

# 2014 Colorado State University Combined Research and Extension Annual Report of Accomplishments and Results

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## I. Report Overview

### 1. Executive Summary

The Agricultural Experiment Station (AES) and Extension at Colorado State University are committed to excellence in basic and applied research and translation of this research through Extension programs to crop (including ornamental) and animal (including equine) agriculture. Extension will continue to emphasize non-formal education and transfer of knowledge to audiences throughout the state, based on research information from the AES, the colleges of Agricultural Sciences, Health & Human Sciences, Engineering, Veterinary Medicine and Natural Resources. Programs will emphasize best management practices in addressing issues that affect Coloradans.

#### **4-H Youth Development**

Program Goals: 4-H Youth Development empowers youth to reach their full potential by working and learning in partnership with caring adults. 4-H affects positive change in life skills (including leadership, citizenship, decision making, and communication) and in STEM (including interest, knowledge, and application of science process skills) for youth ages 5 to 18.

Extension, AES, or Integrated: Extension

New Programs, and/or Addressing NIFA Priorities: STEM priority will benefit from available and promised content and resource support from National 4-H Headquarters, Colorado State University, Extension, and county partners.

Ongoing, Consistent, and/or Successful Programs: Colorado State University Extension reaches Colorado's K-12 youth through 4-H youth development programs in 4-H clubs, after-school and school enrichment. Development of volunteers who provide much of the leadership for 4-H, and private fund-raising are associated activities. 4-H Youth Development emphasizes personal growth of young people through experiential learning with well-designed curricula and projects.

Cross-cutting or Cross-disciplinary Initiatives: Most 4-H Youth Development programs, while focusing on youth development, are built around content that may be supported by one or more college-based specialists.

#### **Community & Economic Development**

Program Goals: Community & Economic Development outreach works with municipal, county, state, and federal agencies, nongovernmental organizations, and citizens to create dynamic processes that address local and regional needs/issues. Our efforts focus on facilitating community planning processes that engage all stakeholders affected by an issue in ways that lead to better informed decisions and help communities understand and deal with change. It includes providing information and resource connections, which might include community impact analysis of economic activity or evaluation of the drivers of local economies. This work encourages collaboration to build regional economies and create entrepreneur/business friendly communities. Innovative and collaborative leadership activities/trainings are provided to engage new diverse leaders and strengthen community organizations.

Extension, AES, or Integrated: Integrated

New Programs, and/or Addressing NIFA Priorities: Community & Economic Development, is highlighted by the Vice President for Engagement and Director of Extension.

Ongoing, Consistent, and/or Successful Programs: Colorado communities are changing rapidly as a result of many factors, including loss of agricultural water, influx of retirement populations, development of gas and oil industries, incidence of military deployment, and changes in cultural composition of residents.

Communities struggle to develop and maintain resources: human, financial, physical, social, environmental, and political. They also are challenged to provide the organizational capacity to assess, plan, and implement activities to address resource development and management. These issues especially are acute in smaller rural communities. Colorado's rural communities are relatively unique in terms of sparse populations, a high natural amenity and public lands base, a transitory population, and relatively low public service provision. Communities require knowledge to evaluate their resource base, their economic and social service alternatives, and their futures.

Cross-cutting or Cross-disciplinary Initiatives: Technologies will be provided through training and technical assistance to Extension agents, as the system views C&ED as a process rather than an issue. The goal is to intentionally integrate C&ED into all issues work.

### **Crop Management Systems**

Program Goals: It is the goal of this Planning & Reporting Unit (PRU) for the producers of Colorado crops to adopt and implement improved, productive, and sustainable agricultural systems that will lead to the success of farms. Furthermore, these producer actions will improve the ability of farm operations to persist and thrive through successive generations of operators. Individuals, families, and communities will all benefit by having a safe, secure and sufficient food supply. Colorado crop producers will accommodate to the growth of demand for local and world crop production without compromising the natural resources upon which agriculture depends.

Extension, AES, or Integrated: Integrated

New Programs, and/or Addressing NIFA Priorities: Global Food Security and Hunger

Ongoing, Consistent, and/or Successful Programs: Molecular biology and genomics of crop plants and their pests; Integrated Pest Management.; Wheat breeding, bean breeding and potato breeding programs; Production systems in semi-arid environments with limited water availability. Communicate results through demonstration plots and field days;

Cross-cutting or Cross-disciplinary Initiatives: This is a well-organized and highly-functioning Extension unit that will maintain its structure and contribute to the NIFA priority goal of global food security.

### **Energy**

Program Goals: (1) Empower Coloradans to make well-informed energy decisions; and (2) Promote a broad, unbiased understanding of energy issues. Promoting a broad, unbiased understanding of energy issues may result in well-informed energy decisions in the long-term. In the short-term, it may simply uplift the quality of energy dialogue in Colorado.

Extension, AES, or Integrated: Integrated

New Programs, and/or Addressing NIFA Priorities: Clean Energy

Ongoing, Consistent, and/or Successful Programs: Energy Masters, Center for Agricultural Energy (CAE)

Cross-cutting or Cross-disciplinary Initiatives: Home & Farm, K-12

### **Environmental Horticulture**

Program Goals: The outreach efforts of the Environmental Horticulture Planning & Reporting Unit (PRU) will provide education and services to encourage the adoption of research-based best management practices (design, plant selection, establishment, and management practices) and diagnostic techniques/services by green industry professionals and the home gardener. Our goal is that professional and lay practitioners will use reasonable inputs of labor, water, fertilizers and pesticides to produce attractive, functional, cost-effective and sustainable ornamental landscapes.

Extension, AES, or Integrated: Integrated

Ongoing, Consistent, and/or Successful Programs: The primary issues addressed by Environmental Horticulture Extension include: ornamental landscapes, diagnostic services, and volunteer engagement. Emerging issues for consideration include:

- Sustainable landscaping
- "Green" gardening
- Organic/natural landscape management

- Composting/recycling
- Water-wise/water smart gardens
- Youth Gardening
- Wildlife gardening (birds, butterflies)
- Home greenhouses
- Spanish speaking audiences

Cross-cutting or Cross-disciplinary Initiatives: Adult and youth audiences.

### **Family & Financial Stability**

Program Goals: Financial, mental, physical, emotional and relational health are key components of well-being. Stable and successful individuals, families, and communities are important to the growth, development and health of our society. When people are in a state of financial and relational wellness, they are in control, confident and focused. They have greater balance and stability so they can concentrate on the most important tasks at hand such as weathering difficulties and making progress toward their goals. Family and financial stability education creates strong communities.

Extension, AES, or Integrated: Extension

New Programs, and/or Addressing NIFA Priorities: Renewed engagement with CSU Department of Human Development and Family Studies provides opportunities for new programs engaging field and campus colleagues.

Ongoing, Consistent, and/or Successful Programs: Family and Financial Stability (FAFS) programs seek to provide applied research and Extension education in a coordinated set of programs related to family and financial economic stability. Financial stability of families has been the area of focus for non-nutrition FCS programming. Colorado families' financial instability includes increasing rates of bankruptcy, economic crises and loss of jobs. Family stability is important to the growth, development, and health of our society.

Cross-cutting or Cross-disciplinary Initiatives: Consumer economics and human development and family studies are vehicles that can assist 4-H in reaching positive youth development and STEM targets.

### **Food Systems**

Program Goals: Improved technical assistance for agricultural and food producers exploring new marketing channels and alternative business approaches. Also, CSU will provide facilitation of community discussions around the interface between food and agricultural issues and broader social issues including public health, food safety, the environment and community development.

Extension, AES, or Integrated: Integrated

New Programs, and/or Addressing NIFA Priorities: This team was formed and issues were framed based on a couple of key assumptions that arose among team members as they saw the requests they received from community members change and evolve:

1. Current work teams do not address all the system-oriented issues that agriculture and food production play a role in.
  2. There is a need for more marketing, policy and community development activities directed at food systems that vary from the conventional system used to handle high volume commodity foods.
  3. Extension is being asked to play a more significant role in food system planning, including facilitating discussions between consumers, producers and organizations interested in ag and food issues.
- Ongoing, Consistent, and/or Successful Programs: The Food Systems team has come together, drawing from a diverse set of personnel with backgrounds in agriculture, horticulture, food safety, nutrition, community development, and youth education. This team will work to increase literacy on food and ag issues, facilitate community discussions and assessments on ag and food issues, provide technical assistance to an increasingly diverse set of food producers and support new market opportunities.
- Cross-cutting or Cross-disciplinary Initiatives: To formalize and coordinate activities that require interdisciplinary approaches related to emerging issues, a new resource team on Food Systems seems warranted.

### **Livestock & Range**

Program Goals: The Livestock and Range (L&R) Planning & Reporting Unit (PRU) strives for

rangeland health, improved animal health and production, industry policy and regulation awareness, and economic sustainability using a broad array of methodologies that provides information, skills, and technology to producers and L&R Unit members. This PRU is designed for Extension Programming for livestock producers, ranchers, and rangeland managers who have, or are striving for, a significant portion of their personal income coming from the farm/ranch. These may be small farms/ranches or larger scale operations. Livestock producers may also integrate cropping production systems into their operation.

Extension, AES, or Integrated: Integrated

New Programs, and/or Addressing NIFA Priorities; Global Food Security and Hunger

Ongoing, Consistent, and/or Successful Programs: Extension outreach will span the breadth of the topics of research to assure that industry participants have practical knowledge in modern beef, dairy, and sheep production systems, biosecurity, economic and risk management, and response to policy and consumer changes. Outreach to youth involved in livestock production and judging events will continue as part of experiential learning in 4-H, FFA, and college judging. Producers will realize increased prices and lower cost of production. Consumers will benefit from higher human nutritional values of food. AES will lead research on animal production systems and reproductive efficiency.

Cross-cutting or Cross-disciplinary Initiatives: Reorganization of Planned Programs pulls apart animal production systems and plant production systems. The work will integrate Extension education in disseminating research results. CSU Extension will:

- Deliver workshops and educational classes for producers;
- Provide individual counseling for producers and clientele on specific animal production problems.

Cross-cutting or Cross-disciplinary Initiatives: Research on animal production systems and reproductive efficiency.

### **Natural Resources**

Program Goals: The Natural Resources Planning & Reporting Unit (PRU) members will work together to develop and implement high quality educational programs and tools to ensure a high quality of life for Colorado citizens.

Extension, AES, or Integrated: Integrated

New Programs, and/or Addressing NIFA Priorities: The Natural Resources PRU is focused on how to best manage our landscapes from the perspective of plants, animals, soils, water, and pests. Our goal is to protect these resources through our programming efforts, with special emphasis on native species.

Ongoing, Consistent, and/or Successful Programs: AES and Extension programs address the growing competition for finite water, land, and air resources in a state with a growing human population by:

- Educating agricultural and resource industry professionals;
- Researching technical and economic issues related to improved resource utilization;
- Enhancing international competitiveness.

Cross-cutting or Cross-disciplinary Initiatives: Nutrient management and odor and dust control.

### **Nutrition, Food Safety & Health**

Program Goals: The goal of this PRU is to promote adoption of healthful eating and activity patterns and ensure an abundant and safe food supply for all. Adoption of healthful eating and activity patterns can enhance the overall health and wellbeing of children, youth, adults, and the growing senior population. Adoption of food safety knowledge and safe food handling practices will ultimately reduce the incidence of foodborne disease in Colorado, especially among the most vulnerable populations (infants, young children and individuals who are immuno-compromised through aging, medical intervention, and illness). Through various programs, CSU Extension contributes to the statewide efforts to increase fruit and vegetable consumption, increase physical activity, and decrease overweight/obesity risk in Colorado.

Extension, AES, or Integrated: Integrated

New Programs, and/or Addressing NIFA Priorities: Planned Programs are reorganized to again combine Nutrition and Food Safety work in this category.

Ongoing, Consistent, and/or Successful Programs:

- Food safety training for food service managers and employees
- Food safety education for high risk audiences, their caregivers, and health care professionals
- Food safety information for consumers including Farmers' Market vendors and their customers.
- Nutrition and Health Promotion programs provide research-based nutrition and health education to a variety of audiences across Colorado in an effort to promote healthful nutrition, activity and lifestyle behaviors.

Cross-cutting or Cross-disciplinary Initiatives: AES food safety research emphasizes pre-harvest management of livestock to prevent transmission of human pathogens in livestock production and handling and post-harvest detection and management systems to prevent contamination of meat and plant products with human pathogens.

**Total Actual Amount of professional FTEs/SYs for this State**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	150.0	0.0	50.0	0.0
Actual	0.0	0.0	71.9	0.0

**II. Merit Review Process**

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

- Internal University Panel
- External Non-University Panel
- Combined External and Internal University External Non-University Panel

**2. Brief Explanation**

All projects conducted by the AES and Extension are subjected to a peer review process. Each college at Colorado State University has adopted a process for conducting a peer review on all AES and Extension projects submitted for support by state and federal funds. Criteria, as requested by NIFA reviewers, include alignment with college priorities, resource allocation, and meeting needs of Coloradans.

As of January, 2014, Extension specialists and agents team together in ten Planning and Reporting Units (PRUs), jointly lead by a specialist and an agent. Each PRU has completed a Logic Model, including providing a situation statement, assumptions, identification of inputs, outputs and outcomes (including learning, action, and condition), and an evaluation plan. The Plans of Work (POW) were submitted for entry into the online Colorado Planning and Reporting System (CPRS) early in 2014.

At the county level, all county Extension programs are required at a minimum to have an Extension Advisory Committee composed of constituents, partner agencies (such as the school districts, councils on aging, county health and human services, commodity groups, etc.). In addition, many counties have multiple program advisory groups that guide the county staff in identification of specific programs of emphasis. In the most recent survey of these committees, 62 Extension county programs (from 52 county offices) had a total of 112 advisory committees involving close to 2,000 individuals in the program review process. County programs are reviewed and evaluated by these county advisory groups. The primary criteria is meeting needs in the county.

### III. Stakeholder Input

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

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals
- Survey of selected individuals from the general public
- Other (Survey of County Commissioners regarding Extension Programs in their county.)

#### Brief explanation.

The AES and Extension are active participants in meetings of Advisory Committees consisting of state, county, and organizational leaders. AES and Extension programs are discussed and input is solicited on future priorities for research activities. In addition, the AES regularly participates in meetings held by CSU Extension where current and future program needs are discussed. A variety of joint research programs are conducted with USDA-ARS programs in Fort Collins, Akron, and other locations as well as collaborative programs with USDA-FS, USDA-NRCS and USDA-NASS. Numerous programs are also conducted in cooperation with individuals.

Regional listening sessions lead by the AES and Extension are held in the various regions of the state. Both AES and Extension programs are modified to reflect the input received where appropriate and feasible.

All sessions are open to the public and advertised in the local media prior to the meeting.

Critical issues addressed by multi-state and integrated activities include the following: 1) invasive plants; 2) obesity; 3) animal and municipal waste management; 4) food safety; 5) community development; 6) water quality and environmental issues; and the emerging area of bioenergy.

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

##### 1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Use Surveys
- Other (Council for Agricultural Research, Extension, and Teaching)

### **Brief explanation.**

For CSU Extension, county needs determine programming direction. These include addressing the needs of under-served and under-represented populations. Extension participated in the first cohort of CSREES-funded Change Agents States. We have maintained the system changes implemented during the initiative, as well as the Diversity Catalyst Team (DCT). Goals for Extension diversity include increasing: diversity of employees; diversity of audiences served; and cultural competency of current Extension employees. DCT seeks to support "widening our circle" to include audiences currently under-served and/or under-represented.

The AES research program is modified based on input from stakeholders. Examples include an evaluation of oilseeds that was initiated to assess bioenergy potential based on stakeholder requests; multi-disciplinary and integrated activities are conducted on invasive plants; and the goals of wheat breeding program that reflect the needs of the wheat industry. In essence, ongoing interaction with stakeholders through formal and informal means is used to insure program relevancy.

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

#### **1. Methods for collecting Stakeholder Input**

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Survey of selected individuals from the general public
- Other (Review of county Web sites to discern priorities)

### **Brief explanation.**

The AES and Extension annually utilize multiple means of obtaining stakeholder input on programs conducted and solicit input on changes in program direction. The AES and Extension support programs in seven of the eight colleges on the Colorado State University campus as well as at nine off-campus research centers, 52 individual county offices and four area programs serving 62 of Colorado's 64 counties.

AES: Each year, the off-campus research centers hold a public meeting where research results are presented and proposed programs are discussed. Public input is solicited on all proposed programs. It should be noted that many of the programs discussed involve faculty and staff located on the Fort Collins campus as well as at the off-campus research centers and Extension county or area offices.

CE: Each County/Area Extension program is required to have a stakeholder advisory committee, representing all programmatic and geographic areas, as well as the diversity found in the county. Evidence of the advisory committee must be documented in performance appraisals, as well as during the regularly scheduled affirmative action reviews. These advisory committees are expected to meet on a regular basis and provide guidance on programming and target audiences. Finally, a Colorado Extension Advisory Committee (CEAC), representing program recipient groups and programmatic collaborators provides oversight and input at the state level. Extension administration pays travel expenses to two meetings each year, to encourage participation.

### **3. A statement of how the input will be considered**

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

#### **Brief explanation.**

The AES and Extension annually utilize multiple means of obtaining stakeholder input on programs conducted and solicit input on changes in program direction. The AES and Extension support programs in seven of the eight colleges on the Colorado State University campus as well as at nine off-campus research centers, 52 individual county offices and four area programs serving 62 of Colorado's 64 counties.

AES: Each year, the off-campus research centers hold a public meeting where research results are presented and proposed programs are discussed. Public input is solicited on all proposed programs. It should be noted that many of the programs discussed involve faculty and staff located on the Fort Collins campus as well as at the off-campus research centers and Extension county or area offices.

CE: Yearly the county advisory committees review the county plans of work which are then incorporated into the statewide work team plans. These plans are reviewed by the CEAC for additional input and acceptance. There is an open call for additional Planning & Reporting Units (PRUs) so that emerging priority areas may be identified and state-wide focus provided, when appropriate. Diversity among stakeholders is expected, but as NIFA reviewers have noted, it is not documented.

#### **Brief Explanation of what you learned from your Stakeholders**

Local demand drives programming in Colorado.



#### IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
3205107	0	3567139	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
<b>Actual Formula</b>	2754706	0	1414996	0
<b>Actual Matching</b>	2754706	0	3980959	0
<b>Actual All Other</b>	9724800	0	27143240	0
<b>Total Actual Expended</b>	15234212	0	32539195	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
<b>Carryover</b>	0	0	147577	0

## V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	4-H Youth Development
2	Family and Consumer Science
3	Nutrition and Food Safety
4	Animal Production Systems
5	Plant Production Systems
6	Natural Resources and Environment
7	Community Development
8	Livestock & Range
9	Cropping Systems
10	Sustainable Energy
11	Environmental Horticulture
12	Food Systems
13	Family & Financial Stability
14	Natural Resources
15	Nutrition, Food Safety & Health
16	Community & Economic Development

**V(A). Planned Program (Summary)**

**Program # 1**

**1. Name of the Planned Program**

4-H Youth Development

Reporting on this Program

**V(B). Program Knowledge Area(s)**

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%		0%	
	<b>Total</b>	100%		0%	

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	49.0	0.0	0.0	0.0
<b>Actual Paid</b>	64.2	0.0	0.0	0.0
<b>Actual Volunteer</b>	48.4	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
881506	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
881506	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2263105	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

- Support traditional club programs by recruiting and establishing new clubs;

- Conduct after school and school enrichment programs that provide curriculum in Science, Technology, Engineering and Math (STEM), leadership, citizenship and life skills development;
- Develop new curriculum in response to new audience needs;
- Strengthen the volunteer management system needed to implement the 4-H Youth Development program by: conducting agent trainings to develop volunteer management skills; developing tools to support volunteer management system; delivering volunteer leader training; developing new funding support through individual and group solicitation, grant applications and fee-for-service programs.

**2. Brief description of the target audience**

- For 4-H Youth Development programming - all Colorado youth, ages 5 - 19.
- For volunteers - interested adults, parents, community members, seniors, partner agencies.
- For increased funding - potential funding entities, including grant providers.

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	611322	171575	71918	91324

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	383	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- 4H 10. Web Hits: Number of web hits regarding 4-H topics, excluding pages of Agent Resources and Blog areas of the site.  
Not reporting on this Output for this Annual Report

**Output #2**

**Output Measure**

- Funding: Grant dollars generated to support 4-H Youth Development programs.  
Not reporting on this Output for this Annual Report

**Output #3**

**Output Measure**

- Value of Volunteers' Time: Value of volunteers' time that Colorado 4-H adult volunteers provide to 4-H programming, based an average donation [CPRS average hours/year/volunteer) at \$22.03/hour (national average for value of time, adjusted for Colorado)  
Not reporting on this Output for this Annual Report

**Output #4**

**Output Measure**

- 4H1. Trainings, Classes, Workshops, Field Days, Educational Activities, or Events for youth (examples might include: NWSS, Ag Fest, MQA Training, etc.)  
Not reporting on this Output for this Annual Report

**Output #5**

**Output Measure**

- 4H 5. Community Meetings Convened [examples: Advisory Groups, Councils, Coalition Meetings, Boards]  
Not reporting on this Output for this Annual Report

**Output #6**

**Output Measure**

- 4H 11. Press/News Release or Column (number submitted)  
Not reporting on this Output for this Annual Report

**Output #7**

**Output Measure**

- 4H9. Newsletters (This is number of newsletters, not number mailed or number of Coloradans who received them.)  
Not reporting on this Output for this Annual Report

**Output #8**

**Output Measure**

- 4H 8. Direct Communication/Education by telephone and/or e-mail

Not reporting on this Output for this Annual Report

**Output #9**

**Output Measure**

- 4H 10. Websites (number of Websites & number of hits)  
Not reporting on this Output for this Annual Report

**Output #10**

**Output Measure**

- 4H 2. Trainings for Volunteers (one-on-one)  
Not reporting on this Output for this Annual Report

**Output #11**

**Output Measure**

- 4H 13. Emergency/Disaster Response. (one-on-one)  
Not reporting on this Output for this Annual Report

**Output #12**

**Output Measure**

- 4H 6. Community Meetings Facilitated [examples: Focus Group, Citizen Forum, Round Table Dialogue, Strategic Planning Process]  
Not reporting on this Output for this Annual Report

**Output #13**

**Output Measure**

- 4H 7. Community Coalitions, Collaborations, Alliances Formed to Address a Specific Issue [list specific groups/issue]  
Not reporting on this Output for this Annual Report

**Output #14**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

<b>Year</b>	<b>Actual</b>
2014	7483

**Output #15**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	53710

**Output #16**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	2061

**Output #17**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	192

**Output #18**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	31

**Output #19**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	426525

**Output #20**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications  
Not reporting on this Output for this Annual Report

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	4H 1.1: 4-H Youth Development volunteers continually develop their competencies as adult volunteers who work with youth: increase leadership capacity; foster life skill development in youth; increase effectiveness of Extension programs, contribute to increased public service; increase skills in audience(s) in which they work.
2	4H 4.1: Colorado youth apply STEM knowledge and skills in club, community and academic projects and programs. <a href="http://www.colorado4h.org/research_impact/surveys/STEM.pdf">http://www.colorado4h.org/research_impact/surveys/STEM.pdf</a>
3	4H 1.1: 4-H Youth Development programs positively influence the development of youth. Youth develop life skills: contribute to community improvement; set goals; make decisions; keep records; speak in public; lead.



**Outcome #1**

**1. Outcome Measures**

4H 1.1: 4-H Youth Development volunteers continually develop their competencies as adult volunteers who work with youth: increase leadership capacity; foster life skill development in youth; increase effectiveness of Extension programs, contribute to increased public service; increase skills in audience(s) in which they work.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	1352

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Trained volunteers increase the capacity to deliver positive youth development programs to youth.

**What has been done**

1352 volunteers said they apply skills developed through Extension-provided training, supervision, and support to increase their effectiveness in influencing positive youth development for the audience(s) with which they work. ES237 shows 10,386 adult and youth volunteers enrolled in Colorado.

**Results**

After a Cloverbud Fun night:

"Of the 20 4-H volunteers assisting with the program, the evaluation of the program showed:

\*100% felt that volunteering this evening increased their leadership ability or knowledge

\*100% thought they increased the social and/or learning skills in the youth they worked with

\*100% thought that volunteering increased the effectiveness of the 4-H program

\*100% felt that volunteering helped them feel more comfortable speaking in front of a group."

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

## **Outcome #2**

### **1. Outcome Measures**

4H 4.1: Colorado youth apply STEM knowledge and skills in club, community and academic projects and programs. [http://www.colorado4h.org/research\\_impact/surveys/STEM.pdf](http://www.colorado4h.org/research_impact/surveys/STEM.pdf)

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	5764

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The United States is facing a critical need for a workforce with strong Science, Technology, Engineering, and Math (STEM) skills. Currently, only 32 percent of U.S. college graduates are earning degrees in these fields (NSF 2007). Recent educational reports state that the United States needs 400,000 new graduates in STEM disciplines by 2015 (SETDA, 2008). To meet this growing need, 4-H, the youth development branch of the USDA and part of the land grant university system, has embarked on a STEM initiative that reaches more than five million youth nationwide with hands-on learning experiences that encourage discovery, develop young minds and fill the educational pipeline with leaders proficient in STEM (National 4-H, 2013).

