

2013 South Dakota State University Combined Research and Extension Plan of Work

Status: Accepted

Date Accepted: 06/20/2012

I. Plan Overview

1. Brief Summary about Plan Of Work

The College of Agriculture and Biological Sciences at South Dakota State University greatly enhances the quality of life in South Dakota through teaching, research and outreach. This is accomplished with research at the South Dakota Agricultural Experiment Station, educational programming conducted by SDSU Extension, and through Academic Programs. The SDSU College of Education and Human Sciences is an important partner to the ABS College, contributing to the understanding of the world and how it affects health and wellness, educational processes, and environmental issues.

October 2011 not only marked the end of a long-established way of thinking for SDSU Extension, but it also ushered in a new era full of excitement, optimism and renewed commitment. Almost in turnkey fashion, SDSU Extension was reorganized from an aging, county-based system to a contemporary, regional technology-based system, designed to deliver high quality programs to all South Dakotans.

This integrated Plan of Work is a statement of South Dakota's intended activities for federal fiscal years 2013 to 2017. Due to the restructuring of SDSU Extension, this plan will evolve over time as changes take effect and stakeholder's needs are identified. The most significant change to SDSU Extension is that eight Regional Extension Centers across South Dakota have replaced the county offices throughout the state. SDSU Extension will also maintain three Federally Recognized Tribal Extension Program offices as well as continue with its existing facilities on the SDSU Campus. Youth programming will be delivered in a new format with more than 30 4-H Youth Program Advisors focusing 100 percent of their time to youth activities.

Current research priorities for AES are based on bio-renewable energy economic development, applied genomic solutions, natural resource stewardship, community innovation and leadership, and enhancing grain/livestock food system economic development. Educational programming for SDSU Extension is offered within five program areas: Competitive Crop Systems, Competitive Livestock Systems, Youth and Community Leadership, Food and Family, and Urban/Rural Initiatives.

As the restructuring of SDSU Extension plays out, emphasis will be placed on developing Learning Communities throughout the state. Learning Communities will allow the university to better engage interested individuals and connect motivated learners with evidence-based experts. The over-arching goal of restructuring SDSU Extension is to develop a sustainable Extension system.

The 2011 population estimate of South Dakota by the US Census Bureau is 824,082. From 2000 to 2010, it was the fastest growing state in the Midwest. The state grew by 7.9%; however, the minority population had a significant gain of 38.1 percent. Lincoln County continues to be the fastest growing county in South Dakota. One-third of the population is found in the two largest counties, and 47 percent of the population is found in the five largest counties. Forty-one counties had a loss in population since the 2000 census, most of which also have had a continual decline in population during the past 50 years.

South Dakota's poverty rate of 13.7% is very close to the national average. Poverty rates in many

South Dakota counties continue to be among the highest in the United States. Five of the 10 poorest counties in the country are in South Dakota. Unfortunately, the population of these five counties combined is 82% American Indian or Alaska Native.

The American Indian population represents nearly nine percent of the total state population. Unemployment, alcoholism, poor diet, obesity, diabetes and other health and social problems are prevalent in reservation areas with high poverty rates. South Dakota State University has developed working agreements with the four 1994 Land Grant Institutions located in South Dakota, and is continuing to offer programs that address these social and economic needs. South Dakota has a substantial American Indian population, and we place great value on education programs that serve this audience. While all Extension programs are available to the entire population of South Dakota, many of the programs that target American Indian needs are funded through FRTEP.

Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	1890	1862	1890
2013	106.9	0.0	190.8	0.0
2014	106.9	0.0	190.8	0.0
2015	106.9	0.0	190.8	0.0
2016	116.0	0.0	190.8	0.0
2017	106.9	0.0	190.8	0.0

II. Merit Review Process

1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

- Internal University Panel
- External Non-University Panel
- Expert Peer Review

2. Brief Explanation

All AES research projects are subjected to peer and merit review prior to implementation. All Hatch and multi-state projects require independent peer reviews from two scientists that are knowledgeable in the respective subject area. The department head or a departmental executive committee identifies peer reviewers. The department head and the AES Director serve as merit reviewers.

