff's Office Training Department
- Women Give, a local philanthropic organization – Larimer County
- Eagle County Health and Human Services
- Larimer County Department of Human Services
- Bent County Senior Centers
- Colorado State Patrol
- Denver County Employees
- Larimer County Employees
- Poudre School District – High School Transitions Class
- STEPS Program – Denver County
- Mathews House – Larimer County
- Namaqua Center – Larimer County

Impacts

Overall program feedback for family financial programs statewide reported immediate learning, change in awareness, and knowledge about the following topics:

- the importance of managing legal affairs.
- increased knowledge about wills, trusts, and other legal documents.
- increased knowledge about the importance of creating/updating/organizing personal and financial records.
- importance of setting financial goals.
- increased knowledge about developing a personal spending plan.

A statewide evaluation of *LSYFF* was completed in order to determine the effectiveness of the information and material presented. The purpose of the study was to determine the effectiveness of the program in educating individuals about the importance of evaluating their current legal condition related to later life issues, the necessity of developing a personal action plan, and the important steps to take to safeguard them and their family's financial future. The program consists of three seminars titled, "Organize", "Communicate", and "Prepare." This report includes an analysis of the data that was collected during and after the program was completed. Data were collected in three counties, Pueblo, Chaffee and LaPlata. The participants were given a needs assessment, an end of program assessment, and a follow-up assessment which was mailed three to six months after the end of the program. The following report is based upon the findings from the completed and returned forms.

The Participant Needs Assessment was distributed to the participants at the end of the first seminar. A total of 39 needs assessments were collected. The summary of the data collected is provided below.

Participants indicated they had the following legal tools in place:

- 62% had a living will
- 54% had a trust
- 49% had a power of attorney
- 46% had a durable power of attorney
- 46% had written goals

Participants indicated they planned to complete:

- 38% written goals
- 33% household inventory
- 31% inventory papers

Participants indicated they have started organizing:

- 51% property records
- 48% financial records
- 44% family records
- 44% inventory of papers

Participants indicated they have completed:

- Only 28% have completed a written will
- Only 26% have completed household record keeping
- Only 21% have organized their financial records.

Participants indicated they have previously worked with the following professionals:

- 69% have worked with an insurance agent
- 67% have worked with a tax preparer
- 46% have worked with a banker
- 44% have worked with a health care professional
- 38% have worked with a financial planner
- 18% have started to work with a community/extension educator
- Only 10% have started to work with an attorney

Participants indicated having discussions about legal issues with family members:

- 49% have had conversations and plan for more

Participants indicated their reasons for enrolling were to:

- 77% get their financial papers in order
- 67% set up a Power of Attorney
- 62% set up advance directives for health care
- 56% prepare a valid will
- 38% set up an estate plan
- 26% set up a trust

The Participant End-of-Program Assessment was distributed to participants at the end of seminar three. A total of 35 assessments were collected. The summary of the data collected is provided below.

Participants indicated they had the following legal tools in place:

- 49% started an inventory of papers
- 40% started organizing family records
- 34% started organizing financial records
- 34% completed organizing their property records
- 23% completed a living will
- 43% plan to complete a power of attorney
- 40% plan to complete a household inventory
- 31% plan to write a will

Participants indicated they have increased their knowledge of estate planning:

- 49% reporting they learned a lot, with an additional 26% reporting they learned a great deal for a total of 75% indicating an increase in knowledge.

Participants indicated having discussions about legal issues with family members:

- 34% responded they have had discussions and plan for more
- 28% responded they have not had discussions but plan to start

Participants indicated the following benefits from the program:

- 37% increased peace of mind
- 37% increased communication with family
- 34% felt they had accomplished something
- 34% were better prepared for end-of-life issues
- 29% increased confidence

Participants responded to overall satisfaction with the program as follows:

- 66% of participants rated the program as “excellent” and an additional 23% rated it as “good” for a total of 89% indicating satisfaction with the program.
- 66% of participants rated the materials used in program as “excellent” and additional 31% as “good” for a total of 97% indicating satisfaction with the materials.
- 99% indicated that they would recommend this program to others.