#### **What has been done**

State and Regional STEM Specialists provide content and kits to local sites for sharing in-and out-of-school (including day camps). STEMasters training was provided to elementary school teachers to help incorporate STEM into programs that meet school standards. 54,688 youth participated in school enrichment activities through Colorado 4-H, and 11,833 in After-School Programs Using 4-H Curricula/Staff Training, according to ES237.

#### **Results**

Data from an embryology program: "The surveys reported that 93% of participants increased their content area knowledge, 68% were able to apply the content knowledge, 83% learned to measure something, 71% learned how to use a scientific tool, 52% learned about record keeping, 78% learned more about observation skills, and 76% increased their interest in science."

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

### **Outcome #3**

#### **1. Outcome Measures**

4H 1.1: 4-H Youth Development programs positively influence the development of youth. Youth develop life skills: contribute to community improvement; set goals; make decisions; keep records; speak in public; lead.

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	3745

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

We are all striving for a common goal of providing a better future for our youth. 4-H is about the kids and giving them a positive environment to learn important life skills for the future.

##### **What has been done**

90,364 youth participated in 4-H in Colorado, according to ES237.

From Caballeros and Clovers 4-H Camp (2 days): Campers also attended workshops based on 4-H curriculum. The workshops for this year were Rocketry, STEM, Home Environment, and Archery. Workshop attendees came away with an increased knowledge about these projects and an interest in enrolling in these projects next 4-H year. Seventy six campers ranging in age from eight to thirteen, ten teen counselors, eight adult chaperones, and seven Extension Agents attended the camp. There was representation from all counties in the Area. Plans are already underway for next year's camp.

##### **Results**

Scholars and a team at the Institute for Applied Research in Youth Development at Tufts University researched the effort of 4-H on youth and the results are astounding. Studies show that 4-H-ers are four times more likely to make contributions to their communities; two times more likely to be civically active; two times more likely to make healthier choices; and two times more likely to participate in Science, Engineering and Computer Technology programs during out-of-school time.

One participant said, "4-H has without a doubt made me a patient person and much more confident. I now look for new things to be a part of everywhere. I have gained both people and life skills with the years spent here. I feel I am now better prepared as I take on my future."

#### **4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**  
806            Youth Development

### **V(H). Planned Program (External Factors)**

#### **External factors which affected outcomes**

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

#### **Brief Explanation**

Families have many choices when selecting activities -- this affects parents as volunteers and youth as participants.

### **V(I). Planned Program (Evaluation Studies)**

#### **Evaluation Results**

Communities in Colorado depend on quality, contributing members of society. Fostering productive community members begins with our young people. 4-H is Colorado State University's premier youth development program. Positive youth development addresses broader developmental needs of youth, in contrast to deficit-based models which focus solely on youth problems. Positive youth development occurs from an intentional process that promotes outcomes for young people by providing opportunities and relationships and externally, through the delivery of projects and curriculum designed according to the best practices of youth development.

#### **Key Items of Evaluation**

New Programs, and/or Addressing NIFA Priorities: STEM priority will benefit from available and promised content and resource support from National 4-H Headquarters, Colorado State University, Extension, and county partners.

Ongoing, Consistent, and/or Successful Programs: Colorado State University Extension reaches Colorado's K-12 youth through 4-H youth development programs in 4-H clubs, after-school and school enrichment. Development of volunteers who provide much of the leadership for 4-H, and private fund-raising are associated activities. 4-H Youth Development emphasizes personal growth of young people through experiential learning with well-designed curricula and projects.

Cross-cutting or Cross-disciplinary Initiatives: Most 4-H Youth Development programs, while focusing on youth development, are built around content that may be supported by one or more college-based specialists.

**V(A). Planned Program (Summary)**

**Program # 2**

**1. Name of the Planned Program**

Family and Consumer Science

- Reporting on this Program  
Reason for not reporting

Planning & Reporting Units restructured. See data in Family & Financial Stability.

**V(B). Program Knowledge Area(s)**

- 1. Program Knowledge Areas and Percentage

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	4.0	0.0	0.0	0.0
<b>Actual Paid</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Volunteer</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

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

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Educational activities include:

- Adoption of curriculum, training for agents and other service providers, educational programs on financial management for individuals and families.

- Science based education (radon in homes) provided by a neutral expert.

**2. Brief description of the target audience**

Colorado families, including diverse and difficult- to-reach populations.

**3. How was eXtension used?**

{No Data Entered}

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

**Patent Applications Submitted**

Year: 2014

Actual: {No Data Entered}

**Patents listed**

{No Data Entered}

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
Actual	5	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- FES 2) Trainings/Classes/Workshops, Field Days, Activity Days.

Year	Actual
2014	0

**Output #2**

**Output Measure**

- FES 9) Newsletters (This is number of newsletters, not number distributed or number of Coloradans who received them).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #3**

**Output Measure**

- FES 13) Number of Volunteers (total) in Planned Program.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #4**

**Output Measure**

- FES 15) Agencies Partnering/Collaborating.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #5**

**Output Measure**

- FES 10) Websites (number of Websites).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #6**

**Output Measure**

- FES 11) Websites (number of hits).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #7**

**Output Measure**

- FES 3) Trainings for Volunteers.

<b>Year</b>	<b>Actual</b>
-------------	---------------

2014 0

**Output #8**

**Output Measure**

- FES 4) Trainings for Extension Staff.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #9**

**Output Measure**

- FES 5) Community Meetings Convened [examples: Advisory Groups, Councils, Coalition Meetings, Boards].

<b>Year</b>	<b>Actual</b>
2014	0

**Output #10**

**Output Measure**

- FES 6) Community Meetings Facilitated [examples: Focus Group, Citizen Forum, Round Table Dialogue, Strategic Planning Process].

<b>Year</b>	<b>Actual</b>
2014	0

**Output #11**

**Output Measure**

- FES 7) Community Coalitions, Collaborations, Alliances Formed to Address a Specific Issue [list specific groups/issue.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #12**

**Output Measure**

- FES 8) Direct Communication/Education by telephone and/or e-mail.

<b>Year</b>	<b>Actual</b>
2014	0



**Output #13**

**Output Measure**

- FES 12) Press/News Releases or Columns number submitted, not number distributed or read by Coloradans).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #14**

**Output Measure**

- RH 1) Trainings/Classes/Workshops, Field Days, Activity Days.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #15**

**Output Measure**

- RH 2) Trainings for stakeholders such as builders, mitigators, and Realtors.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #16**

**Output Measure**

- RH 3) Trainings for stakeholders such as builders, mitigators, and Realtors.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #17**

**Output Measure**

- RH 4) Direct Communication/Education by telephone.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #18**

**Output Measure**

- RH 5) Newsletters (This is number of newsletters, not number mailed or number of Coloradoans who received them.)

<b>Year</b>	<b>Actual</b>
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2014 0

**Output #19**

**Output Measure**

- RH 6) Press/News Release or Column (number submitted).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #20**

**Output Measure**

- RH 8) External Grant Dollars.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #21**

**Output Measure**

- RH 9) Screening Kits distributed.

<b>Year</b>	<b>Actual</b>
2014	0

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	FES 1.10: Coloradans intend to increase their utilization of successful strategies and/or adopt strategies for financial management. Small Steps to Health & Wellness (SSHW) financial indicators include: setting financial goals; record keeping; creating and using a spending plan; credit management and debt reduction; fraud, exploitation, and risk management; housing decisions; saving; investing; and long term and retirement planning.
2	RH 1.1) Safe air quality in homes particularly redirection of air for removal of radon.
3	RH 1.2) Identify appropriate action for mitigation.

**Outcome #1**

**1. Outcome Measures**

FES 1.10: Coloradans intend to increase their utilization of successful strategies and/or adopt strategies for financial management. Small Steps to Health & Wellness (SSHW) financial indicators include: setting financial goals; record keeping; creating and using a spending plan; credit management and debt reduction; fraud, exploitation, and risk management; housing decisions; saving; investing; and long term and retirement planning.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #2**

**1. Outcome Measures**

RH 1.1) Safe air quality in homes particularly redirection of air for removal of radon.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #3**

**1. Outcome Measures**

RH 1.2) Identify appropriate action for mitigation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

{No Data Entered}

**V(I). Planned Program (Evaluation Studies)**

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

**V(A). Planned Program (Summary)**

**Program # 3**

**1. Name of the Planned Program**

Nutrition and Food Safety

- Reporting on this Program
  - Reason for not reporting
    - Planning & Reporting Units restructures - see data in Nutrition, Food Safety & Health

**V(B). Program Knowledge Area(s)**

- 1. Program Knowledge Areas and Percentage

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	45.0	0.0	2.0	0.0
<b>Actual Paid</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Volunteer</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

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

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Conduct basic and applied research on nutrition and wellness.

HEALTH PROMOTION & DISEASE PREVENTION (NH) programs include:



- Strong Women, Strong Bones
- Heart Disease Awareness & Prevention
- Diabetes Awareness, Prevention and Management
- Nutrition Education for Low-income Audiences
- Nutrition and Wellness
- Multi-lesson series: Dining with Diabetes, Small Changes Make a Big Difference, Strong Women-Strong Bones, Moving Toward a Healthier You, Healthy Heart, Smart-START for a Healthy Heart
- Self-paced program - Self-Care for a Healthy Heart
- Single lessons - Workable Wellness (work site wellness).
- Youth programs: Food Friends-Making New Foods Fun for Kids, Eating Right Is Basic, Chef Combo's Fantastic Adventures in Tasting and Nutrition, Professor Popcorn

#### FOOD SAFETY (FSAFE) Education

- Food Safety training for consumers, high risk audiences and their caregivers.(Eat Well for Less, La Cocina Saludable, Work site Wellness, Safe Home Food Preparation and Preservation, Promotion at Farmers Markets.)
- Food Safety Training for Food Service Managers and Workers (Food Safety Works, ServSafe, Food Safety for Food Bank Workers).Some of these programs are fee-based.

#### Promoting Food Security

- Multi-lesson series programs-Eat Well for Less, La Cocina Saludable]
- Single event programs targeting limited resource families
- Newsletters-Senior Nutrition News  
Research
- Development of new technologies for improving food safety
- Determine important relationships between diet, food composition, and health

## 2. Brief description of the target audience

**HEALTH PROMOTION & DISEASE PREVENTION (NH):** Adults and children in Colorado

**FOOD SAFETY (FSAFE):** Consumers, High Risk Audiences (pregnant, immune-compromised, elderly);Food handlers and their managers at retail food establishments;

**Research:** Producers and processors of plant and animal agricultural products.

## 3. How was eXtension used?

{No Data Entered}

## V(E). Planned Program (Outputs)

### 1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

**Patent Applications Submitted**

Year: 2014

Actual: {No Data Entered}

**Patents listed**

{No Data Entered}

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
Actual	20	10	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- FSAFE 2) Number of Trainings/Classes/Workshops, Field Days, Activity Days - Could include: Food Preservation Workshops; Proper Hand washing Demonstration; Pressure Canner Gauge Inspection; Healthy Baby Healthy Me; Food Safety during Pregnancy; Food Safety Works; ServSafe Manager Certification; Safe GAPS; Food Safety for Seniors; Farmers' Market Vendor Training; Other Educational Classes.  
Not reporting on this Output for this Annual Report

**Output #2**

**Output Measure**

- FSAFE 3) Number of Trainings for Volunteers.  
Not reporting on this Output for this Annual Report

**Output #3**

**Output Measure**

- FSAFE 4) Number of Trainings for Extension Staff.  
Not reporting on this Output for this Annual Report

**Output #4**

**Output Measure**

- FSAFE 5) Number of Community Meetings Convened [examples: Advisory Groups, Councils, Coalition Meetings, Boards].  
Not reporting on this Output for this Annual Report

**Output #5**

**Output Measure**

- FSAFE 7) Number of Community Coalitions, Collaborations, Alliances Formed to Address a Specific Issue [list specific groups/issue].  
Not reporting on this Output for this Annual Report

**Output #6**

**Output Measure**

- FSAFE 8) Number of Direct Communications/Education by telephone and/or e-mail.  
Not reporting on this Output for this Annual Report

**Output #7**

**Output Measure**

- FSAFE 9) Number of Newsletters (This is number of newsletters created, not number mailed or number of Coloradans who received them.) SafeFood News; electronic County or other newsletters.  
Not reporting on this Output for this Annual Report

**Output #8**

**Output Measure**

- FSAFE 10) Websites (number of Websites) Farm to Table Website County or Other websites.  
Not reporting on this Output for this Annual Report

**Output #9**

**Output Measure**

- FSAFE 11) Number of Website hits (this is number of hits, not number of websites).  
Not reporting on this Output for this Annual Report

**Output #10**

**Output Measure**

- FSAFE 12) Number of Press/News Releases or Columns (number submitted, not number read by Coloradans).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #11**

**Output Measure**

- FSAFE 13) Number of Volunteers (total) in Planned Program including Master Food Safety Advisers Program and/or other food safety education.  
Not reporting on this Output for this Annual Report

**Output #12**

**Output Measure**

- FSAFE 14) Number of Certified Master Volunteers (of those reported in FSAFE #13).  
Not reporting on this Output for this Annual Report

**Output #13**

**Output Measure**

- FSAFE 15) Number of New Technologies Expected to be Adopted by Producers.  
Not reporting on this Output for this Annual Report

**Output #14**

**Output Measure**

- FSAFE 17) User Fees generated.  
Not reporting on this Output for this Annual Report

**Output #15**

**Output Measure**

- NH 1) Peer Reviewed Publications, including Fact Sheets & Curricula.  
Not reporting on this Output for this Annual Report

**Output #16**

**Output Measure**

- NH 2) Trainings/Classes/Workshops, Field Days, Activity Days.  
Not reporting on this Output for this Annual Report

**Output #17**

**Output Measure**

- NH 4) Trainings for Extension Staff.  
Not reporting on this Output for this Annual Report

**Output #18**

**Output Measure**

- NH 5) Community Meetings Convened [examples: Advisory Groups, Councils, Coalition Meetings, Boards].  
Not reporting on this Output for this Annual Report

**Output #19**

**Output Measure**

- NH 6) Community Meetings Facilitated [examples: Focus Group, Citizen Forum, Round Table Dialogue, Strategic Planning Process].  
Not reporting on this Output for this Annual Report

**Output #20**

**Output Measure**

- NH 7) Community Coalitions, Collaborations, Alliances Formed to Address a Specific Issue [list specific groups/issue].  
Not reporting on this Output for this Annual Report

**Output #21**

**Output Measure**

- NH 8) Direct Communication/Education by telephone and/or e-mail.  
Not reporting on this Output for this Annual Report

**Output #22**

**Output Measure**

- NH 9) Newsletters - This is number of newsletters, not number mailed or number of Coloradans who received them, such as Family Matters & others.  
Not reporting on this Output for this Annual Report

**Output #23**

**Output Measure**

- NH 10) Websites (number of Websites).  
Not reporting on this Output for this Annual Report

**Output #24**

**Output Measure**

- NH 12) Press/News Releases or Columns (number submitted).  
Not reporting on this Output for this Annual Report

**Output #25**

**Output Measure**

- NH 15) EFNEP 1) Adult: Paraprofessional educators provide classes to adults in the neighborhoods in which they reside. Educators teach small group classes and one-on-one. Educators use Eating Smart Being Active (ESBA) a nutrition education curriculum developed by EFNEP staff in Colorado and California. In ESBA, participants learn basic nutrition, food safety and food resource management through Adult Learning Theory principles.  
Not reporting on this Output for this Annual Report

**Output #26**

**Output Measure**

- NH 16) EFNEP 2) Youth: Educators teach a series of nutritionally related lessons to groups of youth at schools and after school programs such as Boys and Girls club.  
Not reporting on this Output for this Annual Report

**Output #27**

**Output Measure**

- NH 17) SNAP-Ed 1) Adult: Paraprofessional educators provide classes to adults in the neighborhoods in which they reside. Educators teach small group classes and one-on-one. Educators use Eating Smart Being Active (ESBA) a nutrition education curriculum developed by EFNEP staff in Colorado and California. In ESBA, participants learn basic nutrition, food safety and food resource management through Adult Learning Theory principles.  
Not reporting on this Output for this Annual Report

**Output #28**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

<b>Year</b>	<b>Actual</b>
2014	0

**Output #29**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #30**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	0

**Output #31**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	0

**Output #32**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	0

**Output #33**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	0

**Output #34**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of new technologies in pre-harvest livestock management adopted to reduce and/or avoid contamination of meat and/or plant products with human pathogens.
2	Number of new technologies in handling and/or post-harvest detection and management systems adopted to prevent contamination of meat and plant products with human pathogens.
3	FSAFE 1.1. Decrease in reportable foodborne illness as determined through statistics gathered by public health agencies such as Colorado Department of Public Health & Environment (CDPHE), FoodNet, Center for Disease Control and Prevention (CDC), Food and Drug Administration (FDA) and Food Safety Inspection Service (FSIS).
4	FSAFE 1.2: Reduction in foodborne illness-related economic losses(including reduced worker productivity, increased medical expenses, and food industry losses) as determined through public health agencies such as Colorado Department of Public Health & Environment (CDPHE), FoodNet, Center for Disease Control and Prevention (CDC), Food and Drug Administration (FDA) and Food Safety Inspection Service (FSIS).
5	FSAFE 1.1. Participants will adopt recommended food safety practices (including food production, processing, transport, preparation, preservation, consumption and storage practices) to minimize risk of foodborne illness.
6	FSAFE 1.2: Participants will adopt skills necessary to teach others about food safety practices that reduce risk of foodborne illness.
7	FSAFE 2.3. Number of Participants who will adopt safe home food preservation practices (including use of tested recipes, following research-based procedures and canning equipment that is routinely inspected and tested for safety).
8	FSAFE 3.1. Number of Participants who will plan to implement processes that will minimize microbial and/or chemical threats to the food supply.
9	FSAFE 3.2. Number of Participants who will plan to adopt food safety processes developed through NIFA-funded projects.
10	FSAFE 2.1. Food safety stakeholders will engage in community events, classes, meetings, discussions, etc. to build awareness and understanding of local food systems and their impact along the food chain that effect availability, affordability, quality, and sustainability of a safe food supply. (Action)
11	FSAFE 1.3: Participants will acquire basic competencies associated with food safety training required or recommended for retail food establishments, cottage foods producers, local growers, food processors, food safety professionals, trained volunteers or consumers.
12	NH 1.1 Consuming more healthy foods such as: vegetables, fruits, whole grains, fat-free or low-fat milk and milk products, seafood, lean meats and poultry, eggs, beans and peas, and nuts and seeds.
13	NH 1.2 Consuming less foods/food components that are commonly eaten in excess such as: sodium, solid fats, added sugars, and refined grains.
14	NH 1.3. Following healthy eating patterns such as: eating breakfast, eating as a family, making healthy snack choices.
15	NH 2.1 Healthy physical activity levels are defined by national physical activity guidelines: A) Children - 60 minutes or more of PA daily B) Adults - 150 minutes of PA per week



16	NH 3: Coloradans will decrease chronic disease risk.
17	NH 4.1. EFNEP reports against national goals and objectives (
18	NH 5.1. SNAP-Ed reports against goals and objectives laid out in SNAP-Ed proposal made to state and regional SNAP offices

**Outcome #1**

**1. Outcome Measures**

Number of new technologies in pre-harvest livestock management adopted to reduce and/or avoid contamination of meat and/or plant products with human pathogens.

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #2**

**1. Outcome Measures**

Number of new technologies in handling and/or post-harvest detection and management systems adopted to prevent contamination of meat and plant products with human pathogens.

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #3**

**1. Outcome Measures**

FSAFE 1.1. Decrease in reportable foodborne illness as determined through statistics gathered by public health agencies such as Colorado Department of Public Health & Environment (CDPHE), FoodNet, Center for Disease Control and Prevention (CDC), Food and Drug Administration (FDA) and Food Safety Inspection Service (FSIS).

## 2. Associated Institution Types

- 1862 Extension

### 3a. Outcome Type:

Change in Condition Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2014	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

{No Data Entered}

#### What has been done

{No Data Entered}

#### Results

{No Data Entered}

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
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{No Data}	null
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## Outcome #4

### 1. Outcome Measures

FSAFE 1.2: Reduction in foodborne illness-related economic losses(including reduced worker productivity, increased medical expenses, and food industry losses) as determined through public health agencies such as Colorado Department of Public Health & Environment (CDPHE), FoodNet, Center for Disease Control and Prevention (CDC), Food and Drug Administration (FDA) and Food Safety Inspection Service (FSIS).

### 2. Associated Institution Types

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #5**

**1. Outcome Measures**

FSAFE 1.1. Participants will adopt recommended food safety practices (including food production, processing, transport, preparation, preservation, consumption and storage practices) to minimize risk of foodborne illness.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #6**

**1. Outcome Measures**

FSAFE 1.2: Participants will adopt skills necessary to teach others about food safety practices that reduce risk of foodborne illness.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #7**

**1. Outcome Measures**

FSAFE 2.3. Number of Participants who will adopt safe home food preservation practices (including use of tested recipes, following research-based procedures and canning equipment that is routinely inspected and tested for safety).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #8**

**1. Outcome Measures**

FSAFE 3.1. Number of Participants who will plan to implement processes that will minimize microbial and/or chemical threats to the food supply.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #9**

**1. Outcome Measures**

FSAFE 3.2. Number of Participants who will plan to adopt food safety processes developed through NIFA-funded projects.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #10**

**1. Outcome Measures**

FSAFE 2.1. Food safety stakeholders will engage in community events, classes, meetings, discussions, etc. to build awareness and understanding of local food systems and their impact along the food chain that effect availability, affordability, quality, and sustainability of a safe food supply. (Action)



## 2. Associated Institution Types

- 1862 Extension

### 3a. Outcome Type:

Change in Action Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2014	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

{No Data Entered}

#### What has been done

{No Data Entered}

#### Results

{No Data Entered}

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

## Outcome #11

### 1. Outcome Measures

FSAFE 1.3: Participants will acquire basic competencies associated with food safety training required or recommended for retail food establishments, cottage foods producers, local growers, food processors, food safety professionals, trained volunteers or consumers.

### 2. Associated Institution Types

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #12**

**1. Outcome Measures**

NH 1.1 Consuming more healthy foods such as: vegetables, fruits, whole grains, fat-free or low-fat milk and milk products, seafood, lean meats and poultry, eggs, beans and peas, and nuts and seeds.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**Outcome #13**

**1. Outcome Measures**

NH 1.2 Consuming less foods/food components that are commonly eaten in excess such as: sodium, solid fats, added sugars, and refined grains.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

### Outcome #14

#### 1. Outcome Measures

NH 1.3. Following healthy eating patterns such as: eating breakfast, eating as a family, making healthy snack choices.

#### 2. Associated Institution Types

- 1862 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Actual
2014	0

#### 3c. Qualitative Outcome or Impact Statement

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

**Outcome #15**

**1. Outcome Measures**

NH 2.1 Healthy physical activity levels are defined by national physical activity guidelines: A) Children - 60 minutes or more of PA daily B) Adults - 150 minutes of PA per week

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #16**

**1. Outcome Measures**

NH 3: Coloradans will decrease chronic disease risk.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #17**

**1. Outcome Measures**

NH 4.1. EFNEP reports against national goals and objectives (

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #18**

**1. Outcome Measures**

NH 5.1. SNAP-Ed reports against goals and objectives laid out in SNAP-Ed proposal made to state and regional SNAP offices

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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{No Data}	null
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

{No Data Entered}

**V(I). Planned Program (Evaluation Studies)**

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}



**V(A). Planned Program (Summary)**

**Program # 4**

**1. Name of the Planned Program**

Animal Production Systems

- Reporting on this Program  
Reason for not reporting

Planning & Reporting Units restructured. See data in Livestock & Range.

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	13.0	0.0	5.0	0.0
<b>Actual Paid</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Volunteer</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

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

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

- Workshops and educational classes for producers
- Demonstration field days to showcase the results
- Individual counseling on producers' specific problems

- Conduct basic and applied research on livestock, primarily beef, dairy, sheep, and horses

**2. Brief description of the target audience**

Individual agricultural producers, commodity groups, agri-business partners

**3. How was eXtension used?**

{No Data Entered}

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	0	0	0	0

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

**Patent Applications Submitted**

Year: 2014

Actual: {No Data Entered}

**Patents listed**

{No Data Entered}

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	{No Data Entered}	{No Data Entered}	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- LR 1) Trainings/Classes/Workshops, Field Days, Activity Days

Year	Actual
2014	0

**Output #2**

**Output Measure**

- LR 3) Trainings for Extension Staff

<b>Year</b>	<b>Actual</b>
2014	0

**Output #3**

**Output Measure**

- LR 4) Community Meetings Facilitated [examples: Focus Group, Citizen Forum, Round Table Dialogue, Strategic Planning Process].

<b>Year</b>	<b>Actual</b>
2014	0

**Output #4**

**Output Measure**

- LR 6) Newsletters (This is number of newsletters, not number mailed or number of Coloradoans who received them.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #5**

**Output Measure**

- LR 7) Websites (number of Websites).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #6**

**Output Measure**

- LR 8) Websites (number of hits).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #7**

**Output Measure**

- LR 9) Press/News Release or Column (number submitted).