A standard review instrument facilitates peer and merit reviews. Reviewers are required to comment on why the proposed research is needed, it's relevance to agriculture, the target audience, and how it compliments other research.

Proposals for research grants that are funded by stakeholder groups are subjected to review by the stakeholders themselves and by college administrators. Much like the CRIS system, stakeholder groups ask for annual progress reports on funded research.

Cooperative Extension Service administrators will serve as the merit review team for the respective components of the plan of work. Department heads, specialists and educators will conduct peer reviews of programs.

III. Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

The Planned Programs are based on input from traditional and non-traditional stakeholder groups who identified critical issues. For the purposes of program planning, South Dakota also considers the input of internal stakeholders, which includes Extension state specialists, field specialists, and scientists. The resulting Planned Programs address critical needs and opportunities through integrated research and educational programs.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

Great efforts are made to seek out and include under-served and under-represented populations in the initial planning of research and Extension programs. In some cases, this involves direct contact with under-served and/or under-represented audiences. In other cases, mass media announcements are used to invite all South Dakotans to participate in program planning. SDSU Extension has added emphasis in Native American programming through several of its signature programs, particularly with the Healthy Foods and Healthy Children program.

3. How will the planned programs describe the expected outcomes and impacts?

The Planned Programs address specific outcomes that occur over the 5-year period of this plan. Some Planned Programs may deliver initial outcomes and impacts in the first year, but the overall impact of these programs will be felt beyond the 5-year planning cycle. Each of the South Dakota Planned Programs list specific outcomes that document progress.

4. How will the planned programs result in improved program effectiveness and/or

South Dakota State University has a strong history of actively integrating research, teaching and Extension programs to deliver science-based information to all citizens. Stakeholder input, from SDSU Extension five-year assessment planning data and other sources, is also used by scientists and classroom educators to gain a better understanding of current needs. Joint FTE appointments give individuals the opportunity to work in a combination of research, Extension and teaching functions, allowing the further integration and transfer of information within the system.

IV. Stakeholder Input

1. Actions taken to seek stakeholder input that encourages 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 specifically with non-traditional groups
- Survey specifically with non-traditional individuals

Brief explanation.

South Dakota State University solicits formal stakeholder input in many forms, from many sources, and at many locations. Methods of inviting stakeholder input include meetings or other communication with: Agricultural Experiment Station Research Farm Advisory Boards; Research Review Meetings with agricultural check-off groups including the South Dakota Soybean Research and Promotion Council, South Dakota Corn Utilization Council, South Dakota Beef Industry Council, South Dakota Oilseeds Council, South Dakota Pork Producers Council, South Dakota Wheat Commission, and others.

Input is also sought from state agricultural commodity groups including Ag Unity, the South Dakota Pork Alliance, the South Dakota Stockgrowers/Cattlemen, and the South Dakota Veterinary Medical Association.

Input is sought from funding organizations such as the National Institutes of Health, U.S. Department of Energy, National Science Foundation, NASA, Environmental Protection Agency, and the National Centers for Disease Control and Prevention. In addition, stakeholder input is solicited from governmental agencies, including: the Office of the Governor, the South Dakota Department of Agriculture, South Dakota Department of Environment and Natural Resources, South Dakota Game, Fish and Parks, South Dakota Department of Education and Cultural Affairs, Office of the State Veterinarian, Social Services, Job Service, National Agricultural Statistics Service, 1994 Institutions, and others.

Stakeholder input is sought at SDSU field day tours; SDSU agricultural meetings; Community Leader Meetings throughout the state; meetings with the South Dakota Board of Regents, South Dakota Legislature, and other elected officials and boards; and events open to the public such as the South Dakota State Fair and DakotaFest.

Additional input is solicited during comprehensive NIFA Departmental and Institutional Reviews, which span teaching, research and Extension activities.