In open ended questions participants responded that the most important idea they gained as a result of attending the program was getting organized and communicating with family.

The Follow-Up Assessment was mailed to participants three to six weeks after the last session. A total of 11 were returned. Data collected was not significantly different from the end of program assessment. The only new information collected was their report on the single most important thing that encouraged them to take action. The

majority reported that “it is never too soon to prepare”. Another segment reported “a family death or illness” is what encouraged them to take action.

Overall, the results indicate that the LSYFF program was successful in motivating people to organize their financial records, increase communication with family members regarding financial and end-of-life decisions, and complete legal documentation necessary for securing their financial futures. Changes in behavior and practices were indicated by the number of people who report that they are implementing at least one behavior change to add stability to their financial situation. Long-term changes are difficult to determine and require further research.

Key Theme-Sustainable Community Development

Inputs

Team leaders – Steve Davies, Kipp Nye, Jim Conley, Dawn Thilmany

Team members – Colorado State University Extension Agents

Partners-

- Partners in Value of Agricultural Land assessment were Steamboat Ski and Resort Association, Department of Ag and Resource Economics and particularly, Professor Andy Seidl and Graduate Student Lindsey Ellingson, the City of Steamboat Springs, Routt County and the Colorado Conservation Trust. (Mucklow)
- The County Wildfire Protection Plan in Jackson County has evolved to be an extremely collaborative process with community volunteers, county officials, state and federal land management agency representatives, and fire and rescue volunteers engaged. The county has secured funds through various sources, such as the BLM Community Assistance program, to support Alpe’s efforts financially. Most importantly, they have now created a line item in my budget to cover user fees to keep retain engagement in this successful effort. Two facilitation efforts are planned for Routt County with user fees paid to support the program.
- Main partners in the Dolores County Business Park effort were Dolores County Commissioners, the Town of Dove Creek, Region 9 Economic Development District, Empire Electric, the Weber Family, USDA Rural Development and the Dolores County Development Corporation. The estimated value of all grants and in-kind services contributed to developing the park are \$407,000.
- Two contracts totaling approximately \$15,000 were established as a result of the State Patrol programming effort and they are currently talking about the possibility of others in the near future.
- Parker and the Colorado Economic Development Council Executive Director have taken part in the development discussions. The Arapahoe County Facilities Department produced a cost allocation for the project.

Additional campus -

- DCE: Rick Simpson, Linda Selkirk and Debbie Colbert
- DARE: Martha Sullins
- CSFS: Jeff Jahnke and many CSFS field foresters:
- Forestry: Kurt Mackes
- Admissions: Anna Arevelos and Mary Ontiveros
- Campus Police: Mark Childress, Jason Meisner, Adam Smith
- Department of Sociology
- Department of Food Science and Human Nutrition
- Department of Social Work.
- Individual specialists: Jennifer Anderson, Prabha Unnithan, Victor Baez, Nancy Banman, and Malcolm Scott
- Huntington Lambert, CSU Office of Economic Development
- Dr. James Cooney, Associate Provost and Director of International Programs

Outputs and Impacts

Land Use Planning and Evaluation.

- The value of agricultural land preservation has been investigated in detail in Routt County (Seidl and Loomis)
- The role of conservation easements in environmental control and economic development have also been a focus of faculty recently (Hoag and Keske).
- The Ford Foundation's Community Forestry project (Cheng, Fernandez and Seidl) led to significant outreach efforts in Delta and Montrose Counties.
- A lodging tax analysis, designed to assist growth in tourism, resulted in a ballot measure in Huerfano County, and a working group to further investigate a ballot measure in Custer County (which has now been authorized by the County Commissioners in Custer County). The Huerfano measure passed with a 70% vote in favor, having lost with only 40% in favor just 2 years ago.
- The socioeconomic evaluation of land use alternatives in the Little Snake Field Office of BLM has shown clear links between economic development and land uses such as agriculture, oil and gas activity versus recreation (Davies, Loomis and Seidl).