<b>Year</b>	<b>Actual</b>
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2014 0

**Output #8**

**Output Measure**

- LR 10) New Technologies Expected to be Adopted by Producers.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #9**

**Output Measure**

- LR 12) Emergency/Disaster Response(group).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #10**

**Output Measure**

- ABM 1: Trainings/Classes/Workshops, Field Days, Activity Days.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #11**

**Output Measure**

- SAM 1) Trainings/Classes/Workshops, Field Days, Activity Days, and/or Field Visits.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #12**

**Output Measure**

- SAM 2) Direct Communication/Education by telephone and/or e-mail.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #13**

**Output Measure**

- SAM 3) Newsletters (number of newsletters, not number mailed or number of Coloradoans who received them).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #14**

**Output Measure**

- SAM 4) Websites (number of websites maintained related to small acreages. Report only once per year).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #15**

**Output Measure**

- SAM 6) The number of acres on which small acreage landowners are implementing weed management and monitoring.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #16**

**Output Measure**

- SAM 7) The number of acres seeded in grass/legumes/forbs.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #17**

**Output Measure**

- SAM 8) The number of acres on which small acreage landowners have implemented proper grazing and pasture management.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #18**

**Output Measure**

- SAM 10) Peer Reviewed Publications, including Fact Sheets, Curricula, and Bulletins.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #19**

**Output Measure**

- SAM 5) Websites (average number of hits per month. Report once at end of year).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #20**

**Output Measure**

- SAM 9) The number of acres on which small acreage landowners have implemented a forest management plan which includes insect/disease issues, proper stand health, and/or creating defensible space.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #21**

**Output Measure**

- ABM 2: Trainings for Extension Staff.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #22**

**Output Measure**

- ABM 4: Direct Communication/Education by telephone and/or e-mail.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #23**

**Output Measure**

- ABM 5: Websites (number of Websites).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #24**

**Output Measure**

- ABM 6: Websites (number of hits).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #25**

**Output Measure**

- ABM 7: Press/News Release or Column (number submitted).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #26**

**Output Measure**

- ABM 3: Community Coalitions, Collaborations, Alliances Formed to Address a Specific Issue [list specific groups/issue].

<b>Year</b>	<b>Actual</b>
2014	0

**Output #27**

**Output Measure**

- ABM 9: Peer Reviewed Publications, including Fact Sheets & Curricula.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #28**

**Output Measure**

- ABM 8: External Grant Dollars.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #29**

**Output Measure**

- LR 2) Trainings for Volunteers.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #30**

**Output Measure**

- LR 5) Direct Communication/Education by telephone and/or e-mail.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #31**

**Output Measure**

- LR 11) External Grant Dollars.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #32**

**Output Measure**

- LR 13) Emergency/Disaster Response. (one-on-one).

<b>Year</b>	<b>Actual</b>
2014	0



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	SAM 1.1a)- Water-related - Small acreage landowners report implementation of water-related conservation practices (such as having their septic system checked/pumped, well water tested, excluding livestock from a stream, drought tolerant landscaping, or increasing irrigation efficiency).
2	SAM 2.1a) - Animals, livestock, wildlife - Small acreage landowners report implementation of animal/wildlife-related conservation practices (such as improved manure management, livestock emergency preparedness, attracting pollinators or other desired wildlife, or deterring unwanted wildlife).
3	SAM 3.1a)- Soils - Small acreage landowners report implementation of soil-related conservation practices (such as composting and soil testing).
4	SAM 4.1a) - Plant-related - Small acreage landowners report implementation of plant-related conservation practices (such as active weed management, pasture management techniques, grass stand establishment, planting windbreaks, and active forest management).
5	ABM 1.1: Participants intend to develop formal plans regarding the succession of their farms and ranches.
6	ABM 2.1: Participants intend to investigate strategies for increasing the profitability, including changing enterprise mixes, leasing, and use of crop insurance.
7	ABM 2.2: Participants intend to implement management strategies for making more informed decisions to sustain profitability and/or manage risk.
8	ABM 2.3: Participants will apply leasing principles and increase their use of written, appropriate, and equitable lease arrangements.
9	ABM 2.4: Participants will access new direct markets for their agricultural products and services.
10	LR 1.1: Producers use rangeland monitoring documentation.
11	LR 1.2: Adult and youth livestock producers gain proficiency in producing profitable animal products.
12	ABM 1.2: Participants have improved intra-family communications.
13	LR 1.2.a: Livestock producers, adult and youth will report an increased use of animal quality assurance practices and techniques.

**Outcome #1**

**1. Outcome Measures**

SAM 1.1a)- Water-related - Small acreage landowners report implementation of water-related conservation practices (such as having their septic system checked/pumped, well water tested, excluding livestock from a stream, drought tolerant landscaping, or increasing irrigation efficiency).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #2**

**1. Outcome Measures**

SAM 2.1a) - Animals, livestock, wildlife - Small acreage landowners report implementation of animal/wildlife-related conservation practices (such as improved manure management, livestock emergency preparedness, attracting pollinators or other desired wildlife, or deterring unwanted wildlife).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #3**

**1. Outcome Measures**

SAM 3.1a)- Soils - Small acreage landowners report implementation of soil-related conservation practices (such as composting and soil testing).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #4**

**1. Outcome Measures**

SAM 4.1a) - Plant-related - Small acreage landowners report implementation of plant-related conservation practices (such as active weed management, pasture management techniques, grass stand establishment, planting windbreaks, and active forest management).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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{No Data}	null
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**Outcome #5**

**1. Outcome Measures**

ABM 1.1: Participants intend to develop formal plans regarding the succession of their farms and ranches.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**  
{No Data}    null

**Outcome #6**

**1. Outcome Measures**

ABM 2.1: Participants intend to investigate strategies for increasing the profitability, including changing enterprise mixes, leasing, and use of crop insurance.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**  
{No Data}    null

**Outcome #7**

**1. Outcome Measures**

ABM 2.2: Participants intend to implement management strategies for making more informed decisions to sustain profitability and/or manage risk.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #8**

**1. Outcome Measures**

ABM 2.3: Participants will apply leasing principles and increase their use of written, appropriate, and equitable lease arrangements.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #9**

**1. Outcome Measures**

ABM 2.4: Participants will access new direct markets for their agricultural products and services.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------



2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #10**

**1. Outcome Measures**

LR 1.1: Producers use rangeland monitoring documentation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**Outcome #11**

**1. Outcome Measures**

LR 1.2: Adult and youth livestock producers gain proficiency in producing profitable animal products.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

## **Outcome #12**

### **1. Outcome Measures**

ABM 1.2: Participants have improved intra-family communications.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

{No Data Entered}

#### **What has been done**

{No Data Entered}

#### **Results**

{No Data Entered}

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

## **Outcome #13**

### **1. Outcome Measures**

LR 1.2.a: Livestock producers, adult and youth will report an increased use of animal quality assurance practices and techniques.

### **2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

{No Data Entered}

**V(I). Planned Program (Evaluation Studies)**

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

**V(A). Planned Program (Summary)**

**Program # 5**

**1. Name of the Planned Program**

Plant Production Systems

Reporting on this Program

Reason for not reporting

Planning & Reporting Units restructured. See data in Cropping Systems.

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	15.0	0.0	26.0	0.0
<b>Actual Paid</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Volunteer</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

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

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

- Conduct basic and applied research in plant productions systems.
- Workshops and educational classes for producers.
- Utilize demonstration plots and field days to communicate program results.

- Use individual counseling with producers and clientele on specific plant production problems.

**2. Brief description of the target audience**

Individual agricultural producers, homeowners, agribusinesses, and commodity organizations.

**3. How was eXtension used?**

{No Data Entered}

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

**Patent Applications Submitted**

Year: 2014

Actual: {No Data Entered}

**Patents listed**

{No Data Entered}

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
Actual	3	15	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- PM 14) New Technologies Expected to be Adopted by Producers

Year	Actual
2014	0

**Output #2**

**Output Measure**

- PM 2) Pest diagnostics in field, urban, office, individual settings.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #3**

**Output Measure**

- PM 3) Trainings/Classes/Workshops, Field Days, Activity Days.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #4**

**Output Measure**

- PM 4) Trainings for Volunteers.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #5**

**Output Measure**

- PM 5) Trainings for Extension Staff.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #6**

**Output Measure**

- PM 6) Community Meetings Convened [examples: Advisory Groups, Councils, Coalition Meetings, Boards].

<b>Year</b>	<b>Actual</b>
2014	0

**Output #7**

**Output Measure**

- PM 7) Direct Communication/Education by field call, telephone and/or e-mail.

<b>Year</b>	<b>Actual</b>
-------------	---------------



2014 0

**Output #8**

**Output Measure**

- PM 8) Newsletters (This is number of newsletters, not number mailed or number of Coloradans who received them.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #9**

**Output Measure**

- PM 9) Websites (number of Websites)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #10**

**Output Measure**

- PM 10) Websites (number of hits).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #11**

**Output Measure**

- PM 11) Press/News Releases or Columns (number submitted).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #12**

**Output Measure**

- PM 12) Volunteers (total) in Planned Program.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #13**

**Output Measure**

- PM 13) Certified Master Volunteers (of those in #12).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #14**

**Output Measure**

- PM 15) External Grant Dollars and User Fee Dollars in support of relevant Extension and outreach project and activity.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #15**

**Output Measure**

- SFSC 1) Trainings/Classes/Workshops, Field Days, Activity Days.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #16**

**Output Measure**

- SFSC 2) Direct Communication/Education by telephone and/or e-mail.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #17**

**Output Measure**

- WOCS 1) Trainings/Classes/Workshops, Field Days, Activity Days.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #18**

**Output Measure**

- WOCS 10) Press/News Release or Column (number submitted)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #19**

**Output Measure**

- WOCS 11) Volunteers (total) in Planned Program

<b>Year</b>	<b>Actual</b>
2014	0

**Output #20**

**Output Measure**

- WOCS 12) New Technologies Expected to be Adopted by Producers

<b>Year</b>	<b>Actual</b>
2014	0

**Output #21**

**Output Measure**

- WOCS 13) External Grant Dollars

<b>Year</b>	<b>Actual</b>
2014	0

**Output #22**

**Output Measure**

- WOCS 14) User Fees

<b>Year</b>	<b>Actual</b>
2014	0

**Output #23**

**Output Measure**

- WOCS 3) Websites (number of hits).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #24**

**Output Measure**

- WOCS 2) Community Coalitions, Collaborations, Alliances Formed to Address a Specific Issue.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #25**

**Output Measure**

- WOCS 6) Direct contact (one-on-one and group) with producers.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #26**

**Output Measure**

- WOCS 7) Newsletters (This is number of newsletters, not number mailed or number of Coloradans who received them.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #27**

**Output Measure**

- WOCS 8) Websites (number of Websites, not number of hits)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #28**

**Output Measure**

- PM 1) News Releases sharing Applied Research & Demonstration Progress in support of relevant extension and outreach project and activity.

<b>Year</b>	<b>Actual</b>
2014	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Economic impact of the change in behavior reported.
2	Adoption of improved wheat cultivars.
3	PM 1.1 a: Participants will improve or intend to improve their practices, decisions and skills in action through timely access to pest management resources and/or pest identification and IPM implementation.
4	WOCS 1.1: % wheat (or other crop) acres planted to CSU and other recently released improved varieties.
5	WOCS 1.2: % of field crop acreage under crop and soil management systems that result in an enhancement of soil health and crop productivity (includes but is not limited to no-till or conservation tillage practices)
6	WOCS 1.3: % of producers using new marketing and/or management techniques for enhancing enterprise efficiency and optimizing net profits
7	WOCS 1.4: % of producers using research based nutrient management practices for cropping systems
8	WOCS 1.5: % of producers using research based integrated pest management practices for field crops
9	WOCS 2.1: % of farmed acreage planted to diversified cropping systems.
10	WOCS 2.2: % of farmed acreage managed with research based best management practices for water use crop efficiency
11	Adoption of crop production technology as measured by agricultural statistics
12	SFSC 1.1) Participants intend to adopt or have adopted soil management practices that will increase soil health/quality (carbon, biology, structure, etc.)
13	SFSC 1.2) Participants intend to adopt or have adopted soil fertility/plant nutrient best management practices.
14	SFSC 1.3) Participants intend to implement or have implemented more efficient methods of irrigation and soil moisture management.
15	SFSC 1.4) Participants have implemented strategies for improving crop yield and quality, and/or livestock product output and quality.
16	SFSC 2.1) Participants develop and use business, marketing and production plans.
17	SFSC 2.2) Participants use a record-keeping system for financial and production records.

18	SFSC 2.3) Participants intend to adopt or have adopted risk management strategies for ag business management.
19	SFSC 2.4) Participants have accessed resources, information and networks to improve their production enterprises.

**Outcome #1**

**1. Outcome Measures**

Economic impact of the change in behavior reported.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

## **Outcome #2**

### **1. Outcome Measures**

Adoption of improved wheat cultivars.

### **2. Associated Institution Types**

- 1862 Extension
- 1862 Research

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

{No Data Entered}

#### **What has been done**

{No Data Entered}

#### **Results**

{No Data Entered}

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

## **Outcome #3**

### **1. Outcome Measures**

PM 1.1 a: Participants will improve or intend to improve their practices, decisions and skills in action through timely access to pest management resources and/or pest identification and IPM implementation.

## 2. Associated Institution Types

- 1862 Extension

### 3a. Outcome Type:

Change in Action Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2014	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

{No Data Entered}

#### What has been done

{No Data Entered}

#### Results

{No Data Entered}

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

### Outcome #4

#### 1. Outcome Measures

WOCS 1.1: % wheat (or other crop) acres planted to CSU and other recently released improved varieties.

#### 2. Associated Institution Types

- 1862 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure



**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #5**

**1. Outcome Measures**

WOCS 1.2: % of field crop acreage under crop and soil management systems that result in an enhancement of soil health and crop productivity (includes but is not limited to no-till or conservation tillage practices)

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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{No Data}	null
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**Outcome #6**

**1. Outcome Measures**

WOCS 1.3: % of producers using new marketing and/or management techniques for enhancing enterprise efficiency and optimizing net profits

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**  
{No Data}    null

**Outcome #7**

**1. Outcome Measures**

WOCS 1.4: % of producers using research based nutrient management practices for cropping systems

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**  
{No Data}    null

**Outcome #8**

**1. Outcome Measures**

WOCS 1.5: % of producers using research based integrated pest management practices for field crops

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #9**

**1. Outcome Measures**

WOCS 2.1: % of farmed acreage planted to diversified cropping systems.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #10**

**1. Outcome Measures**

WOCS 2.2: % of farmed acreage managed with research based best management practices for water use crop efficiency

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #11**

**1. Outcome Measures**

Adoption of crop production technology as measured by agricultural statistics

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #12**

**1. Outcome Measures**

SFSC 1.1) Participants intend to adopt or have adopted soil management practices that will increase soil health/quality (carbon, biology, structure, etc.)

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #13**

**1. Outcome Measures**

SFSC 1.2) Participants intend to adopt or have adopted soil fertility/plant nutrient best management practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #14**

**1. Outcome Measures**

SFSC 1.3) Participants intend to implement or have implemented more efficient methods of irrigation and soil moisture management.

**2. Associated Institution Types**



- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #15**

**1. Outcome Measures**

SFSC 1.4) Participants have implemented strategies for improving crop yield and quality, and/or livestock product output and quality.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

### 3c. Qualitative Outcome or Impact Statement

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

### 4. Associated Knowledge Areas

**KA Code Knowledge Area**

{No Data} null

### Outcome #16

#### 1. Outcome Measures

SFSC 2.1) Participants develop and use business, marketing and production plans.

#### 2. Associated Institution Types

- 1862 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Actual
2014	0

#### 3c. Qualitative Outcome or Impact Statement

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #17**

**1. Outcome Measures**

SFSC 2.2) Participants use a record-keeping system for financial and production records.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #18**

**1. Outcome Measures**

SFSC 2.3) Participants intend to adopt or have adopted risk management strategies for ag business management.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #19**

**1. Outcome Measures**

SFSC 2.4) Participants have accessed resources, information and networks to improve their production enterprises.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

{No Data Entered}

**V(I). Planned Program (Evaluation Studies)**

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

**V(A). Planned Program (Summary)**

**Program # 6**

**1. Name of the Planned Program**

Natural Resources and Environment

- Reporting on this Program
  - Reason for not reporting
    - Planning & Reporting Units restructured - see data in Natural Resources

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	30.0	0.0	11.0	0.0
<b>Actual Paid</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Volunteer</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

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

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

- Conduct basic and applied research on environmental and natural resources issues.

- CMG EDUCATION Total hours of Continuing Education reported by all CMG volunteers
  - CMG EDUCATION Number of Extension staff (agents, specialists, CMG program assistants) days spent HOSTING or FACILITATING CMG education
  - CMG EDUCATION Number of Extension staff (agents, specialists, CMG program assistants) days spent on CURRICULUM DEVELOPMENT and producing other educational products (websites, etc.) for the CMG program
  - CMG EDUCATION Number of Extension staff (agents, specialists, CMG program assistants) days spent TEACHING CMG volunteers (basic and continuing education)
  - CMG OUTREACH One-to-one contacts at the office and in the field - including one-to-one contacts by phone, office walk-ins, diagnostic clinic at the office, e-mails, Ask an Expert questions and house calls
- VOLUNTEER HOURS**
- CMG OUTREACH Apprentice CMG volunteers: total volunteer HOURS
  - CMG OUTREACH Circulation for newspapers/print media where CMG articles are published
  - CMG OUTREACH Continuing CMG Volunteers: NUMBER
  - CMG OUTREACH Continuing CMG Volunteers: Total volunteer HOURS
  - CMG OUTREACH Emeritus, limited activity, and affiliate CMG volunteers NUMBER OF
  - CMG OUTREACH Estimate PERCENTAGE (%) of total CMG contacts that served minority or underserved (as defined for your county) clientele
  - CMG OUTREACH Food Banks - If your CMG program works with directly or indirectly with local food banks, please record the pounds of fresh produce donated.
  - CMG OUTREACH Number of Apprentice CMGs employed in the Green Industry (information found on CMG application)
  - CMG OUTREACH Number of Fact Sheets, PlantTalk and CMG GardenNotes distributed by CMG volunteers
  - CMG OUTREACH TOTAL VOLUNTEER CONTACTS for all CMG activities
  - CMG OUTREACH TOTAL VOLUNTEER HOURS for all CMG volunteer activities
  - CMG OUTREACH Newsletters - number mailed or emailed
  - CMG OUTREACH Website/BLOGS maintained by CMG volunteers - hours spent developing and in maintenance
  - CMG OUTREACH Website/BLOGS maintained by CMG volunteers - number of hits
  - CMG OUTREACH Information booths and clinics (one-to-one and small group contacts in a public setting) - including clinics at nurseries, garden shows (including Colorado Garden Show, and Home and Patio Show), farmers' markets, county fairs, state fairs, and other events where CMGs staff an informational booth. NUMBER OF CONTACTS
  - CMG OUTREACH Information booths and clinics (one-to-one and small group contacts in a public setting) - including clinics at nurseries, garden shows (including Colorado Garden Show, and Home and Patio Show), farmers' markets, county fairs, state fairs, and other events where CMGs staff an informational booth. VOLUNTEER HOURS
  - CMG OUTREACH One-to-one contacts at the office and in the field - including one-to-one contacts by phone, office walk-ins, diagnostic clinic at the office, e-mails, Ask an Expert questions and house calls
- NUMBER OF CONTACTS**
- CMG OUTREACH Classes and group presentations - including all classroom type presentations and workshops where instruction is give on a group basis. This includes classes taught by Master Gardeners, and where Master Gardeners assist as room monitors/hosts. It includes classes for general public, green industry, schools, youth groups, and Master Gardeners. (For example: Speakers bureau, ProGreen room monitors, Twilight Garden Series) NUMBER OF CONTACTS
  - CMG OUTREACH Classes and group presentations - including all classroom type presentations and workshops where instruction is give on a group basis. This includes classes taught by Master Gardeners, and where Master Gardeners assist as room monitors/hosts. It includes classes for general public, green industry, schools, youth groups, and Master Gardeners. (For example: Speakers bureau, ProGreen room monitors, Twilight Garden Series) VOLUNTEER HOURS
  - CMG OUTREACH Community Greening and Gardening Projects - including all activities where



Master Gardeners are assisting with community gardening projects, community greening projects, or other hands-on gardening activities, i.e., where the Master Gardeners is assisting in actual hands-on gardening projects. Includes demonstration gardens and research plots. (For example, Arbor Day projects, Children's Hospital Garden, community gardens, Earth Day project, Habitat for Humanity, Hudson gardens, jail gardens, Loveland youth garden project, nature centers, PERC Gardens, Praying Hands Ranch, Pueblo Zoo, school garden project, tree plantings, and Victim's Outreach garden) NUMBER OF CONTACTS

- CMG OUTREACH Community Greening and Gardening Projects - including all activities where Master Gardeners are assisting with community gardening projects, community greening projects, or other hands-on gardening activities, i.e., where the Master Gardeners is assisting in actual hands-on gardening projects. Includes demonstration gardens and research plots. (For example, Arbor Day projects, Children's Hospital Garden, community gardens, Earth Day project, Habitat for Humanity, Hudson gardens, jail gardens, Loveland youth garden project, nature centers, PERC Gardens, Praying Hands Ranch, Pueblo Zoo, school garden project, tree plantings, and Victim's Outreach garden) VOLUNTEER HOURS

- CMG OUTREACH Number of apprentice CMG volunteers
- CMG OUTREACH Number of Colorado Gardener Certificate, CGC students
- CMG OUTREACH Print Media - CMG-written newspaper, magazine, and newsletter articles

NUMBER WRITTEN

- CMG OUTREACH Print Media - CMG-written newspaper, magazine, and newsletter articles

VOLUNTEER HOURS spent developing/writing

- CMG OUTREACH Support of CMG Program - including advisory boards, CMG committee meetings (not related to specific projects) office filing and assistance, and other behind the scenes work that does not directly contact the public. VOLUNTEER HOURS

- CMG OUTREACH Support of CMG Program - including advisory boards, CMG committee meetings (not related to specific projects) office filing and assistance, and other behind the scene work that does not directly contact the public. NUMBER OF CONTACTS

- CMG OUTREACH Radio and TV - number of programs, show or appearances by CMG volunteers
- CMG OUTREACH Radio and TV - programs, show or appearances by CMG volunteers

ESTIMATED AUDIENCE

- CMG OUTREACH Radio and TV programs, show1 or appearances by CMG volunteers

VOLUNTEER HOURS SPENT

- CMG VOLUNTEER MGT Agent/specialist/program coordinator/Extension staff days spent on CMG volunteer and program management
- CMG Youth - All outreach activities specifically targeting a youth audience NUMBER OF CMG

VOLUNTEERS INVOLVED IN YOUTH PROJECTS

- CMG Youth - All outreach activities specifically targeting a youth audience NUMBER OF YOUTH CONTACTS

- CMG Youth - All outreach activities specifically targeting a youth audience VOLUNTEER HOURS DEVOTED TO YOUTH PROJECTS

- CMG Youth - Number of youth gardening projects that received assistance from CMG volunteers (including 4-H, K-12 and any other youth programs/organizations)

- HORT FM - Farmers' Market administration - agent hours
- HORT FM - Farmers' Market administration - FM coordinator and other Extension staff (hours)
- HORT FM - Farmers' Market estimated attendance
- HORT FM - Farmers' Market gross sales (\$)
- HORT FM - Farmers' Market number of participating vendors
- HORT FM - Farmers' Market-specific volunteer hours (OK if these have also been included in TOTAL CMG VOLUNTEER HOURS - don't worry about double-counting!)

- HORT Telephone, e-mail, other electronic communication
- HORT Demonstration garden management (total agent/coordinator/volunteer DAYS invested)
- HORT Demonstration gardens built/maintained (Plant Select, High and Dry, Xeriscape, etc)

NUMBER OF GARDENS

- HORT eXtension - Ask an Expert (estimated time spent responding to questions in HOURS)

- HORT Extension Fact Sheets, CMG Notes, PlantTalk Colorado scripts written; other writing for CSU Extension (number)
- HORT Newspaper, magazine, newsletter articles, blogs written (number)
- HORT Presentations, Trainings, Classes, Workshops, Webinars, Updates, Field Days given/taught (but NOT CO Master Gardener)
- HORT Presentations, Trainings, Classes, Workshops, Webinars, Updates, Field Days given/taught (but NOT CO Master Gardener) including participation and planning in events that are partnerships such as symposiums, conferences, garden walks, etc.
- HORT User fees generated (Lawncheck, Tree Team, other fee generation/income) DOLLARS GENERATED
- HORT Websites, blogs developed and maintained - number of hits
- HORT Websites, blogs maintained (number)
- NPE-1 No. of NPM Certification Courses (1 course = 3 sessions totaling approx 12.5 contact hrs.)
- NPE-10 External Grant Dollars
- NPE-11 User Fees (gross \$ collected from NPM courses and classes, material sales etc.)
- NPE-12 No. of Agencies Partnering/Collaborating
- WR 1) Trainings/Classes/Workshops, Field Days, Activity Days

**2. Brief description of the target audience**

Individual agricultural producers, landowners, commodity groups, regulatory agencies, agribusinesses, and local, state, and federal land management agencies.