Stakeholder input specifically for projects involving McIntire-Stennis funds is sought from the South Dakota Nurseryman's Association, the South Dakota Parks and Recreation Association, the South Dakota Department of Game, Fish and Parks, the U.S. Forest Service, and

also from special project-oriented groups like the Mortensen Group. This group works specifically on the Mortensen Ranch project, and includes NRCS, local RC&D groups, and other local entities.

2(A). A brief statement of the process that will be 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
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

SDSU Extension recognizes its on-going statutory requirements to invite citizens to participate in an advisory capacity. This is a valuable component of SDSU Extension that allows for full transparency and stakeholder input.

In the past, SDSU Extension employed a three tiered advisory process:

- County Extension Advisory Boards
- Field Education Unit Extension Advisory Boards
- State Extension Advisory Board.

This advisory process has been based on SDSU Extension's presence at the county level. The new focus will be from a discipline/program-base, rather than the previous location-based approach. The Field Education Unit Advisory Boards and the State Extension Advisory Board have officially ended, and as a result, the following advisory structure has been implemented:

Each of the eight regional centers will engage five individuals per capstone program area to serve on their advisory board - resulting in a total of 25 individuals per regional center. These capstone representatives must reflect key constituents, industry and agency partners who are engaged in the discipline and will provide critical advocacy and advisory input/feedback to that SDSU Extension capstone program area.

Program Directors will have the ability to interact with the respective discipline representatives from the eight regional centers (35 individuals) to comprise a statewide Capstone Program Area Advisory Team.

Coordination for the regional center advisory teams will be the responsibility of the Director of Field Operations or the Associate Director of SDSU Extension.

A detailed job description and definition of roles for Extension advisory board members has been completed. This includes terms of service, how often the advisory groups meet, etc.

County Commissioners will be asked to maintain a county advisory structure that engages the local 4-H Promotion and Expansion Committee in the advisory role. This advisory structure would predominantly give guidance to county funded budgets and local 4-H expansion efforts.

On-going Stakeholder Input is often solicited by college leadership during special forums. For example, the SDSU College of Agriculture and Biological Sciences participates in a series of Community Leader Forums each fall. Elected leaders and community stakeholders are invited to attend a series of meetings to discuss the impact of current programs on their communities. These dialog sessions are important opportunities for a candid, two-way discussion of needs, programs, and future plans with local and state elected leaders.

2(B). A brief statement of the process that will be 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 the general public (open meeting advertised to all)
- Survey specifically with non-traditional groups

Brief explanation.

SDSU has established several formal opportunities for stakeholders to offer input regarding quality of programs, and current and future needs, as described earlier in this report. Because stakeholders are most often current clients, SDSU also actively works to identify individuals who have not previously participated. One component of the college's civil rights compliance effort is focused on identifying new or underserved audiences, some of whom are minorities, and documenting efforts to invite their participation in program planning and in educational programs.

3. A statement of how the input will be considered

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

Brief explanation.

Administrators evaluate all input, requests and comments from stakeholders to determine if patterns of need exist, and if resources can be directed to the client requests. SDSU Extension field specialists, state specialists, and AES scientists will actively seek out input to insure that research and education programs are fine-tuned to the current needs of stakeholders.

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Global Food Security and Hunger
2	Climate Change
3	Sustainable Energy
4	Childhood Obesity
5	Food Safety

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger

2. Brief summary about Planned Program

The planned program will conduct research and provide Extension information that will boost agricultural production in the state and nation, improve global capacity to meet the growing food demand, and foster innovation in fighting hunger by addressing food security for vulnerable populations. This includes the development of new crop varieties, increasing production efficiency, and sustainable utilization of animal resources.