Industry Studies and Regional Economics

- ***Economics of the Wine Industry in Colorado.*** The economic impact of the Colorado wine industry examines agriculture outside of its traditional commodity framework, and because the importance of Colorado's unique consumers and geography make impact analysis and assessment of tourism potential specific to this state very important. This report garnered lots of publicity for the industry (and CSU as a research partner). This project was modeled on the earlier golf industry study, as is the forthcoming aquaculture project (Bond, PI). We are thus building a good reputation around these projects, and they have significant outreach and regional development dimensions.
- ***Marketing in nonconventional (organic, natural, humane) and local food systems.*** DARE (Thilmany) provided presentations, programming and technical support to agricultural and specialty food producers in niche marketing, agribusiness management and distribution/retailing activities. These activities have increased our department's and CSU Extension's impact among producers with non-commodity and alternative production and marketing interests, as well as professionals and businesses in specific segments of the broader food industry (chefs, small food processors, specialty retailers).
- We have implemented a number of feasibility studies and business planning exercises as well, including onion nuggets, tilapia, and many others through the EA 428 capstone course and Extension interactions. We anticipate that this area will present a great opportunity for an enhanced outreach programming this area, where we would utilize web based products, interaction with community colleges and other short courses to provide business planning that meets the standards of the farm Credit System, USDA Rural Development, among others. Business technical assistance materials for agritourism enterprises emerging in the West have been developed by Thilmany and Onozaka.
- A major effort with significant outreach components is looking at the regional effects of water transfers. This project will include demonstrations of limited irrigation options for cropping systems and also the regional economic implications of this virtually certain transformation.

Institutional contacts and support efforts

The agents and on campus specialists related to the SCD CCA have supported a wide variety of institutions in their pursuit of economic development efforts:

- **Colorado State Patrol:** The Colorado State Patrol was unable to find an adequate communications class to increase their troopers' communication skills, which in turn would enhance their ability to work with the public. Extension (Nye and others) formed a team consisting of CSP educators and CSU faculty to develop a communications class specific for the law enforcement personnel. This class was based on current research in the area of law enforcement and was implemented in May of 2006. The first class had approximately 20 individuals with more than 3 years experience in the field.
- **Colorado Rural Development Council:** This group is moving aggressively to become a more visible entity within the state as a rural development authority, and is trying to shift its dependence on funding from the

public sector to private sources. CSU will be a large part of this new orientation, and can provide, through Extension, important outlets for dissemination and better analysis.

- **Development of CSU Extension as the Front Door of the University.** Cooperative Extension offices will serve as the “front door” to Colorado State University by providing citizen access to the richness of knowledge across the whole of CSU, which clearly requires enhanced connections of county, area, and campus resources. To this end, Alpe worked with Admissions to develop a County Fair table top display that was circulated to Routt (3000), Jackson (500) and Grand County (1000) fairs. She also organized and implemented “College its A-Mazing workshop attended by appx 200 youth at State 4-H Conference.
 - Life skill evaluations were completed by 170 youth using the 4-fold model which uses indicator indices on 4 dimensions; head, heart, hands and health and measured such life skills as wise use of resources, decision making, accepting differences, healthy lifestyle choices, and responsible citizenship. While the evaluation (attached at the end of this document) contained 50 indicator questions, highest respondent scores on a 1(low)-4 (high) scale averages for the workshop were as follows. Overall rating for the workshop was “good”. Responses indicate the participants learned life skills such as:
 - Respect the rights and property of others: 3.75
 - Feel comfortable saying “no” to things that I don’t want to do.
 - Set goals for my future: 3.7
 - Have control over the events in my life: 3.68
 - Be responsible for my own actions: 3.68
 - Solve problems that occur in my life: 3.64
 - Be friends with people who are different than me: 3.60
- **DOLA Technical Assistance Program.** Extension has worked through with this program for a number of years. A large part of this is related to landscaping and architectural and planning issues that cities and counties have, and appears to attract a fair amount of demand. The Huerfano project was included in this interaction this year, and may provide a template for further disseminations. It also would appear that the economic development side could be enhanced. Edwards is on the Lifelong Learning Committee to create CSU Extension as the front door of the university.
- **Jackson County Community Wildfire Protection Plans (CWPP).** Alpe has provided much support and facilitation of this program for Jackson County, and it will likely extend to other counties as well.