**3. How was eXtension used?**

{No Data Entered}

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	0	0	0	0

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

**Patent Applications Submitted**

Year: 2014

Actual: {No Data Entered}

**Patents listed**

{No Data Entered}

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2014</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Actual</b>	45	25	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- CMG OUTREACH: Apprentice CMG volunteers: Total volunteer HOURS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #2**

**Output Measure**

- CMG OUTREACH: Continuing CMG Volunteers: NUMBER

<b>Year</b>	<b>Actual</b>
2014	0

**Output #3**

**Output Measure**

- CMG OUTREACH: Continuing CMG Volunteers: Total volunteer HOURS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #4**

**Output Measure**

- CMG OUTREACH: Emeritus, limited activity, and affiliate CMG volunteers NUMBER OF

<b>Year</b>	<b>Actual</b>
2014	0

**Output #5**

**Output Measure**

- CMG OUTREACH: Estimate PERCENTAGE (%) of total CMG contacts that served minority or underserved (as defined for your county) clientele

<b>Year</b>	<b>Actual</b>
2014	0

**Output #6**

**Output Measure**

- CMG OUTREACH: Food Banks -- If your CMG program works with directly or indirectly with local food banks, please record the pounds of fresh produce donated.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #7**

**Output Measure**

- CMG EDUCATION: Total hours of Continuing Education reported by all CMG volunteers

<b>Year</b>	<b>Actual</b>
2014	0

**Output #8**

**Output Measure**

- CMG EDUCATION: Number of Extension staff (agents, specialists, CMG program assistants) days spent HOSTING or FACILITATING CMG education

<b>Year</b>	<b>Actual</b>
2014	0

**Output #9**

**Output Measure**

- CMG EDUCATION: Number of Extension staff (agents, specialists, CMG program assistants) days spent on CURRICULUM DEVELOPMENT and producing other educational products (websites, etc.) for the CMG program

<b>Year</b>	<b>Actual</b>
2014	0

**Output #10**

**Output Measure**

- CMG EDUCATION: Number of Extension staff (agents, specialists, CMG program assistants) days spent TEACHING CMG volunteers (basic and continuing education)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #11**

**Output Measure**

- CMG OUTREACH: One-to-one contacts at the office and in the field including one-to-one

contacts by phone, office walk-ins, diagnostic clinic at the office, e-mails, Ask an Expert questions and house calls VOLUNTEER HOURS

Year	Actual
2014	0

**Output #12**

**Output Measure**

- CMG OUTREACH: Number of Apprentice CMGs employed in the Green Industry (information found on CMG application)

Year	Actual
2014	0

**Output #13**

**Output Measure**

- CMG OUTREACH: Number of Fact Sheets, PlantTalk and CMG GardenNotes distributed by CMG volunteers

Year	Actual
2014	0

**Output #14**

**Output Measure**

- CMG OUTREACH: TOTAL VOLUNTEER CONTACTS for all CMG activities

Year	Actual
2014	0

**Output #15**

**Output Measure**

- CMG OUTREACH: TOTAL VOLUNTEER HOURS for all CMG volunteer activities

Year	Actual
2014	0

**Output #16**

**Output Measure**

- CMG OUTREACH: Newsletters, number mailed or emailed

Year	Actual
2014	0

**Output #17**

**Output Measure**

- CMG OUTREACH: Website/BLOGS maintained by CMG volunteers, hours spent developing and in maintenance

<b>Year</b>	<b>Actual</b>
2014	0

**Output #18**

**Output Measure**

- CMG OUTREACH: Website/BLOGS maintained by CMG volunteers, number of hits

<b>Year</b>	<b>Actual</b>
2014	0

**Output #19**

**Output Measure**

- CMG OUTREACH: Information booths and clinics (one-to-one and small group contacts in a public setting) including clinics at nurseries, garden shows (including Colorado Garden Show, and Home and Patio Show), farmers markets, county fairs, state fairs, and other events where CMGs staff an informational booth. NUMBER OF CONTACTS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #20**

**Output Measure**

- CMG OUTREACH: Information booths and clinics (one-to-one and small group contacts in a public setting) including clinics at nurseries, garden shows (including Colorado Garden Show, and Home and Patio Show), farmers markets, county fairs, state fairs, and other events where CMGs staff an informational booth. VOLUNTEER HOURS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #21**

**Output Measure**

- CMG OUTREACH: One-to-one contacts at the office and in the field including one-to-one contacts by phone, office walk-ins, diagnostic clinic at the office, e-mails, Ask an Expert questions and house calls NUMBER OF CONTACTS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #22**

**Output Measure**

- CMG OUTREACH: Classes and group presentations including all classroom type presentations and workshops where instruction is give on a group basis. This includes classes taught by Master Gardeners, and where Master Gardeners assist as room monitors/hosts. It includes classes for general public, green industry, schools, youth groups, and Master Gardeners. (For example: Speakers bureau, ProGreen room monitors, Twilight Garden Series) NUMBER OF CONTACTS

Year	Actual
2014	0

**Output #23**

**Output Measure**

- CMG OUTREACH: Classes and group presentations including all classroom type presentations and workshops where instruction is give on a group basis. This includes classes taught by Master Gardeners, and where Master Gardeners assist as room monitors/hosts. It includes classes for general public, green industry, schools, youth groups, and Master Gardeners. (For example: Speakers bureau, ProGreen room monitors, Twilight Garden Series) VOLUNTEER HOURS

Year	Actual
2014	0

**Output #24**

**Output Measure**

- CMG OUTREACH: Community Greening and Gardening Projects including all activities where Master Gardeners are assisting with community gardening projects, community greening projects, or other hands-on gardening activities, i.e., where the Master Gardeners is assisting in actual hands-on gardening projects. Includes demonstration gardens and research plots. (For example, Arbor Day projects, Children's Hospital Garden, community gardens, Earth Day project, Habitat for Humanity, Hudson gardens, jail gardens, Loveland youth garden project, nature centers, PERC Gardens, Praying Hands Ranch, Pueblo Zoo, school garden project, tree plantings, and Victims' Outreach garden) NUMBER OF CONTACTS

Year	Actual
2014	0

**Output #25**

**Output Measure**

- CMG OUTREACH: Community Greening and Gardening Projects including all activities where Master Gardeners are assisting with community gardening projects, community greening projects, or other hands-on gardening activities, i.e., where the Master Gardeners is assisting in actual hands-on gardening projects. Includes demonstration gardens and research plots. (For example, Arbor Day projects, Children's Hospital Garden, community gardens, Earth Day project, Habitat for Humanity, Hudson gardens, jail gardens, Loveland youth garden project,

nature centers, PERC Gardens, Praying Hands Ranch, Pueblo Zoo, school garden project, tree plantings, and Victims' Outreach garden) VOLUNTEER HOURS

Year	Actual
2014	0

**Output #26**

**Output Measure**

- CMG OUTREACH: Number of apprentice CMG volunteers

Year	Actual
2014	0

**Output #27**

**Output Measure**

- CMG OUTREACH: Number of Colorado Gardener Certificate, CGC students

Year	Actual
2014	0

**Output #28**

**Output Measure**

- CMG OUTREACH: Print Media - CMG-written newspaper, magazine, and newsletter articles  
NUMBER WRITTEN

Year	Actual
2014	0

**Output #29**

**Output Measure**

- CMG OUTREACH: Print Media - CMG-written newspaper, magazine, and newsletter articles  
VOLUNTEER HOURS spent developing/writing

Year	Actual
2014	0

**Output #30**

**Output Measure**

- CMG OUTREACH: Support of CMG Program - including advisory boards, CMG committee meetings (not related to specific projects) office filing and assistance, and other behind the scenes work that does not directly contact the public. VOLUNTEER HOURS

Year	Actual
2014	0



**Output #31**

**Output Measure**

- CMG OUTREACH: Support of CMG Program including advisory boards, CMG committee meetings (not related to specific projects) office filing and assistance, and other behind the scene work that does not directly contact the public. NUMBER OF CONTACTS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #32**

**Output Measure**

- CMG OUTREACH: Radio and TV - number of programs, show or appearances by CMG volunteers

<b>Year</b>	<b>Actual</b>
2014	0

**Output #33**

**Output Measure**

- CMG OUTREACH: Radio and TV - programs, show or appearances by CMG volunteers ESTIMATED AUDIENCE

<b>Year</b>	<b>Actual</b>
2014	0

**Output #34**

**Output Measure**

- CMG OUTREACH: Radio and TV programs, show1 or appearances by CMG volunteers VOLUNTEER HOURS SPENT

<b>Year</b>	<b>Actual</b>
2014	0

**Output #35**

**Output Measure**

- CMG VOLUNTEER MGT: Agent/specialist/program coordinator/Extension staff days spent on CMG volunteer and program management

<b>Year</b>	<b>Actual</b>
2014	0

**Output #36**

**Output Measure**

- CMG Youth: All outreach activities specifically targeting a youth audience NUMBER OF CMG VOLUNTEERS INVOLVED IN YOUTH PROJECTS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #37**

**Output Measure**

- CMG Youth: All outreach activities specifically targeting a youth audience NUMBER OF YOUTH CONTACTS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #38**

**Output Measure**

- CMG Youth: All outreach activities specifically targeting a youth audience VOLUNTEER HOURS DEVOTED TO YOUTH PROJECTS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #39**

**Output Measure**

- CMG Youth: Number of youth gardening projects that received assistance from CMG volunteers (including 4-H, K-12 and any other youth programs/organizations)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #40**

**Output Measure**

- HORT FM: Farmers Market administration, agent hours

<b>Year</b>	<b>Actual</b>
2014	0

**Output #41**

**Output Measure**

- HORT FM: Farmers Market administration, FM coordinator and other Extension staff (hours)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #42**

**Output Measure**

- HORT FM: Farmers Market estimated attendance

<b>Year</b>	<b>Actual</b>
2014	0

**Output #43**

**Output Measure**

- HORT FM: Farmers Market gross sales (\$)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #44**

**Output Measure**

- HORT FM: Farmers Market number of participating vendors

<b>Year</b>	<b>Actual</b>
2014	0

**Output #45**

**Output Measure**

- HORT FM: Farmers Market-specific volunteer hours (OK if these have also been included in TOTAL CMG VOLUNTEER HOURS, don't worry about double-counting)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #46**

**Output Measure**

- HORT: Telephone, e-mail, other electronic communication

<b>Year</b>	<b>Actual</b>
2014	0

**Output #47**

**Output Measure**

- HORT: Demonstration garden management (total agent/coordinator/volunteer DAYS invested)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #48**

**Output Measure**

- HORT: Demonstration gardens built/maintained (Plant Select, High and Dry, Xeriscape, etc.)  
NUMBER OF GARDENS

<b>Year</b>	<b>Actual</b>
2014	0

**Output #49**

**Output Measure**

- HORT: eXtension, Ask an Expert (estimated time spent responding to questions in HOURS)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #50**

**Output Measure**

- HORT: Extension Fact Sheets, CMG Notes, PlantTalk Colorado scripts written; other writing for CSU Extension (number)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #51**

**Output Measure**

- HORT Newspaper, magazine, newsletter articles, blogs written (number)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #52**

**Output Measure**

- HORT: Presentations, Trainings, Classes, Workshops, Webinars, Updates, Field Days given/taught (but NOT CO Master Gardener)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #53**

**Output Measure**

- HORT: Presentations, Trainings, Classes, Workshops, Webinars, Updates, Field Days given/taught (but NOT CO Master Gardener) including participation and planning in events that are partnerships such a symposiums, conferences, garden walks, etc.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #54**

**Output Measure**

- HORT: User fees generated (Lawncheck, Tree Team, other fee generation/income) DOLLARS GENERATED

<b>Year</b>	<b>Actual</b>
2014	0

**Output #55**

**Output Measure**

- HORT: Websites, blogs developed and maintained, number of hits

<b>Year</b>	<b>Actual</b>
2014	0

**Output #56**

**Output Measure**

- HORT: Websites, blogs maintained (number)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #57**

**Output Measure**

- NPE-1: Number of NPM Certification Courses (1 course = 3 sessions totaling approx. 12.5 contact hrs.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #58**

**Output Measure**

- NPE-10: External Grant Dollars

<b>Year</b>	<b>Actual</b>
2014	0

**Output #59**

**Output Measure**

- NPE-11: User Fees (gross \$ collected from NPM courses and classes, material sales etc.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #60**

**Output Measure**

- NPE-12: No. of Agencies Partnering/Collaborating (specify)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #61**

**Output Measure**

- NPE-13: No. of Newsletters (This is no. of newsletters, not number mailed or number of Coloradoans who received them.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #62**

**Output Measure**

- NPE-14: No. of locally hosted Websites in support of this Plan of Work (enter no. of hits as participants.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #63**

**Output Measure**

- NPE-15: Number of NPM media-related items published or aired that are educational in nature such as newspaper articles, blogs, radio or television interviews. (This is the no. of publications etc., not the circulation, listenership or viewership.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #64**

**Output Measure**

- NPE-2: No. of NPM Special Classes (such as basic botany, native plant landscaping, weed management etc. that support NPM courses)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #65**

**Output Measure**

- NPE-3: No. of Trainings for NPM Volunteers

<b>Year</b>	<b>Actual</b>
2014	0

**Output #66**

**Output Measure**

- NPE-4: No. of Trainings for Extension Staff

<b>Year</b>	<b>Actual</b>
2014	0

**Output #67**

**Output Measure**

- NPE-5: No. of NPM Volunteers (total)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #68**

**Output Measure**

- NPE-6: No. of Certified Native Plant Master Volunteers in good standing (of those above in #5)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #69**

**Output Measure**

- NPE-7: No. of Volunteer Trainers that teach NPM courses/classes to public (of those above in #5)

<b>Year</b>	<b>Actual</b>
-------------	---------------

2014 0

**Output #70**

**Output Measure**

- NPE-8: No. of Adult Educational Contacts made by Volunteers/Agents

<b>Year</b>	<b>Actual</b>
2014	0

**Output #71**

**Output Measure**

- NPE-9: No. of Youth Educational Contacts made by Volunteers/Agents

<b>Year</b>	<b>Actual</b>
2014	0

**Output #72**

**Output Measure**

- NPE-C No. of Trainings for NPM Volunteers.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #73**

**Output Measure**

- WR 1) Trainings/Classes/Workshops, Field Days, Activity Days

<b>Year</b>	<b>Actual</b>
2014	0

**Output #74**

**Output Measure**

- WR 2) Trainings for Extension Staff

<b>Year</b>	<b>Actual</b>
2014	0

**Output #75**

**Output Measure**

- WR 3) Community Meetings Convened [examples: Advisory Groups, Councils, Coalition Meetings, Boards]



<b>Year</b>	<b>Actual</b>
2014	0

**Output #76**

**Output Measure**

- WR 4) Community Meetings Facilitated [examples: Focus Group, Citizen Forum, Round Table Dialogue, Strategic Planning Process]

<b>Year</b>	<b>Actual</b>
2014	0

**Output #77**

**Output Measure**

- WR 5) Direct Communication/Education by telephone and/or e-mail

<b>Year</b>	<b>Actual</b>
2014	0

**Output #78**

**Output Measure**

- WR 6) Newsletters (This is number of newsletters, not number mailed or number of Coloradoans who received them.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #79**

**Output Measure**

- WR 7) Websites (number of Websites)Can include :Water Quality Interpretation Tool, Anaerobic digestion, decision, Other sites.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #80**

**Output Measure**

- WR 8) Websites (number of hits) Could include: Water-related fact sheets, Other sites.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #81**

**Output Measure**

- WR 9) Press/News Release or Column (number submitted)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #82**

**Output Measure**

- NPE-J External Grant Dollars.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #83**

**Output Measure**

- NPE-L Number of Agencies Partnering/Collaborating.

<b>Year</b>	<b>Actual</b>
2014	0

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	HORT Home gardeners and green industry professionals report enhanced plant health and more efficient use of labor, water, fertilizer and pesticides when creating and maintaining landscapes
2	NPE 1.1a: Number of land managers and residents who asked for native plants at a local garden center or by mail order.
3	NPE 1.1b: Number of land managers and residents who began or increased planting of natives in a sustainable landscape.
4	NPE 1.2a: Number of land managers and residents who began or increased weed control efforts.
5	NPE 1.1c: Number of acres impacted by planting of natives in a sustainable landscape
6	NPE 1.2b: Number of acres impacted by alien weed control efforts.
7	NPE 1.3a: Number of land managers and residents who left wild native plants to produce seed rather than collecting or picking wildflowers.
8	NPE 1.3b: Number of land managers and residents who stayed on trails to prevent erosion and damage to native plants.
9	NPE 2.1a: Dollar amount saved by residents from their planting of natives in a sustainable landscape.
10	NPE 2.1b: Dollar amount saved by land managers and residents from control of alien weeds.
11	NPE 2.1c: Number of land managers and residents who retained their current job, got a promotion or got a new job as a result of their program participation.
12	WR 1.1) Number of participants reporting they Perform water quality sampling and analysis in a manner meaningful to the user and regulating agencies.
13	WR 1.2) Adoption of technology and Best Management Practices (BMPs) that prevent and mitigate the effects of point-source and/or non-point source water pollution.
14	WR 2.1) Adoption of tools, technology, and practices that foster conservation of water or optimization of water use in agriculture settings.

**Outcome #1**

**1. Outcome Measures**

HORT Home gardeners and green industry professionals report enhanced plant health and more efficient use of labor, water, fertilizer and pesticides when creating and maintaining landscapes

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #2**

**1. Outcome Measures**

NPE 1.1a: Number of land managers and residents who asked for native plants at a local garden center or by mail order.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #3**

**1. Outcome Measures**

NPE 1.1b: Number of land managers and residents who began or increased planting of natives in a sustainable landscape.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #4**

**1. Outcome Measures**

NPE 1.2a: Number of land managers and residents who began or increased weed control efforts.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #5**

**1. Outcome Measures**

NPE 1.1c: Number of acres impacted by planting of natives in a sustainable landscape

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #6**

**1. Outcome Measures**

NPE 1.2b: Number of acres impacted by alien weed control efforts.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #7**

**1. Outcome Measures**

NPE 1.3a: Number of land managers and residents who left wild native plants to produce seed rather than collecting or picking wildflowers.

**2. Associated Institution Types**



- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #8**

**1. Outcome Measures**

NPE 1.3b: Number of land managers and residents who stayed on trails to prevent erosion and damage to native plants.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #9**

**1. Outcome Measures**

NPE 2.1a: Dollar amount saved by residents from their planting of natives in a sustainable landscape.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #10**

**1. Outcome Measures**

NPE 2.1b: Dollar amount saved by land managers and residents from control of alien weeds.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #11**

**1. Outcome Measures**

NPE 2.1c: Number of land managers and residents who retained their current job, got a promotion or got a new job as a result of their program participation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #12**

**1. Outcome Measures**

WR 1.1) Number of participants reporting they Perform water quality sampling and analysis in a manner meaningful to the user and regulating agencies.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #13**

**1. Outcome Measures**

WR 1.2) Adoption of technology and Best Management Practices (BMPs) that prevent and mitigate the effects of point-source and/or non-point source water pollution.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #14**

**1. Outcome Measures**

WR 2.1) Adoption of tools, technology, and practices that foster conservation of water or optimization of water use in agriculture settings.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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{No Data}	null
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

{No Data Entered}

**V(I). Planned Program (Evaluation Studies)**

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

**V(A). Planned Program (Summary)**

**Program # 7**

**1. Name of the Planned Program**

Community Development

- Reporting on this Program
  - Reason for not reporting
    - Planning & Reporting Units restructured - see data in Community & Economic Development

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.5	0.0	6.0	0.0
<b>Actual Paid</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Volunteer</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

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

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

- Training for Extension personnel in community mobilization, facilitation, economic development.
- Working with rural communities on a regional approach to small town tourism including making



optimal use of environmental resources, respecting the socio-cultural authenticity of host communities while conserving their built and living cultural heritage and traditional values, and ensuring viable, long-term economic operations, including stable employment and income-earning opportunities.

- Conducting basic and applied research in areas exploring the interface between agribusiness, rural development, and natural-resource-amenity-based opportunities.
- Conducting workshops and other educational activities with Extension professionals and community stakeholders.

**2. Brief description of the target audience**

Community members, general public, consumers, community organizations. The intuitive success of Extension professionals in community/economic development will be enhanced for formalized training and opportunities to accurately report these on-going efforts.

**3. How was eXtension used?**

{No Data Entered}

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	0	0	0	0

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

**Patent Applications Submitted**

Year: 2014

Actual: {No Data Entered}

**Patents listed**

{No Data Entered}

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	1	10	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- FSYS 19) Number of Agencies Partnering/Collaborating (Colorado Dept. of Ag, CO Dept. of Public Health, RealFood Colorado, LiveWell Colorado, Rocky Mountain Farmers Union, Colorado Farm Bureau, USDA Rural Development)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #2**

**Output Measure**

- Number of new technologies adopted by participants/communities.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #3**

**Output Measure**

- Number of collaborative projects implemented.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #4**

**Output Measure**

- CD 2) Number of Trainings for Volunteers (Educational Classes, Workshops, Group Discussions).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #5**

**Output Measure**

- CD 20) Number of times Presented and translated information to increase public understanding and use data more strategically.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #6**

**Output Measure**

- CD 10) Number Website hits (not number of sites)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #7**

**Output Measure**

- CD 11); FSYS 14) Number of Press/News Releases or Columns submitted

<b>Year</b>	<b>Actual</b>
2014	0

**Output #8**

**Output Measure**

- CD 12) Number of Volunteers (total) in Planned Program

<b>Year</b>	<b>Actual</b>
2014	0

**Output #9**

**Output Measure**

- CD 13); FSYS 17) External Grant Dollars

<b>Year</b>	<b>Actual</b>
2014	0

**Output #10**

**Output Measure**

- CD 14); FSYS 18) User Fees

<b>Year</b>	<b>Actual</b>
2014	0

**Output #11**

**Output Measure**

- CD 15) Number of times Providing coaching and/or individual consulting.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #12**

**Output Measure**

- CD 16) Number of web-based resources and/or learning modules developed.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #13**

**Output Measure**

- CD 17) Number of community assessments, surveys or other community analysis tools developed.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #14**

**Output Measure**

- CD 18) Number of community assessments, surveys, asset mapping and other analysis processes, including secondary data and trend analysis, conducted.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #15**

**Output Measure**

- CD 19) Number of community actions plans, developed, coordinated, and implemented.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #16**

**Output Measure**

- CD 2) Number of Trainings for Volunteers (Educational Class, Workshop, Group Discussion.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #17**

**Output Measure**

- CD 21) Number of white papers, reports, summaries, etc. (not peer reviewed) developed.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #18**

**Output Measure**

- CD 3); FSYS 2) Number of Trainings for Extension Staff (Education Class, Workshop, Group

Discussion.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #19**

**Output Measure**

- CD 4); FSYS 3) Number of Community Meetings Convened [examples: Advisory Groups, Councils, Coalition Meetings, Boards].

<b>Year</b>	<b>Actual</b>
2014	0

**Output #20**

**Output Measure**

- CD 5); FSYS 4) Number of Community Meetings Facilitated [examples: Focus Group, Citizen Forum, Round Table Dialogue, Strategic Planning Process]

<b>Year</b>	<b>Actual</b>
2014	0

**Output #21**

**Output Measure**

- CD 6); FSYS 5) Number of Community Coalitions, Collaborations, Alliances Formed to Address a Specific Issue [list specific groups/issue]

<b>Year</b>	<b>Actual</b>
2014	0

**Output #22**

**Output Measure**

- CD 7); FSYS 6) Number of Direct Communications/Education by telephone and/or e-mail

<b>Year</b>	<b>Actual</b>
2014	0

**Output #23**

**Output Measure**

- CD 8); FSYS 11) Number of Newsletters (This is number of newsletters created and sent, not number mailed or number of Coloradans who received them.)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #24**

**Output Measure**

- CD 90; CD 9) Websites (number of Websites, not number of hits)

<b>Year</b>	<b>Actual</b>
2014	0

**Output #25**

**Output Measure**

- FSYS 1) Number Trainings/Classes/Workshops, Field Days, Activity Days

<b>Year</b>	<b>Actual</b>
2014	0

**Output #26**

**Output Measure**

- FSYS 10) Number of times CSU personnel led or partnered in efforts to build a stronger community and networks of those involved in more localized food systems (producers, resource providers, policy makers, input providers, marketing partners).

<b>Year</b>	<b>Actual</b>
2014	0

**Output #27**

**Output Measure**

- FSYS 7) Number of times Extension staff facilitate community discourse that includes ag producers and other food system stakeholders to improve public understanding about the food system

<b>Year</b>	<b>Actual</b>
2014	0

**Output #28**

**Output Measure**

- FSYS 8) Number of times CSU Extension provides training, publications and leads discussions on nutrition, food safety and public health implications of marketing, production and policy innovations in the food system

<b>Year</b>	<b>Actual</b>
2014	0

**Output #29**

**Output Measure**

- FSYS 9) Number of times CSU Extension personnel provide tools, publications and assistance in developing and translating applied research to food system planning activities.

<b>Year</b>	<b>Actual</b>
2014	0

**Output #30**

**Output Measure**

- CD 19) External Grant Dollars.