3. Program existence : Intermediate (One to five years)

4. Program duration : Medium Term (One to five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		35%	
202	Plant Genetic Resources	0%		3%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		16%	
205	Plant Management Systems	22%		0%	
302	Nutrient Utilization in Animals	0%		20%	
304	Animal Genome	0%		2%	
307	Animal Management Systems	0%		4%	
315	Animal Welfare/Well-Being and Protection	2%		0%	
405	Drainage and Irrigation Systems and Facilities	12%		0%	
501	New and Improved Food Processing Technologies	0%		2%	
502	New and Improved Food Products	0%		12%	
601	Economics of Agricultural Production and Farm Management	15%		3%	
602	Business Management, Finance, and Taxation	17%		3%	
801	Individual and Family Resource Management	32%		0%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

Plant and animal agriculture are the largest portion of South Dakota's economy, and provide the greatest opportunity to address global food security and hunger. For more than a century, this region has been "the breadbasket of the world." Continuing in that tradition, South Dakota State University will assist producers in decreasing the unit cost of production and increasing profitability. Competitive farms and ranches must increase their productivity efficiency and supply a more uniform and higher quality product, which can be marketed for a premium. Therefore, the priorities of the program are to teach producers how new and advancing technologies can be utilized to increase their production efficiency.

2. Scope of the Program

- In-State Extension
- In-State Research

- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

We assume that because of budget cuts, some programs will have to depend less on SDSU Extension, which could affect program participation.

We also assume that increases in the global population, better marketing and transportation, and growing incomes will lead to increased global demand for food. In addition, the cost of food production will continue to change, and individual operations will have the flexibility to make management decisions that will increase the production efficiency of their operation without increasing the cost of production.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to make production agriculture more sustainable and cost effective, ultimately meet the growing global food demand.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	39.5	0.0	108.5	0.0
2014	39.5	0.0	108.5	0.0
2015	39.5	0.0	108.5	0.0
2016	39.5	0.0	108.5	0.0
2017	39.5	0.0	108.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Plant breeders, entomologists, and plant pathologists will develop superior varieties with tolerance or resistance to insects and new disease races. Agronomists will evaluate crop management systems and forage systems that are best adapted to South Dakota, including areas with a history of limited growing season moisture. Soil scientists will develop more effective and cost efficient strategies for conserving soils and reducing fertilizer inputs in cropping systems. Entomologists, plant pathologists, and weed scientists will develop more effective and cost efficient means to safely control plant pests while reducing chemical inputs; including IPM and alternative methods. Horticulturalists will develop appropriate varieties for home gardeners and landscapers, and will teach cost effective production methods. Livestock scientists,

specialists and educators will further explore and teach producers how to maximize income through genetics, resource management and marketing. Hands-on Field Scouting School, crop tours, producer/grower meetings will be held. Provide one-on-one individual consultations. Research and timely information will be provided in news columns, current and up-to-date county and state websites, and Extension publications.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Workshop ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Billboards ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (social media)

3. Description of targeted audience

Farmers, ranchers, agricultural land owners, hobby gardeners, homeowners and Master Gardeners.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of AES research projects which are intended to enhance agricultural profitability and address global food security.
 - Number of CES programs for producers which are intended to enhance agricultural profitability and address global food security.
 - Enroll Students in the Pine Ridge Beginning Farmer/Rancher Program.
 - Increase Family Financial Stability
 - Increase Knowledge of Agricultural Drainage
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers growing alternative crops.
2	Number of Graduates of the Pine Ridge Beginning Farmer/Rancher Program.
3	Number of Participants That Increased Knowledge of Agricultural Drainage
4	Number of People that Increased Knowledge of Financial Stabilitiy

Outcome # 1

1. Outcome Target

Number of producers growing alternative crops.

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of Graduates of the Pine Ridge Beginning Farmer/Rancher Program.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of Participants That Increased Knowledge of Agricultural Drainage

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 405 - Drainage and Irrigation Systems and Facilities

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 4

1. Outcome Target

Number of People that Increased Knowledge of Financial Stability

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 602 - Business Management, Finance, and Taxation
- 801 - Individual and Family Resource Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The greatest external factor is the economy, which has created budget cuts from state and federal sources for the last several years, leading to the restructuring of SDSU Extension. Some outcomes were effected by the loss of approximately 45 field educators throughout the fiscal year.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research projects will be peer reviewed, and published in appropriate scientific journals and lay publications. Research information will also be provided in oral presentations at a variety of meetings.