Key Impacts

- **Value of Agricultural Land.** The studies and outreach efforts on the Value of Agricultural Land done in Routt County last year led to a new community committee established to look at ways to keep agriculture viable. This project increased awareness of the value of agriculture to local leaders through presentations at the Annual Economic Summit and others, including a conference attended by 45 people on the future of Agriculture hosted by Extension. A broad group representing community leaders, recreation, development and agriculture attended these meetings. In the longer term, this research and outreach stimulated discussions of what, if any, policy changes could be made to keep agriculture viable in the Steamboat Springs area. A similar study in the 1990s led to county efforts to keep agriculture viable. The county has a Right to Farm Law, Statement of Supporting Agriculture, and a property tax funded purchase of Development Rights Program. All of these policy decisions used past research to support the value of keeping agriculture. The updated study has reaffirmed that the pastoral landscape is still important to the tourism economy.
- **Dolores County Business Park.** Dolores County had a business park without a tenant for over 4 years. Fernandez, through Extension, assisted in obtaining a first tenant for the park.
- **Colorado State Patrol Communications support.** The initial class had issues, but the content was very much accepted. This has lead to a revised class using different teaching methods, which looks very promising. Another class is scheduled, which will be used to will be used to evaluate the methods to reach the general trooper population after this class. The command staff for the State Patrol has given the impression that the class will be used in some form because they are so pleased with the content. The activity of this project has lead to several conversations amongst prominent government officials and several department heads on campus. Impacts for this type of activity have yet to reveal themselves totally, but at this point the reports are very positive for both Cooperative Extension and the University.

- **Lodging Tax.** The lodging tax analysis has been a very good example of the kind of analysis that can be used across the state. Based on two success stories, we will distribute a general analysis to the Regional and County directors in Extension to see if there are other areas where these analyses would be useful.
- **Bureau of Land Management (BLM) Connections.** The BLM project has been noted by BLM personnel as “finally” providing a decent socio-economic analysis. They have furthermore inquired about our interest in conducting more sophisticated analyses. This is leading to a capacity within the Department of Agricultural and Resource economics and associated Extension personnel to work on issues in energy, including drilling oil and gas wells, and more relevant and defensible evaluations of alternative uses of the public lands. Also, Alpe secured funds through the BLM Community Assistance program to develop Community Wildfire Protection Plans in Jackson and Routt Counties. Finally, Loomis presented the Social & Economic Aspects of Planning to BLM in Boise, Idaho. This is an annual short course given with BLM’s state economists in
- **Jackson County Community Wildfire Protection Plans (CWPP).** Among active participants of the CWPP, after learning the basics of FireWise defensible space concepts, many participants began implementing objectives on their property, including such things as moving firewood to safe distances from homes, clearing dead and dying timber, removing brush, contacting fire officials to complete assessments in subdivisions, organizing community meetings to teach their neighbors these concepts, etc. In addition, landowners are actively participating in implementing the National Healthy Forest Restoration Act by serving as leaders in their communities to complete CWPPs. The long-term impacts will be realized as citizens continue to engage in protecting life and property in the wildland urban interface.
- **State 4-H Conference “College It’s Amazing” workshop evaluations.** Life skill evaluations were completed by 170 youth using the 4-fold model which uses indicator indices on 4 dimensions; head, heart, hands and health and measured such life skills as wise use of resources, decision making, accepting differences, healthy lifestyle choices, and responsible citizenship. While the evaluation (attached at the end of this document) contained 50 indicator questions, highest respondent scores on a 1(low)-4 (high) scale averages for the workshop were as follows. Overall rating for the workshop was “good”. Responses indicate the participants learned life skills such as:
 - Respect the rights and property of others: 3.75
 - Feel comfortable saying “no” to things that I don’t want to do.
 - Set goals for my future: 3.7
 - Have control over the events in my life: 3.68
 - Be responsible for my own actions: 3.68
 - Solve problems that occur in my life: 3.64
 - Be friends with people who are different than me: 3.60

Stakeholder Input Process

Annual critiques and input on our Plans of Work are provided from the State Extension Advisory Committee and from County Advisory Committees. This is an ongoing process whereby critiques and requests are funneled through county faculty to regional directors and discussed at regional meetings on an annual basis. See also the Overview of this Report for a description of the County Commissioner Survey undertaken this year.