<b>Year</b>	<b>Actual</b>
2014	0

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	CD 1.1: The number of Communities that assess community needs, assets and available resources.
2	CD 2.6: Number of Community members participating in community decision making processes shaping natural and built environments.
3	CD 2.1: Number of Community members actively influencing the development of their communities through engagement in participatory community processes. (public issue deliberation, decision-making processes, action planning and evaluation)
4	CD 1.2: Number of Community members engaging in community and economic development, planning and action.
5	CD 1.3: Number in Communities who network and partner with others in community and economic development, planning and action (regional approach).
6	CD 1.4: Number of Communities that develop plans targeting specific interests, actions and community resources towards maintaining and growing economic base.
7	CD 1.6: Number of Entrepreneurs who are coached in development and initiation of new small business ventures.
8	CD 1.8: Number of Jobs that are created.
9	CD 2.2: Number of Community members reporting increased connections with other community residents and organizations.
10	CD 2.3: Number of Communities where plans are developed using participatory community processes.
11	CD 2.4: Number of Communities where plans are implemented following participatory community processes.
12	CD 2.5: Number of Community members who are actively involved in the development of public policy to effect positive change for a healthy and vital community.
13	CD 2.7: Number of Communities that promote diverse, healthy, and sustainable environments through community design and plans.
14	CD 3.1: Number of Communities that provide leadership development training, programs or activities.
15	CD 3.2: Number of communities in which Diversity of community leadership is increased.
16	CD 3.3: Number of Community members reporting increased connection to, and relationship with, local and state government.
17	CD 4.10: Number of Volunteer community members reporting they contribute to increased public service in their communities.



18	CD 4.12: Number of Volunteer community members reporting they increase the social, emotional, and learning skills in the audience with which they work.
19	CD 4.1: Number of Communities providing organizational development training for non-profits and community organizations in planning, decision making, management, and evaluation efforts.
20	CD 4.4: Number of Non-profits and community organizations report increased revenue generated through grant dollars.
21	CD 4.5: Number of Non-profits and community organizations increase partnerships and connections.
22	CD 4.6: Number of Non-profits and community organizations reporting increased number of volunteers involved in organization activities.
23	CD 4.8: Number of Volunteer community members reporting they foster life skill development in the youth in their communities.
24	CD 4.9: Number of Volunteer community members reporting they increased the effectiveness of Extension and other community programs.
25	FSYS 1.1) Colorado food systems stakeholders report they have increased capacity to dialogue and plan for more effective food systems
26	FSYS 1.2) Number of Food system stakeholders who report participating in more education and professional development to improve their understanding of linkages between public health and food safety and emerging food models
27	FSYS 1.3) Number of Food system stakeholders reporting they will engage CSU as a partner in determining data, research, resource partners and other program needs for assessment and strategic planning exercises related to agriculture or food.

**Outcome #1**

**1. Outcome Measures**

CD 1.1: The number of Communities that assess community needs, assets and available resources.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

#### Outcome #2

##### 1. Outcome Measures

CD 2.6: Number of Community members participating in community decision making processes shaping natural and built environments.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	0

##### 3c. Qualitative Outcome or Impact Statement

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

#### Outcome #3

##### 1. Outcome Measures

CD 2.1: Number of Community members actively influencing the development of their communities through engagement in participatory community processes. (public issue deliberation, decision-making processes, action planning and evaluation)

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	0

##### 3c. Qualitative Outcome or Impact Statement

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

**Outcome #4**

**1. Outcome Measures**

CD 1.2: Number of Community members engaging in community and economic development, planning and action.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #5**

**1. Outcome Measures**

CD 1.3: Number in Communities who network and partner with others in community and economic development, planning and action (regional approach).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #6**

**1. Outcome Measures**

CD 1.4: Number of Communities that develop plans targeting specific interests, actions and community resources towards maintaining and growing economic base.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #7**

**1. Outcome Measures**

CD 1.6: Number of Entrepreneurs who are coached in development and initiation of new small business ventures.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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{No Data}	null
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**Outcome #8**

**1. Outcome Measures**

CD 1.8: Number of Jobs that are created.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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{No Data}	null
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**Outcome #9**

**1. Outcome Measures**

CD 2.2: Number of Community members reporting increased connections with other community residents and organizations.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #10**

**1. Outcome Measures**

CD 2.3: Number of Communities where plans are developed using participatory community processes.

**2. Associated Institution Types**



- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #11**

**1. Outcome Measures**

CD 2.4: Number of Communities where plans are implemented following participatory community processes.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #12**

**1. Outcome Measures**

CD 2.5: Number of Community members who are actively involved in the development of public policy to effect positive change for a healthy and vital community.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #13**

**1. Outcome Measures**

CD 2.7: Number of Communities that promote diverse, healthy, and sustainable environments through community design and plans.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**

{No Data}    null

**Outcome #14**

**1. Outcome Measures**

CD 3.1: Number of Communities that provide leadership development training, programs or activities.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #15**

**1. Outcome Measures**

CD 3.2: Number of communities in which Diversity of community leadership is increased.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #16**

**1. Outcome Measures**

CD 3.3: Number of Community members reporting increased connection to, and relationship with, local and state government.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #17**

**1. Outcome Measures**

CD 4.10: Number of Volunteer community members reporting they contribute to increased public service in their communities.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**Outcome #18**

**1. Outcome Measures**

CD 4.12: Number of Volunteer community members reporting they increase the social, emotional, and learning skills in the audience with which they work.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**Outcome #19**

**1. Outcome Measures**

CD 4.1: Number of Communities providing organizational development training for non-profits and community organizations in planning, decision making, management, and evaluation efforts.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #20**

**1. Outcome Measures**

CD 4.4: Number of Non-profits and community organizations report increased revenue generated through grant dollars.

**2. Associated Institution Types**



- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #21**

**1. Outcome Measures**

CD 4.5: Number of Non-profits and community organizations increase partnerships and connections.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
------	--------

2014 0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code Knowledge Area**  
{No Data} null

**Outcome #22**

**1. Outcome Measures**

CD 4.6: Number of Non-profits and community organizations reporting increased number of volunteers involved in organization activities.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**Outcome #23**

**1. Outcome Measures**

CD 4.8: Number of Volunteer community members reporting they foster life skill development in the youth in their communities.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

{No Data}    null

**Outcome #24**

**1. Outcome Measures**

CD 4.9: Number of Volunteer community members reporting they increased the effectiveness of Extension and other community programs.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #25**

**1. Outcome Measures**

FSYS 1.1) Colorado food systems stakeholders report they have increased capacity to dialogue and plan for more effective food systems

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

**KA Code Knowledge Area**

{No Data} null

**Outcome #26**

**1. Outcome Measures**

FSYS 1.2) Number of Food system stakeholders who report participating in more education and professional development to improve their understanding of linkages between public health and food safety and emerging food models

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
{No Data}	null

**Outcome #27**

**1. Outcome Measures**

FSYS 1.3) Number of Food system stakeholders reporting they will engage CSU as a partner in determining data, research, resource partners and other program needs for assessment and strategic planning exercises related to agriculture or food.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

{No Data Entered}

**What has been done**

{No Data Entered}

**Results**

{No Data Entered}

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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{No Data}	null
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

{No Data Entered}

**V(I). Planned Program (Evaluation Studies)**

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

**V(A). Planned Program (Summary)**

**Program # 8**

**1. Name of the Planned Program**

Livestock & Range

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
121	Management of Range Resources	50%		10%	
213	Weeds Affecting Plants	0%		15%	
303	Genetic Improvement of Animals	0%		10%	
304	Animal Genome	0%		15%	
307	Animal Management Systems	50%		30%	
308	Improved Animal Products (Before Harvest)	0%		10%	
315	Animal Welfare/Well-Being and Protection	0%		10%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	9.7	0.0	14.5	0.0
<b>Actual Volunteer</b>	0.6	0.0	0.0	0.0

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



Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
137735	0	285107	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
137735	0	2851070	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
385490	0	1892338	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

The Livestock and Range (L&R) Reporting Unit strives for rangeland health, improved animal health and production, industry policy and regulation awareness, and economic sustainability using a broad array of methodologies that provides information, skills, and technology to producers and L&R Unit members. This PRU is designed for Extension Programming for livestock producers, ranchers, and rangeland managers who have, or are striving for, a significant portion of their personal income coming from the farm/ranch. These may be small farms/ranches or larger scale operations. Livestock producers may also integrate cropping production systems into their operation.

**2. Brief description of the target audience**

Target audiences include youth and adult livestock producers as well rangeland managers and ranchers.

**3. How was eXtension used?**

Ask an eXpert

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	57609	0	3906	2910

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2014</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Actual</b>	605	50	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

<b>Year</b>	<b>Actual</b>
2014	354

**Output #2**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	1034

**Output #3**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	97

**Output #4**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	4

**Output #5**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	23

**Output #6**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	6526

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	50478

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	LR1.1) Livestock and rangeland managers apply newly gained information, technology, or skills to improve animal health and/or animal production.
2	LR1.2) Livestock and rangeland managers apply newly gained information, technology, or skills to improve rangeland health.
3	LR1.3) Livestock and rangeland managers apply newly gained information, technology, or skills to improve economic sustainability.
4	LR1.4) Livestock and rangeland managers develop/write a management plan (i.e. grazing plan, feeding plan, drought plan, business plan, etc...).
5	LR1) Livestock and rangeland managers optimize animal health and production while maintaining/improving rangeland health and economic sustainability.
6	LR2.1) Livestock and rangeland managers apply newly gained information in their decision making process for following or developing new industry policies and regulations.
7	Reduction of low larkspur ( <i>Delphinium</i> spp.) abundance and toxicity on Colorado rangelands using targeted competition from seeded forbsColorado Foothills Rangelands
8	Management of Forages in Colorado for Improved Yield and Quality
9	National Genetic Evaluation of Beef Cattle

## **Outcome #1**

### **1. Outcome Measures**

LR1.1) Livestock and rangeland managers apply newly gained information, technology, or skills to improve animal health and/or animal production.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	660

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

In 2007, the National Ag Census ranked Colorado as 5th in the nation for value of cattle and calves (\$3.2 billion) which is over half of the total market value of agricultural products sold in Colorado. During the same period, Colorado ranked 2nd in the nation for sheep and goat sales (\$85 million). As of January 2012, there were 2.75 million cattle and calves in the state. This is an increase of 150,000 head since January of 2009. However, due primarily to drought in the state, cattle and calve numbers have dropped back to 2.6 million head, as of January of 2013. The economic contribution from cattle is greater than 3 times that of grains, oilseeds, dry beans and dry peas (\$1.0 billion). Milk cows in the state, during 2013, were estimated at 135,000 head and average milk production per cow per year is 23,430 pounds. Total milk produced for the state is estimated at 3.16 billion pounds per year. The number of sheep estimated in the state in January of 2012 was 460,000. As of December of 2011, the total estimated number of horses and pigs in the state was 720,000. Overall, rangeland and livestock are among the most important agricultural resources in the state.

#### **What has been done**

#### **Results**

660 livestock and rangeland managers reported they applied newly gained information, technology, or skills to improve animal health and/or animal production.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
307	Animal Management Systems

## **Outcome #2**

### **1. Outcome Measures**

LR1.2) Livestock and rangeland managers apply newly gained information, technology, or skills to improve rangeland health.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	60

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

There are over 30,000 farms and ranches in Colorado consisting of over 30,000,000 acres of agricultural land (land in farms and ranches), 46% of the state-s total land area of 66.3 million acres. Colorado-s agricultural industry has lost nearly 2 million acres of agricultural land over the last ten years. Agricultural land in Colorado is being converted in three primary ways: urban and built up lands, low density non-agricultural rural land, and public open lands. As we continue to lose acres of agricultural land, we also continue to have fewer days spent working on the farm or ranch. 38.5% of operators worked 200 days or more off the farm or ranch.

Agriculture land represents more than 85% of the private, undeveloped land in Colorado. Another 35%, approximately, is federally owned, of which a large percentage is leased for agricultural production.

#### **What has been done**

With PLT and WSARE funding, nine on-farm workshops were held for land managers in Delta, Larimer, Boulder, Eagle, Pitkin, Adams, Jefferson, Routt, and Montezuma Counties. The program involved cross-state and cross-agency cooperation. Partners included USDA-NRCS, local Conservation Districts, CO State Forest Service, Denver Water, and local farmers. The program highlighted successful multi-state cooperation with Steve Fransen, Extension Forage Crop Specialist from Washington State University and Glenn Shewmaker, Extension Forage Specialist from University of Idaho Twin Falls Research and Extension Center.

#### **Results**

The program above allowed for county agents to work with their communities and local partners to develop a farm tour appropriate for their location. In total, these educational workshops impacted 220 land managers. Evaluations revealed that as a result, participants expect to save a

total of \$81,400 over the next 10 years. Sixty livestock and rangeland managers reported they applied newly gained information, technology, or skills to improve rangeland health.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

### Outcome #3

#### 1. Outcome Measures

LR1.3) Livestock and rangeland managers apply newly gained information, technology, or skills to improve economic sustainability.

#### 2. Associated Institution Types

- 1862 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Actual
2014	391

#### 3c. Qualitative Outcome or Impact Statement

**Issue (Who cares and Why)**

**What has been done**

**Results**

391 livestock and rangeland managers reported they applied newly gained information, technology, or skills to improve economic sustainability.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
307	Animal Management Systems

#### **Outcome #4**

##### **1. Outcome Measures**

LR1.4) Livestock and rangeland managers develop/write a management plan (i.e. grazing plan, feeding plan, drought plan, business plan, etc...).

##### **2. Associated Institution Types**

- 1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	52

##### **3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

52 livestock and rangeland managers reported they developed/wrote a management plan (i.e. grazing plan, feeding plan, drought plan, business plan, etc...).

##### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
121	Management of Range Resources
307	Animal Management Systems

#### **Outcome #5**

##### **1. Outcome Measures**

LR1) Livestock and rangeland managers optimize animal health and production while maintaining/improving rangeland health and economic sustainability.

##### **2. Associated Institution Types**



- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	102815

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The ultimate goals of this PRU are to promote rangeland health, improved animal health and production, improved policy and regulation awareness, and economic sustainability using a broad array of methodologies that provides information, skills, and technologies to livestock producers, ranchers, and rangeland managers.

**What has been done**

Members of the Livestock and Range PRU have demonstrated expertise and recognition in areas of livestock and range research and educational efforts. This expertise spans several departments, colleges and disciplines. For example, within the Animal Science Department production expertise in cattle nutrition, reproduction, genetics and meat science are all represented. In addition, members of the work team represent veterinary medicine, rangeland science as well as agricultural economics. The team also has broad representation from both on-campus and off-campus faculty.

**Results**

102815 animals where health/production was affected/improved  
339105 acres on which rangeland health was affected/improved.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
121	Management of Range Resources
307	Animal Management Systems

**Outcome #6**

**1. Outcome Measures**

LR2.1) Livestock and rangeland managers apply newly gained information in their decision making process for following or developing new industry policies and regulations.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	104

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Agriculture is the second largest economic driver in Colorado, with more than \$7.7 billion in agricultural income receipts, according to the 2013 USDA-NASS Colorado Agriculture Overview. Yet, many Colorado residents have little to no understanding of where their food and fiber comes from or how it is produced.

**What has been done**

Twenty-seven Coloradans traveled to Washington, DC for a series of meetings related to ag policy and ag issues. While in Washington, DC we linked up with agricultural producers & professionals from Kentucky and Montana who were conducting similar meetings. In addition to the Kentucky & Montana groups, the Colorado team met with USDA-Foreign Ag Service, Environmental Protection Agency, Senator Bennet's office, Congressman Gardener's office, National Association of Wheat Growers, National Cattleman's Beef Association, Humane Society of the United States, Embassy of Ireland, American Farm Bureau Federation, Western Governor's Association, Governor Hickenlooper's DC office, National Farmer's Union, & Major General Michael Edwards.

Some of the key discussions centered around trade, "Waters of the United States", opening international markets and WIC to US potatoes, the Trans-Atlantic Free Trade Area & the Trans Pacific Partnership Free Trade Agreements, Payment in Lieu of Taxes, and GMO food labeling.

**Results**

104 livestock and rangeland managers reported they applied newly gained information in their decision making process for following or developing new industry policies and regulations.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
121	Management of Range Resources
307	Animal Management Systems

**Outcome #7**

**1. Outcome Measures**

Reduction of low larkspur (*Delphinium* spp.) abundance and toxicity on Colorado rangelands using targeted competition from seeded forbsColorado Foothills Rangelands

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Larkspurs are often considered the most damaging poisonous plants on rangelands in the western United States, and specifically in Colorado. Published accounts of livestock losses over the past 90 years are normally around 3-5%, but sometimes as high as 15% and translate into annual economic impacts of more than \$20 million to the livestock industry. Animal death is the easiest economic impact to quantify, but there are others. Larkspur may completely dictate grazing management as producers attempt to minimize or avoid livestock losses to larkspur poisoning.

**What has been done**

A variety of plots from 2011-2013 were considered in looking at applications of sprayed herbicides 2,4-D and Tordon as well as unsprayed plots to determine larkspur densities and competitive interactions among native and introduced forbs.

**Results**

Analysis completed on 2013 field data was completed and reported. Major findings include that by 2013, larkspur densities in plots sprayed with 2,4-D in June 2011 were similar to unsprayed plots. Plots treated with Tordon in June 2011 had significantly lower larkspur densities than plots treated with 2,4-D in June 2011. Larkspur canopy cover in 2013 was lower in plots sprayed with Tordon in June 2011 than unsprayed plots and plots sprayed with 2,4-D in 2011 which did not differ statistically. Considering all results, although both 2,4-D and Tordon may reduce larkspur abundance, it appears that Tordon is more effective at both reducing larkspur and minimizing unwanted damage to existing and seeded forbs.

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

- 121 Management of Range Resources
- 213 Weeds Affecting Plants
- 307 Animal Management Systems
- 308 Improved Animal Products (Before Harvest)
- 315 Animal Welfare/Well-Being and Protection

**Outcome #8**

**1. Outcome Measures**

Management of Forages in Colorado for Improved Yield and Quality

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Forages preserved as hay generally ranks as one of the top 3 field crops in terms of value of production in Colorado. In 2009, hay was the leading crop in Colorado with an estimated value of \$633 million, accounting for 31.4% of the total value from all crops. Colorado is experiencing several trends that are creating a need for additional information related to forage production and management.

**What has been done**

Side-by-side fallowing treatments of three alfalfa hayfields and six grass hayfields located on the Western Slope of Colorado. Treatments on the alfalfa sites include fully irrigated (control), stop irrigating after the first cutting, and stop irrigating after the second cutting. The grass sites include a fully irrigated treatment and a full season fallow, or nonirrigated treatment. Forage samples for both yield and quality were taken prior to each hay harvest.

**Results**

Yield reductions at the season-long fallowed grass sites (4 sites) ranged from 24% to 70% in 2013. In 2014, two additional grass sites were fallowed with yield reductions of 81% to 93% compared to the fully irrigated control. The sites fallowed in 2013 were returned to full irrigation in 2014. Yields at these sites were still 39% to 54% below those of the fully irrigated paired plots after one year of recovery. Data was taken at the Peterson Ranch site in 2012 during the drought

and again in 2014. Following 2 years of full irrigation, yields at this site were similar between the fallowed (drought affected) and fully irrigated plots indicating full recovery. Yield reductions at the alfalfa sites for the treatment where irrigation was stopped after the second cutting ranged from 0% to 54% in 2013 and 4% to 39% in 2014. For the treatment where irrigation was stopped after the first cutting, yield reductions ranged from 42% to 71% in 2013 and 55% to 82% in 2014. The complete fallow treatment, only implemented at the Yellow Jacket site in 2013, showed a 77% yield reduction. Alfalfa appears to be very conducive to partial season irrigation which provides an opportunity for hay producers to reduce consumptive water use while still maintaining partial yields in a given year and stands over time.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
213	Weeds Affecting Plants
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

#### Outcome #9

##### 1. Outcome Measures

National Genetic Evaluation of Beef Cattle

##### 2. Associated Institution Types

- 1862 Research

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	0

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Economically relevant traits (ERT) will be reviewed to identify those that represent either revenue or cost streams in all sectors of the beef industry to help with the development of new genetic evaluation and selection tools for these ERT in the form of expected progeny differences (EPD) and economic EPD indexes. The development of computational methods for national cattle evaluation for both purebred and crossbred databases to assist in performing routine genetic evaluations for beef breed associations and other producer groups.

### What has been done

In the past year, we developed a multi-breed stayability genetic evaluation for the incorporation of heterosis and founder breed effects. Heterosis values for stayability to two, three, four and five years of age were calculated. Results of this study showed that a first cross animal has an 5.4%, 9.2% 10.9% and 12.2% greater chance of remaining in the herd until 3, 4, 5 and 6 years of age, respectively.

### Results

The CSU Center for Genetic Evaluation of Livestock (CSU-CGEL) has worked to develop, improve and implement largescale genetic evaluations for various livestock populations through incorporating study results into a multi-breed stayability evaluation that included all animals in the breed association registry, regardless of breed percent.. The CSU-CGEL is the close working relationship with various beef cattle breed associations as well as individual producer groups to provide sire selection tools in the form of expected progeny differences (EPD) and corresponding accuracies for over 17 different beef cattle traits.

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
303	Genetic Improvement of Animals
304	Animal Genome
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection

## V(H). Planned Program (External Factors)

### External factors which affected outcomes

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

### Brief Explanation

Livestock and range outcomes are dependent on public policies/regulations, climate, disease outbreaks for forages and livestock, and episodic natural disasters such as drought, flooding, blizzards, and wildfire. Additionally, changes in the stock market as well as increasing input costs (e.g. fuel costs) will affect livestock and range outcomes. These external factors will be addressed when possible in education and research efforts, but their influence on outcomes is likely to continue into the future.

## V(I). Planned Program (Evaluation Studies)

## Evaluation Results

A statewide survey has been developed for all Livestock and Range PRU members to use. This survey is divided to represent the 4 quarters of the state, NE, SE, SW, NW allowing an overall summary and area-specific summary for all livestock and range programming needs. This survey also allows participants to list specific programming needs and delivery method. This survey will also allow the PRU to develop an entire statewide programming effort when needed.

## Key Items of Evaluation

Extension livestock and range team assists livestock producers to optimize animal health and production while maintaining/improving rangeland condition and economic sustainability. One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, and/or Ask an eXpert are a vital component of reaching livestock producers. Many prefer this setting as it can enhance their ability to learn, retain, and apply research based information and education.

- "I'm glad I called. That's exactly what I needed to know." -Livestock/Land Owner
- "You did a lot of good today. I'm glad you (Extension) don't mind working with people who have disabilities." -Land Owner
- "I didn't know Extension did this. I feel much better about turning my animals out to pasture." - Land/Livestock Owner

**V(A). Planned Program (Summary)**

**Program # 9**

**1. Name of the Planned Program**

Cropping Systems

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	58%		15%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		20%	
202	Plant Genetic Resources	0%		20%	
213	Weeds Affecting Plants	0%		20%	
216	Integrated Pest Management Systems	34%		25%	
601	Economics of Agricultural Production and Farm Management	8%		0%	
<b>Total</b>		100%		100%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	18.5	0.0	43.7	0.0
<b>Actual Volunteer</b>	1.7	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
261697	0	900678	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
261697	0	900678	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
673031	0	11825168	0



**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

The Cropping Systems Extension Unit strives for crop (grain, forage, vegetable, fruit, and specialty) and farm sustainability using a broad array of methodologies that provides education to producers and Team/Unit members. The concept of agricultural sustainability is multidimensional, as it applies to social, economic, and environmental dimensions simultaneously. This PRU is designed for Extension Programming for Crop & Produce producers who have, or are striving for, a significant portion of their personal income coming from the farm. These may be small farm or specialty crop producers or larger scale - primarily commodity crop - producers. They may also integrate plant and animal production systems.

The Colorado Agricultural Experiment Station cropping programs encompass a variety of commodities within the state and exist to conduct basic and applied research in plant production systems through utilizing demonstration plots and field days to communicate program results.

**2. Brief description of the target audience**

Adults involved in commodity or specialty crop, vegetable, and fruit production whose personal income is derived in large part from their farming activities. And, similar people who strive to achieve income from their plant production farms. These producers may use integrated crop and livestock production practices.

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	423922	643705	869763	643705

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

**Patent Applications Submitted**

Year: 2014

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	742	137	0

## V(F). State Defined Outputs

### Output Target

#### Output #1

##### Output Measure

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

Year	Actual
2014	316

#### Output #2

##### Output Measure

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

Year	Actual
2014	6019

#### Output #3

##### Output Measure

- Meetings convened and /or facilitated

Year	Actual
2014	102

#### Output #4

##### Output Measure

- Kits or similar resources loaned or provided  
Not reporting on this Output for this Annual Report

#### Output #5

##### Output Measure

- Extension-related research and assessment projects

Year	Actual
2014	112

#### Output #6

##### Output Measure

- Web hits

<b>Year</b>	<b>Actual</b>
2014	326413

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	96767

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	1.1: Participants apply research-based techniques for improving soil quality and productivity, protecting and making the best uses of water resources, managing crop nutrients, and/or enhancing plant yields and quality in their farm fields.
2	1.2: Participants use research-based knowledge of integrated pest management systems for the crops and cropping systems in their farmed fields and/or their adjacent landscapes within their property and right-of-ways.
3	1.3: Participants will utilize business planning and management strategies to reach their business goals, improve farm management, and/or improve business economic sustainability.
4	Adoption of improved wheat cultivars.
5	Bean Breeding
6	Colorado Potato Breeding Program

**Outcome #1**

**1. Outcome Measures**

1.1: Participants apply research-based techniques for improving soil quality and productivity, protecting and making the best uses of water resources, managing crop nutrients, and/or enhancing plant yields and quality in their farm fields.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	500

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Farmers in Colorado have lots of decisions to make regarding crops and varieties. Wheat, a crop that occupies more than 250,000 acres in one county alone, is a major economic driver for all of NE Colorado. Variety choices are extremely important, as a couple of bushels/acre difference on a farm can have a tremendous impact.