Due to the restructuring of SDSU Extension, many factors have made good evaluation results practically impossible. Many changes started taking place half way through the reporting year and many changes will be taking place for at least the next full year. While SDSU's College of Agriculture and Biological Sciences resources have been greatly reduced, SDSU Extension is finding opportunities to make big improvements. With the increased importance of program impact and evaluation, SDSU Extension is taking several steps to become more accountable. Currently, we do not have a single individual dedicated to evaluation, but we are now in the process of hiring a fulltime evaluator. We are also beta testing a new Program Business Plan that includes a detailed section on evaluation plans. The completion of the plan will be mandatory for all SDSU Extension programs. As we move forward, we will not only know that our programs are successful and making a difference, we will be able to prove it empirically.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change

2. Brief summary about Planned Program

The planned program will conduct research and provide Extension information regarding the management and productivity of soil, land and animals in the face of climate change. This will help producers plan for and make decisions to adapt to changing environments. Proper management of the soil and natural resources is critical for the success of the small farm, and can increase farm profitability, and minimize harmful effects on the environment brought on by inappropriate management practices, such as overgrazing, over tillage and over application of soil nutrients.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	0%		5%	
102	Soil, Plant, Water, Nutrient Relationships	0%		33%	
111	Conservation and Efficient Use of Water	0%		2%	
112	Watershed Protection and Management	0%		2%	
121	Management of Range Resources	50%		13%	
122	Management and Control of Forest and Range Fires	25%		2%	
124	Urban Forestry	0%		2%	
131	Alternative Uses of Land	0%		4%	
133	Pollution Prevention and Mitigation	0%		2%	
134	Outdoor Recreation	0%		4%	
135	Aquatic and Terrestrial Wildlife	0%		13%	
136	Conservation of Biological Diversity	0%		16%	
141	Air Resource Protection and Management	25%		2%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

As the nature of changes in the earth's climate are becoming known, the impact of agricultural and social practices are becoming understood. At the very foundation of agriculture is the concept of managing carbon, which we are learning plays a large role in shifting temperatures, precipitation patterns, and agricultural productivity. Programs in this area will consider the interrelationship between natural resources and the environment.

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Research
- Multistate Extension
- Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

We assume that there will be an increase in scientific understanding of the causes of climate change, and that this growth in new knowledge will impact governmental and social policies. Furthermore, these policy shifts will lead to changes in agricultural production systems and natural resource management.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to foster environmental stewardship, civic engagement and entrepreneurship in a manner that reflects societal and governmental priorities regarding climate change.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	4.3	0.0	30.7	0.0
2014	4.3	0.0	30.7	0.0
2015	4.3	0.0	30.7	0.0
2016	4.3	0.0	30.7	0.0
2017	4.3	0.0	30.7	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Homeowners, landowners and gardeners will be taught concepts of horticultural sustainability to reduce inputs and conserve natural resources. Create Extension civic engagement curriculum for community leaders and organizations, and promote leadership capacity to enhance civic activity within the community.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Workshop ● Group Discussion ● One-on-One Intervention 	<ul style="list-style-type: none"> ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (social media)

3. Description of targeted audience

- Ranchers
- Livestock Producers
- Agricultural Lenders
- Land Assessors
- Governmental Agency Personnel
- Dairy Farmers

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Increase Knowledge of Healthy Grazing and Pasture Lands.
- Increase Knowledge of Nutrient Flow
- Increase Knowledge of Sustainable Consumer Horticulture.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of Ranchers that Increased their Knowledge to Maintain Healthy Grazing and Pasture Lands.
2	Quantify Improvements in Plant Diversity and Production of South Dakota Grasslands.
3	Increase the Understanding of Nutrient Flow through a Livestock Facility.

Outcome # 1

1. Outcome Target

Number of Ranchers that Increased their Knowledge to Maintain Healthy Grazing and Pasture Lands.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 121 - Management of Range Resources

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Quantify Improvements in Plant Diversity and Production of South Dakota Grasslands.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 121 - Management of Range Resources
- 122 - Management and Control of Forest and Range Fires

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Increase the Understanding of Nutrient Flow though a Livestock Facility.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 141 - Air Resource Protection and Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The greatest external factor is the economy, which has created budget cuts from state and federal sources for the last several years, leading to the restructuring of SDSU Extension. Some outcomes will be affected by the loss of approximately 45 field educators throughout the fiscal year.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research projects will be peer reviewed, and published in appropriate scientific journals and lay publications. Research information will also be provided in oral presentations at a variety of meetings.