Actions taken to seek stakeholder input:

Every county/area is expected to have an Extension Advisory Committee made up of a broad representation of stakeholders from all programmatic and geographic areas, as well as representative of the diversity found in the county. Evidence of an active advisory committee must be documented in performance appraisals by county directors. The committee and its efforts are also documented during the regular affirmative action review conducted in each county/area. Counties frequently have programmatically oriented advisory committees as well. In addition, specialists frequently have advisory committees at the state level, comprised of commodity group representatives, cooperators, etc. An

inventory of all advisory committees at the county and state level reveals more than 112 committees, currently involving over 2000 individuals throughout Colorado.

Process used to identify stakeholders and collect input:

Representatives from program recipient groups (4-H leaders, master gardeners, agricultural cooperators), as well as programmatic collaborators (community agencies, county departments, commodity groups) are expected to be a part of the advisory committee structure. In addition, county advisory committees must reflect the ethnic diversity of the county. Advisory committees are expected to meet on a regular basis as evidenced by minutes and recommendations regarding programming being forthcoming. Extension agents provide programmatic input to committees and receive feedback and suggestions for new programs and changes to existing programs.

How Input is used:

Programmatic suggestions are funneled from county advisory committees to the State Extension Advisory Committee for consideration, recommendation, and implementation

Program Review

The program review process has not changed since the submission in 1999. We continue to work with the Ag Experiment Station to develop joint program review processes based on our joint development of a program accountability system. In addition, all projects conducted by Extension Specialists are subject to the peer review process established by each College.

Colorado State University Cooperative Extension FY 2005-06

Smith-Lever Funds (only) and FTE Distribution by Goal Area

Federal Goal Area	Formula Dollars	FTE
Goal 1-Competitive Agricultural System	\$614,353.70	8.69
Goal 2-Save and Secure Food System	91,205.81	1.29
Goal 3-A Healthy, Well-Nourished Population	452,781.40	6.41
Goal 4-Agriculture and the Environment	443,850.26	6.28
Goal 5-Economic Opportunity & Quality of Life	1,104,212.83	15.62
Total	\$2,706,404.00	38.29

Evaluation of Success of Multi-State and Joint Activities

In evaluating the success of Extension's multi-state and joint activities, a review of the concerns registered by stakeholders is appropriate. Identified during the comprehensive futuring effort conducted during 2003-2004, and re-emphasized again this year by county advisory committees, as well as the state Cooperative Extension Advisory Committee and the County Commissioner Survey were the following:

- The need to target in core areas of responsibility/competency while reaching out to underserved or under-represented audiences.
- The need to strengthen and diversify financial support to the extension program.
- The desire to partner with appropriate agencies, organizations and individuals to offer effective and efficient programming.
- The need to engage Coloradans through the use of state-of-the-art technology.

The identified existing multi-state and integrated activities continue to reflect the requests of stakeholders by focusing on specific areas of expertise (community development, water, turf and the green industry, youth development, sustainable agriculture, crop development, nutrition and food safety) with concentrated application of programming dollars. Many of these efforts specifically target under-represented/under-served groups such as rural community development/economic development programs, non-4-H youth, senior citizens, immuno-compromised and at-risk individuals, and small, sustainable growers. In addition, much of the work with the green industry and in food safety targets minority audiences who are present in large numbers in these program audiences. Working with these same industries provide the opportunity for fee-for-service training for employers who need professional development opportunities for their employees. Much of the joint research/extension agenda garners additional funding from industry sources as well. Multi-state opportunities provide opportunities to partner across state lines, but also with community groups and individuals who are working in the area of community/economic development. Work in the area of precision agriculture and with technology-assisted growing systems has resulted in specific management practices for increased profitability and environmental sustainability.