**What has been done**

An aggressive on-farm wheat testing program has been advanced and is paying dividends. Currently, five on farm sites have been planted in the above county for the 2015 crop year with another six more located on farms within the Area. Further, a major dry-land wheat breeding evaluation site is located in here. The project includes CSU on-campus specialists, the CSU wheat breeder, and five Agronomy Agents within Eastern Colorado.

**Results**

Above example: As a result of these testing activities, we've discovered which varieties work at various locations within Eastern Colorado. Currently, 60% of the state's wheat acreage is planted to Colorado State University varieties.

Reported statewide: 500 participants reported they applied research-based techniques for improving soil quality and productivity, protecting and making the best uses of water resources, managing crop nutrients, and/or enhancing plant yields and quality in their farm fields.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

## **Outcome #2**

### **1. Outcome Measures**

1.2: Participants use research-based knowledge of integrated pest management systems for the crops and cropping systems in their farmed fields and/or their adjacent landscapes within their property and right-of-ways.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	234

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Commercial and private pesticide applicators that are licensed in the state of Colorado are required to attend continuing education classes every three years before their license can be renewed. There are currently about 250 commercial and 3500 private applicators licensed in western Colorado (including the San Luis Valley). The Tri River Area Pest Management Workshop has been held annually since the early 1990's with the goal of offering all of the CEC's needed by licensed applicators at one reasonably priced, high quality workshop.

#### **What has been done**

This annual event remains the only workshop on the west slope where licensed commercial applicators can get all required CEC's at a single meeting. Attendance has stabilized over the years it has been held, with about 200 people registering. The workshop is financially self-sufficient, with registration and sponsorships paying all program expenses including speaker travel. The 2014 TRA Pest Management Workshop was held in Grand Junction on Feb 18/19. A total of 221 people attended, with 76 receiving CEC's as private applicators, and 72 as commercial applicators. 41 TRA Master Gardeners attended and received continuing education credits within that program, and another 32 people attended without receiving any credits. Fifteen individuals received verified training as technicians working under a qualified supervisor.

#### **Results**

Reported from above example: The 2014 TRA Pest Management Workshop was held in Grand Junction on Feb 18/19. A total of 221 people attended, with 76 receiving CEC's as private applicators, and 72 as commercial applicators. 41 TRA Master Gardeners attended and received continuing education credits within that program, and another 32 people attended without receiving any credits. Fifteen individuals received verified training as technicians working under a qualified supervisor.

Reported Statewide: 234 participants reported they use research-based knowledge of integrated pest management systems for the crops and cropping systems in their farmed fields and/or their adjacent landscapes within their property and right-of-ways.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

#### Outcome #3

##### 1. Outcome Measures

1.3: Participants will utilize business planning and management strategies to reach their business goals, improve farm management, and/or improve business economic sustainability.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	3

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

The concept of agricultural sustainability is multidimensional, as it applies to social, economic, and environmental dimensions simultaneously. This PRU is designed for Extension Programming for Crop & Produce producers who have, or are striving for, a significant portion of their personal income coming from the farm. These may be small farm or specialty crop producers or larger scale - primarily commodity crop -producers. They may also integrate plant and animal production systems.

###### **What has been done**

CSU Extension Agricultural Agents in Northeast Colorado organized a 2 day Crops Clinic in November that offered technical agricultural information and specific credits targeted to Certified Crop Advisors.

###### **Results**

Reported from above example: Attendees were industry Agronomists with 86% of attendees directly influencing more than 2000 acres each and 66% of attendees influencing more than 5000 acres each. As a result, a total of 212,700 acres were represented at this meeting. Survey results indicated that the program was worth an average of \$8.41/acre and that 97% of attendees indicated the program was useful to their operations. As a result of the information gained,

attendees told us the program had a \$1.7 million impact to their businesses. Reported statewide: Three participants reported they utilized business planning and management strategies to reach their business goals, improve farm management, and/or improve business economic sustainability.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

#### Outcome #4

##### 1. Outcome Measures

Adoption of improved wheat cultivars.

##### 2. Associated Institution Types

- 1862 Research

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	0

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Development of improved wheat varieties serves the wheat industry in Colorado and the western Great Plains through reduction of production costs and increased disease and insect resistance providing minimized environmental impacts and improved marketing options.

###### **What has been done**

In fall 2014, hard white winter wheat (HWW) experimental line CO09W293 (KS01HW152-6/HV9W02-267W pedigree) was formally released by the Colorado Agricultural Experiment Station. CO09W293 (name pending) will be marketed by the Colorado Wheat Research Foundation (CWRF) under the PlainsGold Brand and the CWRF-Ardent Mills Ultragrains Premium Program. In three years of testing in the CSU Elite Trial (28 location-years, 2012-2014), dryland yield of CO09W293 was 101% of trial average, compared to 105% for Byrd HRW, 103% for Antero HWW, 99% for Hatcher HRW, and 91% for Snowmass HWW. In fall 2014, experimental line CO11D174 was advanced for Foundation seed production to enable release as a new cultivar in fall 2015.

###### **Results**



Since inception of the program, 37+ CSU-bred wheat cultivars account for 61.3% (or 77.4% of the accounted-for acreage) of Colorado's 2.4 million acres (2012 crop). Average wheat grain yields in Colorado have more than doubled with at least 50% of this increase attributed to improved cultivars. Estimates of economic returns in Colorado from CSU-developed wheat varieties were approximately \$43 million for the 2011 crop alone. These estimates include yield increases resulting from improved CSU varieties (\$29 million), marketing benefits resulting from CSU varieties with enhanced end-use quality (\$9 million), and yield-protection resulting from adoption of CSU varieties carrying herbicide tolerance traits for winter annual grassy weed control (\$5 million).

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources

#### Outcome #5

##### 1. Outcome Measures

Bean Breeding

##### 2. Associated Institution Types

- 1862 Research

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	0

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

The primary objectives of this project are to improve dry bean production in the USA, while reducing environmental impact and providing an economically viable food commodity with associated health attributes.

###### **What has been done**

A three-year study was completed at the Colorado State University (CSU) research farm north of Fort Collins, CO. The study compared the performance of three pinto bean cultivars with varying growth habit grown under furrow irrigation to determine if double row arrangement on seed beds increased seed yield or altered seed size compared to single row arrangement on seed beds. These results suggest that pinto bean growers should be able to increase yield and maintain desirable seed size using double row arrangement over traditional single row arrangement on the

planting bed.

**Results**

Commercial dry bean production in Colorado was estimated at 43,000 acres in 2014, and increase of 5,000 acres from 2013. The Dry Bean Breeding Project initiated a "Fast Track" project to develop "slow darkening" pinto bean varieties for the High Plains and western U.S. The project increased 200 F4 lines for winter evaluations in New Zealand to test for yield and agronomic traits. CSU cultivars account for approximately 50% of cultivars grown in Colorado. Six lines were selected for further increase of Breeder seed in the winter nursery during 2014-15 for use to produce Foundation seed for release in 2015. In addition, the project evaluated more than 12,500 lines in the breeding program and increased pure seed of ten promising pinto breeding lines in western Colorado. One line, CO 91212, was increased in New Zealand during the winter 2013-14 and planted for Foundation Seed Production and will be released in 2014-15.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

**Outcome #6**

**1. Outcome Measures**

Colorado Potato Breeding Program

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The major objectives of the Colorado Potato Breeding and Selection Program are to address the needs of Colorado growers to have new potato cultivars (russets, reds, chippers, and specialties) with increased yield, improved quality, improved nutritional characteristics, resistance to diseases and pests, and tolerance to environmental stresses. by assessing production, adaptability, marketability, and other characteristics of advanced selections.

**What has been done**

The primary emphasis is placed on the development of russet cultivars. The balance of the breeding effort is devoted to developing red, specialty, and chipping cultivars. This broad approach is important because it recognizes the diverse markets accessed by potato growers throughout Colorado and many other states in the region. In 2014, Fortress Russet (AC99375-1RU), a Russet cultivar that shows tolerance for the PVYn virus, was released.

**Results**

Since 1975, there have been 30 potato cultivars/clonal selections released by Colorado State University (CSU) or in cooperation with other agencies. CSU releases accounted for 51% of the 54,200 acres planted to fall potatoes in Colorado in 2014. Colorado cultivars and clonal selections accounted for 34% of the 10,964 acres of Colorado certified seed accepted for certification in 2014. Six of the top 20 russet cultivars grown for seed in the U.S. [Russet Norkotah-S3 (#7), Canela Russet (#11), Silverton Russet (#13), Centennial Russet (#14), Russet Norkotah-S8 (#15), Rio Grande Russet (#20)] in 2014 were developed by the Colorado program. For reds, Colorado Rose ranked #8. For chippers, Chipeta ranked #7. For colored-fleshed.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

The external factors marked above would cause changes in programming and the time Extension Agents and Specialists could devote to a specific program or topic. A natural disaster, such as drought, would cause additional programming to provide the education

and information producers would need for their businesses to survive. Decreases in appropriated budgets - county and/or state - would likely force agents to alter their work on cropping issues. Members of the Crops Team would change the topics presented in a workshop, change educational programming, and/or develop new or different technologies and strategies for crop producers if there were changes in government regulations.

#### **V(I). Planned Program (Evaluation Studies)**

##### **Evaluation Results**

PRU members use surveys to capture and report relevant information that quantifies the impact and behavior changes on stakeholders.

##### **Key Items of Evaluation**

CSU Extension Agricultural Agents in Northeast Colorado organized a 2 day Crops Clinic in November that offered technical agricultural information and specific credits targeted to Certified Crop Advisors. Attendees were industry Agronomists with 86% of attendees directly influencing more than 2000 acres each and 66% of attendees influencing more than 5000 acres each. As a result, a total of 212,700 acres were represented at this meeting. Survey results indicated that the program was worth an average of \$8.41/acre and that 97% of attendees indicated the program was useful to their operations. As a result of the information gained, attendees told us the program had a \$1.7 million impact to their businesses.

**V(A). Planned Program (Summary)**

**Program # 10**

**1. Name of the Planned Program**

Sustainable Energy

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	100%		0%	
<b>Total</b>		100%		0%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	2.6	0.0	0.0	0.0
<b>Actual Volunteer</b>	0.1	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
41321	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
41321	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
121405	0	0	0

**V(D). Planned Program (Activity)**

1. Brief description of the Activity

The Energy PRU: 1. empowered Coloradans to make well-informed energy decisions; and 2. promoted a

broad, unbiased understanding of energy issues. Examples included helping a homeowner decide whether she would benefit from rooftop solar, helping a community understand impacts of oil and gas development, and helping K12 students become familiar with relevant energy issues through STEM activities. Extension professionals involved in energy programming provided direct assistance as well as resources individuals and communities can use on their own.

**2. Brief description of the target audience**

Target audiences include homeowners, the general public, teachers, ag producers, and, in some circumstances, policymakers.

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	99466	2984	963	840

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	5	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

<b>Year</b>	<b>Actual</b>
2014	67

**Output #2**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	243

**Output #3**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	17

**Output #4**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	30

**Output #5**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	3

**Output #6**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	97651

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	1803



**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Energy 1.1) Apply or intend to apply increased understanding of energy in personal and/or professional life (e.g. decide whether to move forward with an energy project, change behavior, have more informed discussions, etc.)

## **Outcome #1**

### **1. Outcome Measures**

Energy 1.1) Apply or intend to apply increased understanding of energy in personal and/or professional life (e.g. decide whether to move forward with an energy project, change behavior, have more informed discussions, etc.)

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	174

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

An oft-cited statement that the average person spends 6 minutes per year thinking about energy may or may not be proven, but the larger point that many Coloradans are uninformed about energy issues is one of our assumptions. There has also been a plentiful amount of misleading information strewn about in both the oil and gas and RES debates of late.

#### **What has been done**

We need to find ways to 1. captivate people for longer periods; and/or 2. deliver energy information in very short snippets.

The highly charged discussions around both oil and gas and the rural RES currently provide Extension with opportunities to provide solid energy education based in issues of above-average concern. We can use these issues as springboards to provide well-rounded education that not only helps Coloradans process these issues through an unbiased lens, but also helps them make sound energy decisions in their own lives.

We believe that a combination of in-depth workshops/classes based around these high profile issues and promotion and development of engaging, quick, low commitment educational resources ? particularly online ? feed off of one another to make Extension-s energy efforts more accessible and meaningful to Coloradans.

#### **Results**

174 participants reported they Applied or intended to apply increased understanding of energy in personal and/or professional life (e.g. decide whether to move forward with an energy project, change behavior, have more informed discussions, etc.)

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

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

##### Brief Explanation

Weather extremes may focus public attention on energy and climate change, the economy affects people's desire to spend and save money through energy measures, appropriations can lead to changes in energy programming capacity, public policy and government regulation can increase scrutiny of energy issues, competing priorities and programs may serve to decrease interest in energy issues, population changes can affect the level of interest in energy programming.

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

Energy Masters are working with town and county governments around alternative energy options; building websites promoting various energy sources; hosting educational events for local realtors (Green Building Certification programs); presenting to students and homeowners to encourage energy audits; promoting a new solar array; designing cooling systems for community ice arena and solar water pumping for a local ranch; teaching design, building, and racing solar-powered cars. These Energy Masters are in one county alone.

##### Key Items of Evaluation

Three Energy Masters employed by Routt County are conducting a Greenhouse Gas Emissions (GHG) inventory for county government. This inventory will be a follow-up to a 2005 GHG baseline inventory. When completed, the report will help the county identify specific areas of needed improvement to lower GHG. As a result of preliminary findings, two indicators; total electrical and natural gas use in Routt County, will now be checked annually. These indicators were shown to represent 56% of total GHG for the County. Routt County Building Maintenance Director, Tim Winter, now plans to use the per capita use of these two emissions sources as motivation for further energy efficiency and fossil fuel consumption in county government.

**V(A). Planned Program (Summary)**

**Program # 11**

**1. Name of the Planned Program**

Environmental Horticulture

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	30%		0%	
111	Conservation and Efficient Use of Water	35%		0%	
216	Integrated Pest Management Systems	35%		0%	
	<b>Total</b>	100%		0%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	22.9	0.0	0.0	0.0
<b>Actual Volunteer</b>	37.8	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
316791	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
316791	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
800827	0	0	0

**V(D). Planned Program (Activity)**

1. Brief description of the Activity

The outreach efforts of the Environmental Horticulture PRU provided education and services to encourage the adoption of research-based best management practices (design, plant selection, establishment, and management practices) and diagnostic techniques/services by green industry professionals and the home gardener. The goal was that professional and lay practitioners use reasonable inputs of labor, water, fertilizers and pesticides to produce attractive, functional, cost-effective and sustainable ornamental landscapes.

**2. Brief description of the target audience**

Home gardeners and professional green industry professionals and youth gardeners.

**3. How was eXtension used?**

Agents respond to Ask an eXpert.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	1621607	13435	24925	171673

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

**Patent Applications Submitted**

Year: 2014

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	277	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

<b>Year</b>	<b>Actual</b>
2014	2287

**Output #2**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	21542

**Output #3**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	350

**Output #4**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	858

**Output #5**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	173

**Output #6**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	1177046

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	21542

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	EH1.1) Participants report using or intention to use new technologies and/or intention to adopt or adoption of best management practices and/or policies promoting best management practices in their landscapes, businesses and/or communities.
2	EH2.1) Participants report intention to change or they have changed pest management strategies, intent to utilize or utilizing new technologies to assist with pest diagnosis and management, intent to adopt or adopting integrated pest management strategies and/or intention to adopt or adopting of policy promoting or utilizing integrated pest management strategies.
3	EH3.1) As a result of Colorado Master Gardener (CMG) training and on-going support, CMGs report increased competence (confidence and proficiency/accuracy) in educating the public.



## **Outcome #1**

### **1. Outcome Measures**

EH1.1) Participants report using or intention to use new technologies and/or intention to adopt or adoption of best management practices and/or policies promoting best management practices in their landscapes, businesses and/or communities.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	1174

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The average household in Colorado spends over \$1,000 annually on landscape care and gardening supplies (<http://www.greenco.org/images/downloadables/GreenCO-ExecSumFinal08.pdf> ). Landscaping yields an average of a 109% return on every dollar spent, much more so than other home improvements. (<http://ellisonchair.tamu.edu/emphasis-areas/marketing-economics/economic-benefits-of-plants/> ).

#### **What has been done**

One example: A fun and educational event in Pueblo happened the first weekend of June. Ten gardens were open to the public, with name tags on plants and information about design and maintenance in the garden biographies and plant lists. The xeritour is a collaborative event, planned and supported by CSU Extension-Pueblo County, the Southeast Colorado Water Conservancy District (SECWCD), and Pueblo West Community Xeriscape Gardeners. Gardens are chosen based on beauty, but must conform to water-wise gardening principles. The goal is to provide inspiration and to demonstrate that even in the harsh conditions of Pueblo and Pueblo West, homeowners can have sustainable, colorful landscapes that are long on beauty but short on water bills and maintenance. This was the 9th year for the tour, which is held the first weekend of June. Gardens in Pueblo are open on Saturday and the event is planned by SECWCD staff and Colorado Master Gardener volunteers. The 2014 event featured the public garden at the Sangre de Cristo Art Center and 4 private gardens in older neighborhoods that had been remodeled from turf to colorful, waterwise landscapes surrounded by mature trees. On Sunday, the tour featured gardens in Pueblo West, showcasing young landscapes with little turf, but gardens that support native arthropods, provide water for birds, and edibles for the homeowners. The public garden at Cattail Crossing looked the best it has in years, showing that when nature provides some spring rainfall, a low-water garden can truly shine. This garden was awarded the Plant Select Showcase Garden Award last June and is managed by the all-volunteer Pueblo

West Community Xeriscape Gardeners.

### Results

Overall, 1174 participants reported using or intending to use new technologies and/or intention to adopt or adoption of best management practices and/or policies promoting best management practices in their landscapes, businesses and/or communities.

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water

## Outcome #2

### 1. Outcome Measures

EH2.1) Participants report intention to change or they have changed pest management strategies, intent to utilize or utilizing new technologies to assist with pest diagnosis and management, intent to adopt or adopting integrated pest management strategies and/or intention to adopt or adopting of policy promoting or utilizing integrated pest management strategies.

### 2. Associated Institution Types

- 1862 Extension

### 3a. Outcome Type:

Change in Action Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2014	329

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

New pest outbreaks affecting horticultural plants have been occurring in Colorado with increasing frequency in recent years. Oak agrilus borer and Japanese beetle were detected 2003. Japanese beetle was eradicated in the Tri-River area in 2004, but reappeared in the Front Range in 2005 where it continues to be a growing problem. In 2013, emerald ash borer was detected in Boulder County; the presence of this insect presents the potential to cause millions of dollars of damage to the Front Range urban forest. Mountain pine beetle epidemics have occurred off and on since the 1950s and by 2011 had affected 752,000 acres of Colorado. (Results of the 2011 Aerial Detection Survey in Region 2, U.S. Forest Service, Rocky Mountain Region). Spotted wing drosophila was reported in Fort Collins and the Denver metro area in 2013; this insect will be a significant problem for both commercial and home gardener small fruit production. Another

important introduced insect, the brown marmorated stink bug, is likely to become a problematic Colorado pest in the near future. The impact of these invasive species has received increased attention from state and Federal governments and IPM programs are under development to mitigate their negative impacts. These programs need major enhancements to adequately protect human health, our food supplies, and the environment from the impact of pests and pest management tactics. Extension personnel have collaborated with other agencies in delimitation studies, public education, pest identification and research and developing management strategies. As pests are introduced or break out, extension personnel continue to devote time and effort towards them.

**What has been done**

Western Colorado Pest Management Workshop. The workshop provides continuing education credits (CECs) for private, public, and commercial pesticide applicators.

**Results**

Overall, 329 participants reported an intention to change or they did change pest management strategies, intend to utilize or are utilizing new technologies to assist with pest diagnosis and management, intend to adopt or are adopting integrated pest management strategies and/or intend to adopt or are adopting of policy promoting or utilizing integrated pest management strategies.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems

**Outcome #3**

**1. Outcome Measures**

EH3.1) As a result of Colorado Master Gardener (CMG) training and on-going support, CMGs report increased competence (confidence and proficiency/accuracy) in educating the public.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	431

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Questions about turf and gardens outnumber availability of Extension staff to respond. Trained volunteers increase capacity to meet local demand.

#### **What has been done**

Most counties have a gardening help desk whereby the public can get gardening questions (including diagnosis of disease, insect and weed problems) answered by agents, specialists, and volunteers. In 2012, agents and Colorado Master Gardeners answered over 200,000 public gardening questions via phone, email, websites, newsletters, and other contact methods. Plant diagnostics are offered in many counties throughout Colorado. Jefferson County has a Plant Diagnostic Clinic that receives samples from all over the Front Range, and other counties offer diagnostic services as well. In 2012, over 8,000 horticultural diagnostic problems were addressed in CO counties.

#### **Results**

431 CMGs report increased competence (confidence and proficiency/accuracy) in educating the public.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
216	Integrated Pest Management Systems

### **V(H). Planned Program (External Factors)**

#### **External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)

#### **Brief Explanation**

**Natural Disasters** including invasive pest introduction, drought, flooding, hail, moisture/temperature trends can influence pest life cycles which will require redirection of effort to accommodate current needs.

**Economic problems** may lead more individuals to acquire/redirect their IPM strategies according to resource limitations or opportunity; more individuals may grow their own food crops, requiring redirection of programming efforts; individuals may spend less on landscape and turf, requiring redirection of programming efforts. Colorado Master Gardener volunteer numbers may be less due to increased costs associated with the program and personal economic situation.

**Government regulations** may alter pesticide, water and plant availability and use, redirecting efforts to alternative materials and methods.

**Population changes** may increase the demand on volunteer and staff time or may increase demands in specific areas such as food production. Increases in under-served populations may alter programming delivery methods.

### **V(I). Planned Program (Evaluation Studies)**

## Evaluation Results

There is an increased demand for local food production at the home gardener and commercial levels. There is also increasing concern about food insecurity in the mountains of Colorado. Rural communities and those in areas with extremely short growing seasons rely almost exclusively on fresh produce and other food items trucked into the area. Increasing local production of crops will make areas more food secure. Season extension techniques will play a large role in crop production at high elevation areas with extremely short (~60-120 day) growing seasons depending on elevation and microclimate.

## Key Items of Evaluation

Three Colorado counties (San Miguel, Teller and Eagle) have been growing warm season, cool season and winter greens under different season extension covers since 2010.

Raised beds (>22 inches tall, 4' wide x 12' long) are used at all locations. Covers tested have been:

- 3.5 and 5 mm polyethylene covers (Solexx) with automatic vents
- mini-hoops covered with an under layer of spun-bonded polypropylene row cover fabric and a top layer of polyvinyl alcohol film (Diobetalon or Tuff Bell)
- spun-bonded polypropylene row cover fabric alone
- polyvinyl alcohol film (Diobetalon or Tuff Bell) alone
- uncovered beds

Plants tested have included:

- lettuces in late winter through early winter
- cold-hardy greens (spinach, kale, corn salad, arugula) in fall through spring
- warm season crops (green beans, squash, cucumbers and peppers) in the summer.

Fresh yield weights have been recorded and monthly photographs taken of each test plot. Air temperature and soil temperature in each test plot have been monitored for the length of the trial using automated data loggers.

Lettuces grown under the polyvinyl alcohol film (Diobetalon or Tuff Bell) alone followed by the double layer of spun-bound polypropylene row cover fabric and polyvinyl alcohol film have performed best (highest yield and quality) in spring through fall. Lettuces planted in late winter or held over in early winter have performed best under double layer of spun-bound polypropylene row cover fabric and polyvinyl alcohol film during late winter and early winter. Results for lettuces grown under spun-bonded polypropylene row cover fabric alone are inconclusive.

Warm season crops (green beans and squash for example) have performed best under the double layer of spun-bound polypropylene row cover fabric and polyvinyl alcohol film. Results for warm season crops grown under spun-bonded polypropylene row cover fabric alone and polyvinyl alcohol film (Diobetalon or Tuff Bell) alone are inconclusive.

Results for yield and quality for fall and winter greens are not conclusive for any treatment.