Due to the restructuring of SDSU Extension, many factors have made good evaluation results practically impossible. Many changes started taking place half way through the reporting year and many changes will be taking place for at least the next full year. While SDSU's College of Agriculture and Biological Sciences resources have been greatly reduced, SDSU Extension is finding opportunities to make big improvements. With the increased importance of program impact and evaluation, SDSU Extension is taking several steps to become more accountable. Currently, we do not have a single individual dedicated to evaluation, but we are now in the process of hiring a fulltime evaluator. We are also beta testing a new Program Business Plan that includes a detailed section on evaluation plans. The completion of the plan will be mandatory for all SDSU Extension programs. As we move forward, we will not only know that our programs are successful and making a difference, we will be able to prove it empirically.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Sustainable Energy

2. Brief summary about Planned Program

The planned program will conduct research and provide Extension information that fosters energy independence, the development of biomass use for biofuels, design of optimum forestry and crops for bioenergy production, and production of value-added bio-based industrial products. It will promote economically viable technologies for crop and livestock producers while maintaining quality environment for all citizens.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		10%	
202	Plant Genetic Resources	10%		10%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	10%		21%	
204	Plant Product Quality and Utility (Preharvest)	0%		5%	
205	Plant Management Systems	10%		5%	
502	New and Improved Food Products	0%		3%	
503	Quality Maintenance in Storing and Marketing Food Products	0%		3%	
511	New and Improved Non-Food Products and Processes	35%		40%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%		3%	
608	Community Resource Planning and Development	20%		0%	
805	Community Institutions, Health, and Social Services	15%		0%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Biofuel holds great promise economically, environmentally and agriculturally. Two of every three rows of corn grown in South Dakota is used for biofuels. The biofuel industry has rapidly grown, and has become an established value-added industry. In a state long known for wind, the wind energy industry has recently become established. For the past five decades, South Dakota's hydroelectric dams have provided electricity to the Midwest. As new sources of energy become available, fossil fuels have become more expensive, in turn driving up expenses for families, businesses and communities. Programs in this area will include energy research, conservation, and application of new knowledge.

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Research
- Multistate Extension
- Integrated Research and Extension

- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

We assume that there will be an increase in scientific knowledge with respect to the development and application of new energy sources, specifically biofuels, and wind energy. Consumer demand will continue to drive the energy marketplace. Agricultural production systems will continue to adapt to these new opportunities.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to investigate new sources and new applications of renewable fuels, and to assist stakeholders in understanding and applying new energy knowledge.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	7.5	0.0	20.2	0.0
2014	7.5	0.0	20.2	0.0
2015	7.5	0.0	20.2	0.0
2016	7.5	0.0	20.2	0.0
2017	7.5	0.0	20.2	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

South Dakota State University will conduct research in support of biofuel development, including new and adapted crop varieties. Extension will address energy conservation and efficiency, recycling and air quality.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods

- Education Class
- Workshop
- Demonstrations

- Public Service Announcement
- Newsletters
- TV Media Programs
- Web sites other than eXtension
- Other 1 (social media)

3. Description of targeted audience

Homeowners, agricultural commodity group leaders with interests in biofuels, biofuels industry leadership.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Increase Energy Conservation Information through Consultation, Workshops, Displays and Other Methods.
 - Increase Knowledge of Business Goals.
 - Increase Involvement with the Number of People Gaining Knowledge in Community Development.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Increase the Knowledge of Cellulosic Biomass Feedstock.
2	Number of People that Increased Their Understanding of Civic Involvement through the Community Capacity Building Program.
3	Number of people that Increased Their Knowledge of Alternate Cropping Systems.
4	Number of People that Increased their Knowledge of Business Goals.