Multi-state and joint activities have and will continue to yield specific outcomes/impacts:

- Improved profitability of production systems (animal and plant) while maintaining sustainability of the region's natural resources.
- Genetic improvement of bean, potato and sunflower varieties.
- Economic development of rural communities.
- Life skill development in non-4-H youth through involvement in youth programming.
- Sustainable turf grass and ornamental horticulture production, including reduction in pesticide and water usage.
- Decreased incidence of food borne illness in at-risk populations.
- The development of new cropping systems for specific, dryland, new and alternative crops.
- Improved water quality and quantity through the Colorado Water Program.

The success of Colorado's multi-state and joint activities continues to improve the effectiveness and efficiency of our overall Extension program.

Multi-State & Joint Activities

Multistate Projects - As shown in the attached table, Colorado State University Extension faculty are engaged in a great variety of multistate activities largely focused on the immediate high plains states or in the western region. The activities are organized around our ongoing work teams and provide additional resources and synergy in high quality programming and research.

Joint Projects – Successful joint programming continues to occur between Cooperative Extension and the Agricultural Experiment Station. The attached table details this work.

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Actual Expenditures of Federal Funding for Multistate Extension and Integrated Activities**

(Attach Brief Summaries)

Fiscal Year: 2006

Select One: Interim Final

Colorado State

Institution: University

State: Colorado

	Integrated Activities (Hatch)		Multistate Extension Activities (Smith-Lever)		Integrated Activities (Smith-Lever)
<i>Established Target %</i>	0%	%	15%	%	15%
<i>This FY Allocation (from 1088)</i>	\$ -		\$2,706,404		\$2,706,404
<i>This FY Target Amount</i>	\$ -		\$405,961		\$405,961
Title of Planned Program Activity					
Competitive Agricultural Systems	\$ -		\$ -		\$ -
Safe and Secure Food & Fiber System			210,820		325,229
Healthy and Well-Nourished Population			21,082		26,308
Greater Harmony Between Agriculture and the Environment			0		26,309
Enhanced Economic Opportunity and Quality of Life			115,951		74,373
			127,422		10,709
Total	\$ -		\$527,980		\$462,928
Carryover	\$ -		\$ -		\$ -

Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays represented here accurately reflect allowable expenditures of Federal funds only in satisfying AREERA requirements.

 Marc A . Johnson
 Director

6/07
 Date

2005-6 Multistate Extension Activities

Note: The funds shown identify ONLY CSU Smith-Lever dollars.

Program*	Federal Goal	States	FTE*	Funds
Colorado Engaging Communities in Transition	5	Arizona, New Mexico, Utah	1.0	105,410
Certified Greenhouse Professional Program	4	Wyoming, Utah	.2	21,082
Colorado Water Outreach Program	4	Wyoming, Montana, North Dakota, South Dakota, Utah	.3	31,623
Veterinary Extension in the West	1	Nebraska, Wyoming, Utah	.3	31,623
Colorado Row and Vegetable Crop Foliar Disease Management	1	Nebraska, Wyoming	.2	21,082
LandHelp	4	New Mexico, Arizona, Wyoming	.1	10,541
Turf Production and Management in Colorado	4	Wyoming, Nebraska, Arizona	.2	21,082
Commercial Greenhouse Crops	4	Wyoming	.2	21,082
4-H Youth Life Skills Development in Archuleta County	5	New Mexico	.25	15,812
Sustainable Ag Using Alternative Methods in LaPlata and Archuleta Counties and San Juan County New Mexico	1	New Mexico	.2	21,082
4-H Youth Life Skills Development in La Plata County	5	New Mexico	.1	6,200
Living on the Land – Small Acreage Curriculum	4	Oregon, Nevada, Idaho, Washington, Utah, Montana, California	.3	31,623
Preserve Warhill Germplasm	1	Wyoming, Nebraska	.1	10,541
Southeast Colorado Dryland Cropping Systems	1	Kansas	.2	21,082
Northeast Colorado Dryland Cropping Systems	1	Kansas	.3	31,623
Food Safety	2	Wyoming, Minnesota	.2	21,082
Sunflowers	1	Nebraska, Kansas	.3	31,623
Irrigation	1	Nebraska	.2	21,082
Change Agent States For Diversty	5	14 states nationwide	.5	52,705
		Total-FY 2006 Multistate		\$527,980

* No change in Program or FTE due to level funding at State and Federal levels.