**V(A). Planned Program (Summary)**

**Program # 12**

**1. Name of the Planned Program**

Food Systems

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management	10%		0%	
604	Marketing and Distribution Practices	20%		0%	
608	Community Resource Planning and Development	20%		0%	
703	Nutrition Education and Behavior	10%		0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	40%		0%	
	<b>Total</b>	100%		0%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	6.3	0.0	0.0	0.0
<b>Actual Volunteer</b>	0.1	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
82641	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
82641	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
257694	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

The Food Systems team has come together, drawing from a diverse set of personnel with backgrounds in agriculture, horticulture, food safety, nutrition, community development, and youth education. This team works to increase literacy on food and ag issues, facilitate community discussions and assessments on ag and food issues, provide technical assistance to an increasingly diverse set of food producers and support new market opportunities.

**2. Brief description of the target audience**

Youth and Adults who want to better understand the linkages between their food system and other community issues. Adults involved in specialty crop, vegetable, & fruit or integrated livestock production whose personal income is derived in large part from their farming activities.

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	91987	25009	3166	25242

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2014</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Actual</b>	110	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

<b>Year</b>	<b>Actual</b>
2014	142

**Output #2**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	662

**Output #3**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	154

**Output #4**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	0



**Output #5**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	149

**Output #6**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	456

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	91421

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	FS 1.2) Colorado communities and stakeholders develop and conduct food and agricultural assessments, initiatives and planning efforts.
2	FS 1.3) Food producers gain access to new market opportunities that foster food access, community development, environmental stewardship, and public health
3	FS 1.1) Colorado communities and stakeholders become knowledgeable about and engage in civil public discourse on food and ag issues.

## **Outcome #1**

### **1. Outcome Measures**

FS 1.2) Colorado communities and stakeholders develop and conduct food and agricultural assessments, initiatives and planning efforts.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	35

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The agriculture and food issues, clientele and level of community engagement that Extension personnel are being asked to provide knowledge and assistance on, or facilitate discussions around, are changing. For example, a Northern Colorado Food Assessment showed that over 70% of those defined as farmers were not operating at a commercial level that could use conventional production, budgeting and marketing models Extension has readily available.

#### **What has been done**

Extension is being asked to play a more significant role in food system planning, including facilitating discussions between consumers, producers and organizations interested in ag and food issues.

#### **Results**

35 Colorado communities and/or stakeholders reported they developed and conducted food and agricultural assessments, initiatives and/or planning efforts.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

## **Outcome #2**

### **1. Outcome Measures**

FS 1.3) Food producers gain access to new market opportunities that foster food access, community development, environmental stewardship, and public health

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	135

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The Colorado Cottage Food Act passed in 2012 states that a home food producer must take a food safety course given by Colorado State University Extension or a state, county or district public health agency. At the time of passing, neither CSU Extension nor health agencies had developed an appropriate curriculum for this audience. The only option for Colorado Cottage food producers was to take a food service manager class for retail food establishments. Although this training covered basic food safety topics, it did not cover specific foods items allowed under the Colorado Cottage Food Act (preserved jams, jellies, candy, eggs, nuts and seeds, dried fruits and vegetable, fresh eggs, honey, etc.) and included end temperatures and holding temperatures of foods not allowed in the act (meats, low acid foods, fish, cooked vegetables, etc.). It is estimated there are thousands of Cottage Foods producers in Colorado that either could not find any food safety training to receive the needed certification in food safety to start their business or could only attend a food service manager class that partially met their business needs.

#### **What has been done**

CSU Extension stepped up to meet an immediate need for food safety training statewide. Specialists Bunning, Schroeder and Sullins worked with Agents, Zander, Snow, Gains, Illick, Massey and Follman to develop, test, modify and retest the current CSU EXT. Food Safety for Colorado Cottage Foods Producers workshop and certification program in 2014. A total of 217 participants in 2014 attended the face-to-face training, passed the certification test and received a 3 year certificate. Additionally, another 30 participants completed the Online Plus courses- Developing a Safe Food Business and Cottage Food Safety, also developed by CSU Extension.

#### **Results**

CSU Extension has become a vital resource for answering questions about cottage foods and assisting persons wishing to start a cottage food business in obtaining food safety certification as required by the CO Cottage Food law. We are the only resource in Colorado with a training

developed specifically to address food safety for cottage foods producers.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

#### Outcome #3

##### 1. Outcome Measures

FS 1.1) Colorado communities and stakeholders become knowledgeable about and engage in civil public discourse on food and ag issues.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	617

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Local demand for streamlining the regulatory process for local foods.

###### What has been done

In partnership with Routt County departments of Environmental Health, Planning, Building and Assessor, Routt County Extension has worked to streamline the process of local food projects. The county commissioners asked the Community Agriculture Alliance and Extension to find a way to help frustrated citizens navigate the various departmental regulations.

###### Results

Now, new projects are directed to the Extension office first where we educate them about Cottage Foods and other pertinent issues. They are then encouraged to complete an online form that the Extension office shares with county departments and the local Division of Water Resources. The Extension office schedules a meeting with representatives from all of the departments to suggest any changes or considerations for the project. We have received positive feedback from the county commissioners and all parties involved.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

#### **V(H). Planned Program (External Factors)**

##### **External factors which affected outcomes**

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

##### **Brief Explanation**

USDA has Global Food Security as a National priority, and not all the activities needed to support such a goal are addressed through production-oriented teams. One consideration listed in national outcomes is the need for resiliency, and given current global market pressures, pest pressures, supply chain risks (food safety, transportation costs), it would suggest a more diverse set of food production models is needed.

USDA food security priorities also address natural resources and the long-term management of agricultural lands. Long term land conservation requires some new models of land transitions, since the average age of farmers is in the high 50's and increasing and this team addresses new models of agriculture which may lower barriers to entry into agricultural production.

#### **V(I). Planned Program (Evaluation Studies)**

##### **Evaluation Results**

Food safety training for cottage food producers is helping to ensure that safe food products are being produced in home kitchens for sale to the public.

##### **Key Items of Evaluation**

Cottage food sales benefit local communities by providing a low risk means for individuals to start a small scale business. Additionally, food safety education is critical in preventing the incidence of foodborne illness, where an estimated cost of foodborne illness to Colorado is \$2.3 billion (Scharff, 2010), with the average cost per case of foodborne illness estimated to be \$1814 (CDPHE 2014).

**V(A). Planned Program (Summary)**

**Program # 13**

**1. Name of the Planned Program**

Family & Financial Stability

Reporting on this Program

**V(B). Program Knowledge Area(s)**

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	65%		0%	
802	Human Development and Family Well-Being	35%		0%	
<b>Total</b>		100%		0%	

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	5.3	0.0	0.0	0.0
<b>Actual Volunteer</b>	0.1	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
68868	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
68868	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
225745	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Financial, mental, physical, emotional and relational health are key components of well-being. Stable and successful individuals, families, and communities are important to the growth, development and health of our society. When people are in a state of financial and relational wellness, they are in control, confident and focused. They have greater balance and stability so they can concentrate on the most important tasks at hand such a weathering difficulties and making progress toward their goals. Family and financial stability education creates strong communities.

**2. Brief description of the target audience**

Target audiences include adults, children, teens, students, parents, grandparents and guardians, employees, volunteers, and partners.

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	169505	27810	1744	67175

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	4	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted



<b>Year</b>	<b>Actual</b>
2014	332

**Output #2**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	1215

**Output #3**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	32

**Output #4**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	0

**Output #5**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	2

**Output #6**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	49927

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	119574

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	FAFS 1.1a) Participants across the life cycle will apply financial best practices.
2	FAFS 1.2a) Participants will implement best practices of healthy development and relationships across the life cycle.
3	FAFS 1.1b) Participants will plan to apply financial best practices.
4	FAFS 1.2b) Participants will plan to implement best practices of healthy development and relationships across the life cycle.

**Outcome #1**

**1. Outcome Measures**

FAFS 1.1a) Participants across the life cycle will apply financial best practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	337

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

When people are in a state of ?financial wellness,? they are in control. They are confident and focused. They have greater balance and stability so they can concentrate on the most important tasks at hand such a weathering financial difficulties and making progress toward their financial goals.

**What has been done**

One Example: CSU Extension developed effective relationships in the community to fulfill the role of providing trusted resources and education to the low-income and economically vulnerable population. Collaborating with the non-profit sector and other governmental agencies to increase the financial literacy and improve financial decision making of their clients was key. CSU Extension provided financial education strategies with partners such as Catholic Charities, Eagle County Economic Services, Habitat for Humanity, Early Head Start, Head Start, The Literacy Project and referred individuals.

Using the Dollar Works2 Curriculum from the University of Minnesota, Extension, ten lessons were provided to strengthen 60 participants? skills at managing their personal finances and taking control of their financial decision making. The curriculum was culturally adapted for Latino audiences which is necessary for the demographics of Eagle County. The use of individual units did not need to be used in consecutive order. Therefore, lessons were used dependent on the needs of the learners.

**Results**

From above example: The objective of Unit 2 in the Dollar Works2 curriculum helps learners identify money goals that reflect their values and develop skills in making decisions and talking about money.

?14 out of 27 participants said they would very likely or likely set money goals.

?14 out of 27 participants said they would very likely or likely use decision making steps to make money decisions.

?14 out of 27 participants said they would very likely or likely spend money on needs before wants.

?13 out of 27 participants said, ?Given what they had learned, they would put money in savings each month.

The objective of Unit 3 in the Dollar Works2 curriculum helps the learner make a plan for spending for one month.

?14 out of 18 participants said they would very likely or likely make a plan for spending set money goals.

?11 out of 18 participants said they would very likely or likely track their spending.

?14 out of 18 participants reported that they will likely or very likely put money in savings each month, given what they had learned in the class.

The objective of Unit 5 in the Dollar Works2 curriculum helps learners understand the importance of saving for emergencies and for future goals.

?6 out of 7 participants said they would very likely or likely start or keep an emergency fund.

?6 out of 7 participants said they would very likely or likely not use emergency savings for everyday expenses.

?7 out of 7 participants said they would very likely or likely put money in savings each month.

The objective of Unit 7 in the Dollar Works2 curriculum teaches learners how to keep track of their income and expenses by using a bank or credit union account.

?9 out 9 participants said that given what they had learned, they would likely or very likely manage a bank or credit account.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

#### Outcome #2

##### 1. Outcome Measures

FAFS 1.2a) Participants will implement best practices of healthy development and relationships across the life cycle.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	403

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Stable and successful individuals, families, and communities are important to the growth, development and health of our society.

**What has been done**

**Results**

403 participants reported they will implement best practices of healthy development and relationships across the life cycle.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

**Outcome #3**

**1. Outcome Measures**

FAFS 1.1b) Participants will plan to apply financial best practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	308

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Some counties have conducted formal needs assessments that show financial management education and work in healthy relationships and development are important and desired.

**What has been done**

"Take Charge of Your Money Matters" was one curriculum used.

**Results**

308 participants reported they intend to apply financial best practices. Some include watching for spending leaks, creating a spending plan, writing down goals, tracking spending, paying down

debt, stepping down expenses, checking credit reports, and setting aside money for an emergency fund.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

#### Outcome #4

##### 1. Outcome Measures

FAFS 1.2b) Participants will plan to implement best practices of healthy development and relationships across the life cycle.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	111

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Stable and successful individuals, families, and communities are important to the growth, development and health of our society; financial, mental, physical, emotional and relational health are key components of well-being.

###### **What has been done**

Extension Family and Consumer Science professionals are trustworthy sources of financial and human development and family studies education due to their training, experience, and objectivity.

###### **Results**

One example: In the Children in the Middle Class series in Pueblo County, 16 children of various ages were impacted by the parents' changed behaviors. Most parents found that the communication tools that they learned were the most effective part of the class, followed by child development knowledge (expectations).

#### 4. Associated Knowledge Areas

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

### **V(H). Planned Program (External Factors)**

#### **External factors which affected outcomes**

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

#### **Brief Explanation**

Public policies, local, county, state, and federal initiatives, economic conditions, profound advances in human development and family studies, and financial capability research, public perceptions, personal values and sentiments about public issues, Extension staff changes, availability of funding, changes with stakeholders and partners will affect outcomes. Most of the program efforts are multi-year activities and cumulative rather than episodic in nature.

### **V(I). Planned Program (Evaluation Studies)**

#### **Evaluation Results**

(Glenda Wentworth, Eagle County)

Smart Choice for Health Insurance is a comprehensive, research-based, unbiased curriculum designed by the University of Maryland Extension. Its purpose is to equip consumers with the tools they need to make the best possible decision when choosing health insurance plans for themselves and families. The 2-hour program helps a participant analyze their health care needs, compare insurance plans and apply knowledge learned to make a smart health insurance choice based on what they can afford. Participants received a consumer workbook and learned about tools to use that will help them feel empowered and more confident in making health insurance choices.

The University of Maryland continues to conduct research on the workshops. Twenty participants in the Northwest Region of Colorado participated in the training and eighteen people took part in the pre-post assessments. As a result of the workshop; participants are confident they understand health insurance terms and can find information to choose a health plan. They are also likely to determine which doctors and hospitals are covered and understand what they would have to pay for prescription drugs, emergency department visits, and specialist visits.

#### **Key Items of Evaluation**

Colorado Works Professional Development Academy (Glenda Wentworth, Eagle County)

This workshop is designed for service providers to increase financial literacy behaviors with the individuals and families they are working with. The purpose of the workshop is to strengthen provider's skills at working with clients to help manage their personal finances



and taking control of their financial decision making. Providers will acquire skills to help clients identify money goals that reflect their values, make a plan for spending for one month, and understand the importance of saving for emergencies and for future goals.

Sixty one people attended the workshop and 47 participants evaluated it. The response summary showed 100% of the responses remarked that at least one resource was given to them during the workshop. 87% stated that the presenter engaged them in a skill-building activity. The respondents were satisfied with the workshop content.

**V(A). Planned Program (Summary)**

**Program # 14**

**1. Name of the Planned Program**

Natural Resources

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	20%		20%	
111	Conservation and Efficient Use of Water	20%		60%	
205	Plant Management Systems	25%		20%	
216	Integrated Pest Management Systems	15%		0%	
307	Animal Management Systems	20%		0%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	17.1	0.0	10.4	0.0
<b>Actual Volunteer</b>	0.5	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
234150	0	229211	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
234150	0	229211	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
609318	0	13425734	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

CSU Extension uses eight common outputs for planning and reporting purposes. They include group educational events, individual education (one-on-one), meetings convened and/or facilitated; kits, research/assessment projects; peer-reviewed publications, media releases, and on line posts. Definitions at <http://www.ext.colostate.edu/staffres/program/outputdefinitions.html> .

**2. Brief description of the target audience**

Adult and youth

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	409063	0	15615	41925

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	1012	37	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

<b>Year</b>	<b>Actual</b>
2014	1349

**Output #2**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

<b>Year</b>	<b>Actual</b>
2014	5508

**Output #3**

**Output Measure**

- Meetings convened and /or facilitated

<b>Year</b>	<b>Actual</b>
2014	203

**Output #4**

**Output Measure**

- Kits or similar resources loaned or provided

<b>Year</b>	<b>Actual</b>
2014	416

**Output #5**

**Output Measure**

- Extension-related research and assessment projects

<b>Year</b>	<b>Actual</b>
2014	9

**Output #6**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	313229

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	5508

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	NR 1.1) Participants report implementation or intent to implement actions relating to water quality and quantity issues (such as well and septic system management, CO Water Law and regulations, water rights, best irrigation practices, stream quality issues, and/or drought tolerant landscaping).
2	NR 1.2) Participants report implementation or intent to implement animal/wildlife-related conservation practices (such as improved manure management, livestock emergency preparedness, attracting pollinators, enhancing wildlife habitat, and/or deterring unwanted wildlife).
3	NR 1.3) Participants report implementation or intent to implement soil-related conservation practices (such as soil health, soil fertility, soil testing, erosion control, cover crops, composting, or soil compaction).
4	NR 1.4) Participants report implementation or intent to implement plant-related conservation practices (such as active weed management, pasture management techniques, grass stand establishment, planting windbreaks, planting native plants, and/or active forest management).
5	NR 1.5) Participants improve or intend to improve their practices, decisions and skills in action through timely access to pest management resources and/or pest identification and IPM implementation.
6	NR 1.6) The number of acres reported that are impacted (by weed management, planting natives, fire mitigation, pasture grasses, etc.)
7	NR 1.7) Dollars saved by best management practices.
8	NR 1.8) Grant dollars awarded towards work in natural resources.
9	NR 1.9) User fees from programming.
10	Determining the consumptive use of crops in Colorado for efficient irrigation

## **Outcome #1**

### **1. Outcome Measures**

NR 1.1) Participants report implementation or intent to implement actions relating to water quality and quantity issues (such as well and septic system management, CO Water Law and regulations, water rights, best irrigation practices, stream quality issues, and/or drought tolerant landscaping).

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	789

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The Colorado Water plan was a joint effort to provide and ascertain input to future water use in Western Colorado.

#### **What has been done**

The initial meeting in Meeker had 55 participants. The topic covered potential movement and conservation practices that might be used to develop future water movement. The information was then shared to assist in the development of the Governor-s proposals to shape water usage. Additionally CSU agent Bill Ekstrom presented "Irrigation Scheduling" for field crops.

#### **Results**

It was requested by several entities that we do a water awareness educational event the spring of 2016. It was also requested that CSU agent repeat the Irrigation Scheduling workshop and also conduct a home owner's lawn irrigation management and calibration workshop.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
111	Conservation and Efficient Use of Water

**Outcome #2**

**1. Outcome Measures**

NR 1.2) Participants report implementation or intent to implement animal/wildlife-related conservation practices (such as improved manure management, livestock emergency preparedness, attracting pollinators, enhancing wildlife habitat, and/or deterring unwanted wildlife).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	588

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

NRCS CIG Learning from the Land Project: Twin Buttes Range ?- Specifically looking at interactions with (wild horses, cattle and wildlife).

**What has been done**

To advance the education program an initial family meeting was held which prompted the formation of a local on-sight team training composed of (NRCS, CDOW, CSU and other local interest) the purpose of this training was to identify the major areas of concern or interest.

**Results**

The next step was to proceed with data collection initiated for range sites associated with sage communities.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
307	Animal Management Systems



### **Outcome #3**

#### **1. Outcome Measures**

NR 1.3) Participants report implementation or intent to implement soil-related conservation practices (such as soil health, soil fertility, soil testing, erosion control, cover crops, composting, or soil compaction).

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	652

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

With PLT and WSARE funding, nine on-farm workshops were held for land managers in Delta, Larimer, Boulder, Eagle, Pitkin, Adams, Jefferson, Routt, and Montezuma Counties. The program was administered by Jennifer Cook and involved cross-state and cross-agency cooperation. Partners included USDA-NRCS, local Conservation Districts, CO State Forest Service, Denver Water, and local farmers. The program highlighted successful multi-state cooperation with Steve Fransen, Extension Forage Crop Specialist from Washington State University and Glenn Shewmaker, Extension Forage Specialist from University of Idaho Twin Falls Research and Extension Center

##### **What has been done**

The hands-on workshops addressed key soil and plant issues which are targeted in the Natural Resources POW. At on-site soil pits, participants learned about soil properties and soil health. Grass seeding and reseeding techniques were taught to participants during an on-site grass drill demonstration. Tree planting and grazing techniques were also discussed while participants were able to see the result of management practices. One participant noted in the evaluation, "It was very helpful to get hands-on knowledge and to see others who have addressed issues similar to the ones we face."

As a prerequisite, participants were asked to watch recorded webinars prior to farm tours. The webinars provided essential background information and allowed for a more in-depth learning experience.

The program allowed for county agents to work with their communities and local partners to develop a farm tour appropriate for their location. In total, these educational workshops impacted 220 land managers. Evaluations revealed that as a result, participants expect to save a total of

\$81,400 over the next 10 years.

**Results**

The results of the project also contributed to environmental sustainability. Soil erosion by wind and water has serious environmental and economic impacts in Colorado. This program demonstrated how to implement sustainable soil erosion reduction practices such as proper grazing techniques, tree planting, cover crops, and grass seeding. Participants were asked on their evaluations to "list any actions you plan on taking on your property as a result of the farm tour." Answers included, "Less watering?", "Manage weeds, manage grazing, get soil tested?", and "I think incorporating better management practices will help us increase our yields and potential." One participant summed up the intent of the farm tours by noting, "My expectations were met. We had in depth conversation on the science and experience of ag practices, and on a gorgeous day."

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships

**Outcome #4**

**1. Outcome Measures**

NR 1.4) Participants report implementation or intent to implement plant-related conservation practices (such as active weed management, pasture management techniques, grass stand establishment, planting windbreaks, planting native plants, and/or active forest management).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	1475

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

With PLT and WSARE funding, nine on-farm workshops were held for land managers in Delta, Larimer, Boulder, Eagle, Pitkin, Adams, Jefferson, Routt, and Montezuma Counties. The program was administered by Jennifer Cook and involved cross-state and cross-agency cooperation. Partners included USDA-NRCS, local Conservation Districts, CO State Forest Service, Denver Water, and local farmers. The program highlighted successful multi-state cooperation with Steve Fransen, Extension Forage Crop Specialist from Washington State University and Glenn

Shewmaker, Extension Forage Specialist from University of Idaho Twin Falls Research and Extension Center.

**What has been done**

Grass seeding and reseeding techniques were taught to participants during an on-site grass drill demonstration. Tree planting and grazing techniques were also discussed while participants were able to see the result of management practices. One participant noted in the evaluation, Quote: It was very helpful to get hands-on knowledge and to see others who have addressed issues similar to the ones we face.

**Results**

The results of the project also contributed to environmental sustainability. Soil erosion by wind and water has serious environmental and economic impacts in Colorado. This program demonstrated how to implement sustainable soil erosion reduction practices such as proper grazing techniques, tree planting, cover crops, and grass seeding. Participants were asked on their evaluations to "list any actions you plan on taking on your property as a result of the farm tour." Answers included, "Less watering?", "Manage weeds, manage grazing, get soil tested?", and "I think incorporating better management practices will help us increase our yields and potential." One participant summed up the intent of the farm tours by noting, "My expectations were met. We had in depth conversation on the science and experience of ag practices, and on a gorgeous day."

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems

**Outcome #5**

**1. Outcome Measures**

NR 1.5) Participants improve or intend to improve their practices, decisions and skills in action through timely access to pest management resources and/or pest identification and IPM implementation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	338

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

EPA's Current Agricultural Worker Protection Standard (WPS) is a regulation published in 1992 that is aimed at reducing the risk of pesticide poisoning and injury among agricultural workers and pesticide handlers. The current WPS offers occupational protections to over 2 million agricultural workers (people involved in the production of agricultural plants) and pesticide handlers (people who mix, load, or apply crop pesticides) that work at over 600,000 agricultural establishments (farms, forests, nurseries and greenhouses). The WPS requires that owners and employers on agricultural establishments provide protections to workers and handlers from potential pesticide exposure, train them about pesticide safety, and provide mitigation in case exposures may occur. (US EPA statement.)

**What has been done**

we held a class on Worker Protection Standards. The class was taught by Thia Walker, Extension Specialist and program manager for the Colorado Environmental Pesticide Education Program (CEPEP) at Colorado State University. This class is designed for agriculture producers and employers who utilize pesticides in their workplace. We discussed changes in the requirements to comply with worker safety as well as how to properly train and protect those workers that will be using or are likely to come in contact with pesticides as they perform their duties.

**Results**

Vegetable farmers, grain farmers as well as Parks and Recreation departments all benefited from this class.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
216	Integrated Pest Management Systems

**Outcome #6**

**1. Outcome Measures**

NR 1.6) The number of acres reported that are impacted (by weed management, planting natives, fire mitigation, pasture grasses, etc.)

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	378558

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems

**Outcome #7**

**1. Outcome Measures**

NR 1.7) Dollars saved by best management practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	230166

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems
307	Animal Management Systems

**Outcome #8**

**1. Outcome Measures**

NR 1.8) Grant dollars awarded towards work in natural resources.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	389940

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
205	Plant Management Systems
216	Integrated Pest Management Systems
307	Animal Management Systems

**Outcome #9**

**1. Outcome Measures**

NR 1.9) User fees from programming.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	26486

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
205	Plant Management Systems
216	Integrated Pest Management Systems
307	Animal Management Systems

**Outcome #10**

**1. Outcome Measures**

Determining the consumptive use of crops in Colorado for efficient irrigation

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
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2014

0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Water transfers from agriculture to growing municipalities, well shutdowns, tighter regulations for compact compliance in major river basins, and droughts have reduced the availability of water for irrigation. Among the Western states, Colorado is one of the hardest hit. These pressures on irrigation water supplies require increased efficiency of irrigation. The application of correct amounts of irrigation water, based on knowledge of local crop evapotranspiration (ETc) rates, is essential for increasing irrigation application efficiency.

#### What has been done

Evaluate the performance of the American Society of Civil Engineers (ASCE) standardized reference ET equation for calculating alfalfa reference evapotranspiration (ET) in major agricultural regions of Colorado. The expected outputs of this project include (1) information on seasonal consumptive water use of crops commonly grown in major agricultural regions of Colorado, (2) locally-derived crop coefficient curves for use with the ASCE standardized reference ET equation already being used in CoAgMet.