Outcome # 1

1. Outcome Target

Increase the Knowledge of Cellulosic Biomass Feedstock.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 511 - New and Improved Non-Food Products and Processes

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of People that Increased Their Understanding of Civic Involvement through the Community Capacity Building Program.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of people that Increased Their Knowledge of Alternate Cropping Systems.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 4

1. Outcome Target

Number of People that Increased their Knowledge of Business Goals.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

The greatest external factor is the economy, which has created budget cuts from state and federal sources for the last several years, leading to the restructuring of SDSU Extension. Some outcomes will be affected by the loss of approximately 45 field educators throughout the fiscal year.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research projects will be peer reviewed, and published in appropriate scientific journals and lay publications. Research information will also be provided in oral presentations at a variety of meetings.

Due to the restructuring of SDSU Extension, many factors have made good evaluation results practically impossible. Many changes started taking place half way through the reporting year and many changes will be taking place for at least the next full year. While SDSU's College of Agriculture and Biological Sciences resources have been greatly reduced, SDSU Extension is finding opportunities to make big improvements. With the increased importance of program impact and evaluation, SDSU Extension is taking several steps to become more accountable. Currently, we do not have a single individual dedicated to evaluation, but we are now in the process of hiring a fulltime evaluator. We are also beta testing a new Program Business Plan that includes a detailed section on evaluation plans. The completion of the plan will be mandatory for all SDSU Extension programs. As we move forward, we will not only know that our programs are successful and making a difference, we will be able to prove it empirically.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Childhood Obesity

2. Brief summary about Planned Program

The planned program will conduct research and provide Extension information to ensure that nutritious foods are affordable and available, and provide guidance so that individuals and families are able to make informed, science-based decisions about their health and well-being. South Dakota's youth effort will reach beyond obesity and include: health and safety, child care, family resilience and stability.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
701	Nutrient Composition of Food	15%		6%	
702	Requirements and Function of Nutrients and Other Food Components	20%		40%	
703	Nutrition Education and Behavior	20%		35%	
704	Nutrition and Hunger in the Population	0%		15%	
724	Healthy Lifestyle	15%		4%	
802	Human Development and Family Well-Being	5%		0%	
806	Youth Development	25%		0%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Obesity, lack of physical activity and poor diet are greatly contributing to the health problems and chronic diseases that our citizens of South Dakota are facing today. The leading causes of death in South Dakota are heart disease and cancer, which both have risk factors related to diet. Sixty-five percent of adults and 33.6% of youth ages 5-19 in South Dakota are overweight or obese. More than 50% of South Dakota adults report doing less than 30 minutes of moderate physical activity per day, and those having no vigorous physical activity reached nearly 75%. And when it comes to nutrition and the consumption of

fruits and vegetables, South Dakota is worse than the national average with approximately 81% of adults and 84% of youth in grades 9-12 consuming less than five servings of fruits and vegetables per day.

Poverty can be a contributing factor to obesity. Poverty rates in South Dakota are among the highest in the United States, occurring largely in counties with a high percentage of American Indians. Of South Dakota's 66 counties, the following ten have the highest poverty rates: Ziebach, Shannon, Todd, Corson, Buffalo, Bennett, Mellette, Jackson, Dewey and Charles Mix. A majority of the citizens in each of these ten counties is American Indian.

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

We assume that because of budget cuts, some programs will have to depend less on SDSU Extension, which could affect program participation.

We also assume that obesity rates will continue to rise in all demographic portions of the state population. Weight management will be an issue for many adult South Dakotan. Education of children and parents provides the greatest opportunity to control childhood obesity and create the foundation for a healthy lifestyle.