**Colorado State University Cooperative Extension/Agriculture Experiment Station
Integrated Activities
2005-2006**

Note: No new projects have been added for the 2006 fiscal year due to budget restrictions.

Program	Funds	Description
Colorado Integrated Resource Management & Sustainable Agriculture (Whittier)	23,448	Improve sustainability and profitability of livestock production systems in forage-based, natural resource environments. Improving quality composition and consistency of market livestock and meat products. Genetic screening for improved beef cutability and palatability.
Crops Testing and Alfalfa Variety Testing and Extension Education for Colorado (Byrne, Schwartz, Brick, Johnson)	49,754	Testing of winter wheat varieties, corn (dryland and irrigated grain as well as silage) hybrids, sunflower hybrids, dry bean varieties. Genetic improvement of beans for yield, pest resistance and food value. Alfalfa variety testing and technology transfer, veg. crop folier disease management.
Colorado Environmental Pesticide Education Program (Beck)	20,359	Pesticide safety education, pesticide use and needs assessment, crop pest management, pesticide information transfer. Ecology and management of invasive weeds.
Alternative Cropping Systems – Sustainable/Organic Integrated Fruit Production for Colorado (Larson)	7,747	Commercial fruit production – production techniques, pest control, pesticide selection and use, crop selection and management options.
Improving Certified Seed Potato Production and Management (Davidson)	21,184	New cultivars, seed related research, integrating management strategies for disease and pest problems. Management of diseases through improved certified seen production and management techniques.
Field Scale Monitoring & Modeling of Salinity, South Platte Mapping (Garcia)	10,453	Detailed data-collection activities for soil salinity, depth to groundwater, groundwater quality, rainfall amounts, evapotranspiration, and crop yield.
Turf Production and Management in Colorado (Koski)	25,421	Sustainable turf grass production and management – lay and professional – water requirements, fertilizer, pesticides, energy. Water use, stress resistance and varietal evaluation
Nutrition and Food Safety (Kendall & Anderson)	52,617	Improving safety of food; seasonal patterns of food insecurity on diet and growth of children; nutrition technology transfer.
Horticulture and the Green Industry (Klett, Cranshaw)	30,463	Introduction, adaptability, production and survival of landscape plants. Improving management and technology transfer of insects affecting horticultural crops.
Precision Agriculture (Khosla)	13,027	Site specific management zones for farm profitability and environmental sustainability (GPS/GIS)
Rural Economic Development (Thilamany)	10,709	Rural communities, rural labor markets and public policy.
Colorado Field Crop Entomology (Peairs, Westra)	60,566	Biology and management of Russian wheat

		aphid
Northeast Colorado Dryland Cropping Systems (Pearson)	8,937	New and alternative crops.
Southeast Regional Range-Livestock (Brummer)	9,263	Biology of cheatgrass invasion in the Gunnison Basin
Commercial Vegetable Crop Production (Bartolo)	8,010	Weed management for onion, potato, dry bean, sugar beet production.
Animal Manure and Waste (Davis, Seidl)	44,622	
Equine Spermatazoa Research (Denniston)	13,497	ID factors and development technologies to improve efficiency of cooled and frozen equine spermatazoa
Weed Management Strategies (Westra, Zalesky, Nissen)	34,362	Weed control in crop and non-crop systems
Turf and Ornamental Diseases in Colorado (Tisserat)	18,489	Diagnostic keys for turfgrass and tree pests
Total – FY 2006	\$462,928	