#### Results

This project developed local seasonal crop coefficient (Kc) curves for the two most widely irrigated crops in Colorado: alfalfa hay and grain corn. Seasonal consumptive water use (total ET) for those two crops were measured during several growing seasons. A seasonal Kc curve for sugar beets was also developed. The Kc curves can be used to convert daily alfalfa reference crop ET into equivalent alfalfa hay, corn, or sugar beet crop ET. The Kc curves have been incorporated in an online irrigation scheduling tool that can be used by Colorado irrigators to determine the amount (inches of water) and timing (date) of irrigations required to avoid water stress or over-irrigation.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
205	Plant Management Systems



## **V(H). Planned Program (External Factors)**

### **External factors which affected outcomes**

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

### **Brief Explanation**

Natural Resource PRU outcomes are dependent on the needs and engagement levels of all landowners. Their needs and level of interest in change can be affected by weather, public policy, economy, and population changes. Also, what benefits one segment may impact another segment.

Weather conditions such as drought, flooding, hail, fires, moisture/temperature trends influencing pathogen and pest life cycles, in addition to abiotic stress effects, which will require short/medium/long term redirection of effort to accommodate program needs for pest diagnostics and management strategies

## **V(I). Planned Program (Evaluation Studies)**

### **Evaluation Results**

Native Plant Master program has surveyed participants to learn what they have learned and how they have used information they learned from the courses -- in their work, volunteer, and/or personal activities.

### **Key Items of Evaluation**

Please see impact report posted at  
[http://www.ext.colostate.edu/impact/nativeplantmaster\\_2013.pdf](http://www.ext.colostate.edu/impact/nativeplantmaster_2013.pdf).

**V(A). Planned Program (Summary)**

**Program # 15**

**1. Name of the Planned Program**

Nutrition, Food Safety & Health

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	30%		0%	
704	Nutrition and Hunger in the Population	5%		0%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	5%		0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	30%		0%	
724	Healthy Lifestyle	30%		0%	
	<b>Total</b>	100%		0%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	43.0	0.0	0.0	0.0
<b>Actual Volunteer</b>	2.1	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
592262	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
592262	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
3779321	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

CSU Extension uses eight common outputs for planning and reporting purposes. They include group educational events, individual education (one-on-one), meetings convened and/or facilitated; kits, research/assessment projects; peer-reviewed publications, media releases, and on line posts. Definitions at <http://www.ext.colostate.edu/staffres/program/outputdefinitions.html> .

**2. Brief description of the target audience**

Adults and youth

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	989075	481054	9190	704712

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

**Patent Applications Submitted**

Year: 2014

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
Actual	1927	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

Year	Actual
2014	1349

**Output #2**

**Output Measure**

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

Year	Actual
2014	6344

**Output #3**

**Output Measure**

- Meetings convened and /or facilitated

Year	Actual
2014	104

**Output #4**

**Output Measure**

- Kits or similar resources loaned or provided

Year	Actual
2014	359

**Output #5**

**Output Measure**

- Extension-related research and assessment projects

Year	Actual
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2014 18

**Output #6**

**Output Measure**

- Web hits

<b>Year</b>	<b>Actual</b>
2014	832818

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	154330

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Coloradans report intention to eat more of healthy foods, or reported actually eating more of healthy foods.
2	Coloradans report intention to eat less of foods/food components which are commonly eaten in excess, or actually eating less of those foods.
3	Coloradans report intention to increase their physical activity and/or reduce sedentary time or reported actually doing so.
4	Coloradans report they intend to adopt, or actually have adopted a learned food safety practice such as safe food preservation techniques, food or refrigerator thermometer usage, proper sanitizing of food contact surfaces, safe methods of food thawing, heating or cooling, having pressure canner gauge tested for accuracy or other appropriate measures of food safety.
5	Participants will obtain certification necessary to meet job-related food safety training requirements and/or recommendations.

**Outcome #1**

**1. Outcome Measures**

Coloradans report intention to eat more of healthy foods, or reported actually eating more of healthy foods.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	4766

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The Science teacher at Red Canyon High School (the alternative high school) requested a presentation on eating healthy because the class was learning how to grow produce. Nutrition research shows that optimal health and healthy habits originate early in life. Over the last several years, the prevalence of childhood overweight and obesity has risen substantially. The Science Teacher wanted to introduce her students to the importance of eating more fruits and vegetables.

**What has been done**

A presentation on "Color Yourself Healthy" was given to provide information on the benefits of phytonutrients and the colorful fruits and vegetables that supply them.

**Results**

4766 participants reported their intention to eat more of healthy foods, or reported actually eating more of healthy foods. One example (see above): The class prepared two recipes: 1) Kale with Apples and Mustard and 2) Blueberry Spinach Summer Salad. The students enjoyed the spinach salad more than the kale with apples. As a result of the lesson, the students stated they would:

- \*Eat more green, healthy foods in meals.
- \*Put more healthy colors in my food! Thank you for all the information. It was very helpful.
- \*Make sure to add a vegetable to all of my meals.
- \*Try to make my food wheel more colorful and try not to buy horribly processed food.
- \*Be more conscious about what I eat, and choose to pick fruits instead of junk food.
- \*Know how to cook food, food that taste good and are good.
- \*Take into consideration the full spectrum of the color wheel during times when I am eating a meal.
- \*Eat healthier

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

#### Outcome #2

##### 1. Outcome Measures

Coloradans report intention to eat less of foods/food components which are commonly eaten in excess, or actually eating less of those foods.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	364

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

The high cost of living combined with seasonal and low-wage jobs in the rural resort communities of Eagle County presents challenges for many families; but particularly those in the Latino community, who disproportionately suffer from chronic disease. The Latino immigrants find work in low-paying, often seasonal jobs in the tourism industry and in manual labor. The 2010 Census Bureau shows that 27.2% of the workers are employed in service occupations. Many in the service industry are recent immigrants from Mexico, Central America and South America. These unique environmental and economic factors in this region disguise the problems affecting the populations of highest needs contributing to the health disparities among the Latino community.

###### **What has been done**

Eagle County Public Health and Environment (ECPHE) received a grant through the Office of Health Disparities, Colorado Department of Public Health and Environment, to reduce the health disparities in the Latino community. ECPHE along with community partners developed the ¡Estoy Sano! Project to improve Latino individuals' health and improve the overall community well-being. CSU Extension was incorporated into the project in order to build upon the nutrition education already being provided to low income and Latino families.

The ¡Estoy Sano! Project is a, multi-faceted obesity risk factor reduction program that has implemented educational programs, and provided evidence-based strategies to improve the health of the Latino population in Eagle County. Hispanics still rely heavily on traditional media to influence their shopping and consumption decisions, especially television and radio. Therefore, as



part of the grant, selected strategies were based on culturally appropriate interventions, including the regular production of a Spanish-language cooking show. ¡Estoy Sano!, a Spanish-language cooking show, was designed to bring nutrition education and food preparation skills to the greater Latino population to encourage healthy eating and active living within this population.

CSU Extension's scope of work included coordinating the cooking show from beginning to execution. Besides coordinating schedules with the chef, the host, and the Eagle County Communication Department; CSU Extension staff researched and practiced suitable recipes, wrote the script, purchased the food and supplies, pre-prepped the food, transported the food to the recording studio and cleaned up afterwards. The Communication Department produced and broadcast the program on Eagle County ECO TV 18 (the county's government TV channel).

Each script contained talking points on empowering people to make healthier food choices for themselves, their families, and their children. The talking tips were generated from the Spanish version of MyPlate materials based upon the science-based advice from the 2010 Dietary Guidelines on eating healthy and being active to reduce the risk of chronic diseases such as diabetes, heart disease, some cancers, and obesity.

The recipes were retrieved from the United States Department of Agriculture federally-funded website (<http://www.whatscooking.fns.usda.gov/>) under the Latin American/Mexican Cuisine. These simple recipes emphasized foods low in sodium, fat, and sugar while encouraging the consumption of more fruits and vegetables. These recipes were chosen based upon the fact they were developed for diverse limited income families. Each show not only demonstrated a recipe it also incorporated that recipe into a tasty healthy plate (MyPlate) at meal times.

The show features a local Latino couple, a Spanish speaking chef and his wife (who has a nutrition and public health background). CSU Extension staff reviewed the script and the recipe with the chef and host; mentoring them in terms of nutrition education, food safety, and being physically active. The couple engaged the audience in selecting healthy foods, proper cooking methods, keeping food safe, and being physically active. Add their sense of humor and the show is fast becoming a delight to watch.

## Results

¡Estoy Sano! Project is an opportunity to address and help reduce the health disparities in the Latino population in Eagle County. CSU Extension has also provided leadership to other programs in nutrition outreach to the Latino community for several years; but the ¡Estoy Sano! Project is community based with many partners designed to promote nutrition and healthy food access to reduce obesity risk factors and thus decrease cardiovascular disease in the Eagle County Latino population. The ¡Estoy Sano! Spanish-language cooking show is a project that has provided Latinos with greater knowledge and self-efficacy around nutrition and healthy cooking. This program will continue to have impacts beyond the county borders and throughout the entire nation for many years.

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #3**

**1. Outcome Measures**

Coloradans report intention to increase their physical activity and/or reduce sedentary time or reported actually doing so.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	948

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Physical activity is a proven protective factor against many chronic diseases including heart attack, diabetes and high blood pressure. Additionally, physical activity helps maintain a healthy weight, contributes to healthy muscles and bones and can reduce the impact of arthritis and depression. Thirty minutes of moderate physical activity five days per week or twenty minutes of vigorous physical activity three days per week have both been shown to have beneficial effects. In 2011, just over half of adults in the United States (51.6%) participated in 150 minutes or more of aerobic physical activity per week. In Colorado 61.8% of adults attained the recommended levels of physical activity

**What has been done**

Increasing exercise by walking and other forms of physical activity was the first contest phase of the Healthier Weigh Challenge program. Each challenge member wore a pedometer and recorded their steps daily. The top team in the contest was Hips Ahoy turning in 3,339,425 steps, or the equivalent of 1,670 miles for an average of 417 miles per person. The 4 GG?s ranked second, averaging 256 miles. The third place in total steps went to Thin It to Win It, who averaged 225 miles per member; the Waist Aways ranked fourth. The most outstanding individual effort was a woman reporting just over 538 miles of physical activity.

**Results**

The 2014 Healthier Weigh Challenge produced good results for the 17 people who completed the 12-week nutrition and fitness program. As a whole group, they logged over 5,107 miles of physical activity, averaging 300.5 miles per person. In the weight loss category, the group of 17 people who completed the program lost a total of 52.3 pounds for a combined percentage of weight loss of 1.6 percent of their original weight. This group also lost 38 inches off their waists, 5.6 percent off their beginning measurements. This is a very positive aspect of reducing their risk of chronic disease, such as heart disease and diabetes.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

#### Outcome #4

##### 1. Outcome Measures

Coloradans report they intend to adopt, or actually have adopted a learned food safety practice such as safe food preservation techniques, food or refrigerator thermometer usage, proper sanitizing of food contact surfaces, safe methods of food thawing, heating or cooling, having pressure canner gauge tested for accuracy or other appropriate measures of food safety.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	2153

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Illness resulting from food consumption is usually a preventable disease that can be avoided by applying well established hygienic standards in the production, preparation, holding, and serving of food. The CDC recently reported the decline in foodborne illness appears to be stalling and concluded that "the lack of recent progress points to the need to continue to develop and evaluate food safety practices as food moves from the farm to the table" (CDC, 2009). A key food safety priority of this PRU is to translate knowledge into effective actions on the part of consumers, retail food workers, cottage food entrepreneurs, agricultural producers and farm workers, and community agencies or organizations that improve the health of Coloradans. We partner with local and state health departments, the state department of agriculture, food subsistence programs, schools, and local businesses to deliver current food safety information to the residents of Colorado. Our work team is engaged in activities designed to inform and educate diverse audiences about key aspects of food safety and safe food handling. The work is critical because no other organizations are addressing food safety education on a state-wide level. Our complex and globalized food network is vulnerable to numerous food safety threats, including microbiological and chemical contamination, and food safety education can help reduce the risks associated with unsafe food and promote consumer health and wellness. With the passing of the Colorado Cottage Foods Bill, education is necessary to clarify consumer activity versus commercial food processing, and to assist those interested in starting small entrepreneurial food

businesses. With focus on educating today's youth in Science Technology, Engineering and Math, the principles of safe home food processing and preservation can be incorporated into STEM curriculum with K-12 youth.

**What has been done**

We are learning that the Colorado Cottage Food Act is opening up a niche for CSU Extension to help a number of small home based businesses either remain home-based or grow. It involves food safety, food preservation, financial skills, business, community development, and economic development.....the list goes on and on. CSU Extension stepped up to meet an immediate need for food safety training statewide. Specialists and agents worked to develop, test, modify and retest the current CSU EXT. Food Safety for Colorado Cottage Foods Producers workshop and certification program in 2014.

**Results**

A total of 217 participants in 2014 attended the face-to-face training, passed the certification test and received a 3 year certificate. Additionally, another 30 participants completed the Online Plus courses-Developing a Safe Food Business and Cottage Food Safety, also developed by CSU Extension.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #5**

**1. Outcome Measures**

Participants will obtain certification necessary to meet job-related food safety training requirements and/or recommendations.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	704

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Illness resulting from food consumption is usually a preventable disease that can be avoided by applying well established hygienic standards in the production, preparation, holding, and serving

of food. The CDC recently reported the decline in foodborne illness appears to be stalling and concluded that "the lack of recent progress points to the need to continue to develop and evaluate food safety practices as food moves from the farm to the table" (CDC, 2009). A key food safety priority of this PRU is to translate knowledge into effective actions on the part of consumers, retail food workers, cottage food entrepreneurs, agricultural producers and farm workers, and community agencies or organizations that improve the health of Coloradans. We partner with local and state health departments, the state department of agriculture, food subsistence programs, schools, and local businesses to deliver current food safety information to the residents of Colorado. Our work team is engaged in activities designed to inform and educate diverse audiences about key aspects of food safety and safe food handling. The work is critical because no other organizations are addressing food safety education on a state-wide level. Our complex and globalized food network is vulnerable to numerous food safety threats, including microbiological and chemical contamination, and food safety education can help reduce the risks associated with unsafe food and promote consumer health and wellness. With the passing of the Colorado Cottage Foods Bill, education is necessary to clarify consumer activity versus commercial food processing, and to assist those interested in starting small entrepreneurial food businesses. With focus on educating today's youth in Science Technology, Engineering and Math, the principles of safe home food processing and preservation can be incorporated into STEM curriculum with K-12 youth.

**What has been done**

Cottage Foods; Food Safety Works

**Results**

704 participants reported obtaining certification necessary to meet job-related food safety training requirements and/or recommendations.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

Natural Disasters:

- Wild fires, power outages brought on by weather extremes (flooding, storms, tornados,) or other reasons creates the need for timely and effective food safety education during both the crisis and recovery period involving collaboration with public health and

government agencies, the media, emergency response networks and others depending on the situation.

- An emergency may also result from loss of employment, therefore decreasing financial resources available to purchase foods. Whatever the situation, knowledge of food safety and storage is important.

Economy:

- Can affect food safety, nutrition and health, such as affordability and accessibility to safe and wholesome foods. Families with limited resources can benefit from information such as how to stretch food dollars to provide healthful and safe foods. Individuals seeking jobs need support with entrepreneurial efforts such as starting a Cottage Foods business.

Public policy changes:

- Can affect food safety, nutrition and health, such as affordability and accessibility to safe and wholesome foods. Examples may include changes to school wellness policies; training opportunities for school personnel and food service staff, increases in funding for childhood obesity in the state and communities.

Government regulations:

- Changes in FDA food code effect food safety training opportunities for retail food and school food service staff. Legislation changes regarding the cottage food industry may require focused effort by this PRU to develop and deliver targeted food safety education. Funding for SNAP-ED and EFNEP is provided through federal sources. Changes in funding or program guidelines are plausible. Additionally, legislation regarding the School Nutrition program and the Farm bill may influence Extension programming.

Competing Public priorities

- In today's economic climate, Extension staff and partner agencies are being asked to do more with less. Nutrition, food safety and health promotion programming may be a lower priority in some areas due to competing public priorities at both the local and state levels.

Population Changes:

- Increased numbers of Spanish speaking audiences requires greater accessibility to educational materials translated into Spanish.

## **V(I). Planned Program (Evaluation Studies)**

### **Evaluation Results**

- The surveys asked questions focused primarily on changes in knowledge, intent to change behavior, and reported behavior change.
- The surveys helped us measure the percentage of program participants who increased their knowledge pertaining to the program topic.
- The results of the surveys are used in writing impact statements or reports that highlight the efforts of this PRU.
- CSU Extension Website hits both State site and County sites, and other social media are used to disseminate information throughout the State.

### Key Items of Evaluation

**What difference did it make?** CSU Extension has become a vital resource for answering questions about cottage foods and assisting persons wishing to start a cottage food business in obtaining food safety certification as required by the CO Cottage Food law. We are the only resource in Colorado with a training developed specifically to address food safety for cottage foods producers.

**Economic Impact:** Food safety training for cottage food producers is helping to ensure that safe food products are being produced in home kitchens for sale to the public. Cottage food sales benefit local communities by providing a low risk means for individuals to start a small scale business. Additionally, food safety education is critical in preventing the incidence of foodborne illness, where an estimated cost of foodborne illness to Colorado is \$2.3 billion (Scharff, 2010), with the average cost per case of foodborne illness estimated to be \$1814 (CDPHE 2014).

**Public Value:** Ensuring that individuals operating a cottage food business in Colorado have the knowledge and training to produce safe food products for sale to the public is of high public value.

**V(A). Planned Program (Summary)**

**Program # 16**

**1. Name of the Planned Program**

Community & Economic Development

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	100%		0%	
	<b>Total</b>	100%		0%	

**V(C). Planned Program (Inputs)**

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	10.2	0.0	0.0	0.0
<b>Actual Volunteer</b>	2.5	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
137735	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
137735	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
608864	0	0	0

**V(D). Planned Program (Activity)**

1. Brief description of the Activity

Community Development outreach works with municipal, county, state, and federal agencies, nongovernmental organizations, and citizens to create dynamic processes that address local and regional



needs/issues. Our efforts focus on facilitating community planning processes that engage all stakeholders affected by an issue in ways that lead to better informed decisions and help communities understand and deal with change. It includes providing information and resource connections, which might include community impact analysis of economic activity or evaluation of the drivers of local economies. This work encourages collaboration to build regional economies and create entrepreneur/business friendly communities. Innovative and collaborative leadership activities/trainings are provided to engage new diverse leaders and strengthen community organizations.

**2. Brief description of the target audience**

- Community members, general public, consumers, students, youth
- Communities and their formal and informal leaders in the public and private sector, businesses, entrepreneurs
- Community organizations, government agencies, other agencies, potential and existing non-profits, staff, board members, and others affiliated with the organization
- Emerging and existing adult and/or youth leaders reflecting community demographics and sectors, and underserved residents
- Community steering committee, workshop participants, project team members, community volunteers

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	58936	3790	3857	7784

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	5	0	0

**V(F). State Defined Outputs**

## Output Target

### Output #1

#### Output Measure

- Classes, trainings, workshops, demonstrations, field days, technical assistance, etc. conducted

Year	Actual
2014	258

### Output #2

#### Output Measure

- One-on-one direct client contacts by site visit, office drop-in, e-mail, telephone, Ask an eXpert, etc.

Year	Actual
2014	660

### Output #3

#### Output Measure

- Meetings convened and /or facilitated

Year	Actual
2014	2807

### Output #4

#### Output Measure

- Kits or similar resources loaned or provided

Year	Actual
2014	0

### Output #5

#### Output Measure

- Extension-related research and assessment projects

Year	Actual
2014	57

### Output #6

#### Output Measure

- Web hits

<b>Year</b>	<b>Actual</b>
2014	3798

**Output #7**

**Output Measure**

- Indirect contacts through Media releases/appearances, newsletters, blog posts, or other non-peer reviewed publications

<b>Year</b>	<b>Actual</b>
2014	55133

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	CD 1.5) Businesses, non-profits, agencies, and community members increase links to resources and community assets.
2	CD 1.1)Community members engage in community and economic development planning and action.
3	CD 1.6) Community members increase engagement in community and/or organization through new leadership opportunities.

**Outcome #1**

**1. Outcome Measures**

CD 1.5) Businesses, non-profits, agencies, and community members increase links to resources and community assets.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	838

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communities must find ways to thrive in a diverse and rapidly changing economic environment.

**What has been done**

One example: Meeting with staff members of Jeffco Public Health helped all of us to develop connections with each other, with the Public Health Community Health Improvement Program and with others.

**Results**

838 businesses, non-profits, agencies, and community members reported they increased links to resources and community assets. One example: By educating the staff regarding specific Extension programs in the county, they were able to see relationships to their goals, connections that already exist and the potential for new connections.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #2**

**1. Outcome Measures**

CD 1.1)Community members engage in community and economic development planning and action.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	452

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communities are increasingly confronted with complex, controversial issues. Issues such as economic development, taxes and public finance, land use, environmental issues, county health plans, local educational issues, to name just a few, are complex issues because there are no simple solutions. Many individuals, groups and organizations have a "stake" in the decision and, because the stakes are high, the issues can quickly become controversial. Conflicts emerge as stakeholders place different values on what is important and what the solution should be.

**What has been done**

One example: A Team of Extension Community Development practitioners helped facilitate the Colorado Food Systems Advisory Council meeting in Denver in the Spring of 2014.

**Results**

From above example: "CSU Extension's partnership was invaluable to our conference. Extension provided the perfect space for our reception, assisting in all the logistics involved in the evening; they provided materials and support for the two-day conference; and most importantly, they offered their expertise as facilitators and strategic advisors for the event, making all aspects of the event more worthwhile and successful. We are incredibly grateful for their work, support and expertise. CSU Extension is an essential partner in all our food systems work, serving as a great asset to all agriculture and food work in the state."

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

### **Outcome #3**

#### **1. Outcome Measures**

CD 1.6) Community members increase engagement in community and/or organization through new leadership opportunities.

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	249

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Leadership is essential for communities to move forward because, without local citizens who have skills and feel confident they can make a difference, a community seldom will be successful. Many communities have residents who want to see positive outcomes in their communities but may lack the required skills or have a perception that they could not be successful planning and implementing community programs.

Efforts to enhance the leadership capacity for development of rural communities and under-served urban neighborhoods are especially important to the viability of limited resource communities. These communities often have unique challenges and barriers to engagement in formal traditional leadership development which in turn leaves a vacuum of leadership for the community. This lack of effective leadership development in rural and urban under-served areas also contributes to deficits in the diversity of leadership that reflects the community/neighborhood.

##### **What has been done**

Family Leadership Training Institute (FLTI) is conducted in Larimer County and in the Five Points neighborhood in Denver.

##### **Results**

Evaluation results are showing medium to large effects in civic literacy and empowerment, current skills and activities, and civic activities. FLTI is funded for five years through NIFA's CYFAR initiative.

#### **4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**  
608            Community Resource Planning and Development

### **V(H). Planned Program (External Factors)**

#### **External factors which affected outcomes**

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

#### **Brief Explanation**

- With new emerging opportunities in communities, programs may shift in response to community need.
- Extension role in community development is emerging and it may take three to five years to establish strong programs with measurable outcomes.

### **V(I). Planned Program (Evaluation Studies)**

#### **Evaluation Results**

Pre-assessment, focus groups, interviews, and surveys are conducted to provide base line data. Metrics are tracked for number of trainings, participants, consulting sessions, partnerships, grant \$, etc. Pre-and post-surveys of workshop participants are conducted to capture immediate changes in knowledge, short-term changes based on identified indicators of this plan of work. A combination of case studies, community visits, and focus groups are used to measure longer-term impacts.

#### **Key Items of Evaluation**

Over two days in February, LiveWell Colorado and the CO Food Systems Advisory Council hosted a state-wide convening of food policy councils and other food system community coalitions. With support from our sponsors we were able to bring Coalition members to Denver from all across the state. Most of the attendees had never previously met...the support we received from five CSU Extension staff to guide our small group discussions on both days guaranteed we would meet our goals. Extension staff supported an efficient process due to their relevant content knowledge - there was no need to interrupt the process to ask for clarifications since facilitators know the content well - and due to their enthusiasm for the topic and skill at keeping a group of strangers on track and on point. Our partnership with Extension lead to exceptionally strong evaluation results - we overwhelmingly met the convening's goals in the eyes of participants.



## VI. National Outcomes and Indicators

### 1. NIFA Selected Outcomes and Indicators

<b>Childhood Obesity (Outcome 1, Indicator 1.c)</b>	
0	Number of children and youth who reported eating more of healthy foods.
<b>Climate Change (Outcome 1, Indicator 4)</b>	
0	Number of new crop varieties, animal breeds, and genotypes with climate adaptive traits.
<b>Global Food Security and Hunger (Outcome 1, Indicator 4.a)</b>	
0	Number of participants adopting best practices and technologies resulting in increased yield, reduced inputs, increased efficiency, increased economic return, and/or conservation of resources.
<b>Global Food Security and Hunger (Outcome 2, Indicator 1)</b>	
0	Number of new or improved innovations developed for food enterprises.
<b>Food Safety (Outcome 1, Indicator 1)</b>	
0	Number of viable technologies developed or modified for the detection and
<b>Sustainable Energy (Outcome 3, Indicator 2)</b>	
0	Number of farmers who adopted a dedicated bioenergy crop
<b>Sustainable Energy (Outcome 3, Indicator 4)</b>	
0	Tons of feedstocks delivered.