2. Ultimate goal(s) of this Program

The ultimate goals of this program are to: to promote a healthy weight to reduce risk factors for chronic disease (Persons of all ages across SD), to improve access to healthy, affordable and safe food supplies, and to strengthen and enhance the partnership between the Expanded Food and Nutrition Education Program (EFNEP) and Family Nutrition Program (FNP) in order to expand the reach of low-income audiences served across SD.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890

Year	Extension		Research	
	1862	1890	1862	1890
2013	37.4	0.0	6.0	0.0
2014	37.4	0.0	6.0	0.0
2015	37.4	0.0	6.0	0.0
2016	37.4	0.0	6.0	0.0
2017	37.4	0.0	6.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Scientists will continue to conduct research on nutrition and SDSU Extension will continue programs to increase knowledge on nutrition, diet, and the understanding of the importance of physical activity.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Workshop ● One-on-One Intervention ● Demonstrations ● Other 1 (Scholarly publications) 	<ul style="list-style-type: none"> ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (social media)

3. Description of targeted audience

- Researchers
- Youth
- Parents
- Families
- People Living in Poverty

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Increase Knowledge of Healthy Meals through Nutrition Programs.
- Increase Consumption of Fruits and Vegetables.
- Increase Citizen's Physical Activities.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of people that increased their frequency in using the food label to make food choices.
2	Number of people that adopted 1 or more practices to choose/consume healthier snack choices.
3	Number of people that adopted 1 or more healthy practices to healthy eating when dining out.

Outcome # 1

1. Outcome Target

Number of people that increased their frequency in using the food label to make food choices.

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of people that adopted 1 or more practices to choose/consume healthier snack choices.

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of people that adopted 1 or more healthy practices to healthy eating when dining out.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities

Description

The greatest external factor is the economy, which has created budget cuts from state and federal sources for the last several years, leading to the restructuring of SDSU Extension. Some outcomes were effected by the loss of approximately 45 field educators throughout the fiscal year.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research projects will be peer reviewed, and published in appropriate scientific journals and lay publications. Research information will also be provided in oral presentations at a variety of meetings.

Due to the restructuring of SDSU Extension, many factors have made good evaluation results practically impossible. Many changes started taking place half way through the reporting year and many changes will be taking place for at least the next full year. While SDSU's College of Agriculture and Biological Sciences resources have been greatly reduced, SDSU Extension is finding opportunities to make big improvements. With the increased importance of program impact and evaluation, SDSU Extension is taking several steps to become more accountable. Currently, we do not have a single individual dedicated to evaluation, but we are now in the process of hiring a fulltime evaluator. We are also beta testing a new Program Business Plan that includes a detailed section on evaluation plans. The completion of the plan will be mandatory for all SDSU Extension programs. As we move forward, we will not only know that our programs are successful and making a difference, we will be able to prove it empirically.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Food Safety

2. Brief summary about Planned Program

The planned program will conduct research and provide Extension information to reduce the incidence of foodborne illness and provide a safer food supply by addressing and eliminating causes of microbial resistance to contaminants, educating consumer and food safety professionals, and developing food processing technologies to improve safety. This program will span food development, processing, quality and delivery of food and non-food products in South Dakota and beyond our borders.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
211	Insects, Mites, and Other Arthropods Affecting Plants	0%		18%	
212	Pathogens and Nematodes Affecting Plants	0%		20%	
213	Weeds Affecting Plants	0%		4%	
215	Biological Control of Pests Affecting Plants	0%		4%	
216	Integrated Pest Management Systems	12%		10%	
311	Animal Diseases	0%		25%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	0%		4%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	20%		2%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	30%		0%	
722	Zoonotic Diseases and Parasites Affecting Humans	20%		0%	
801	Individual and Family Resource Management	18%		4%	
802	Human Development and Family Well-Being	0%		5%	
901	Program and Project Design, and Statistics	0%		4%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

South Dakota is not isolated from the incidence of foodborne illness. The South Dakota State Epidemiologist has estimated that 200,000 South Dakotans experience a foodborne related illness each year. According to the Centers for Disease Control and Prevention, the incidence of several foodborne illnesses in South Dakota is higher than the national average, and several enteric diseases are increasing in numbers.

2. Scope of the Program

- In-State Extension
- In-State Research

- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

We assume that prevention of foodborne diseases takes more than one entity tackling the problem, establishing a great need at the local level to support the Federal government's agenda.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to reduce the risk of foodborne illness associated with unsafe food handling at all levels of the food delivery system, from production to consumption.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	18.2	0.0	25.4	0.0
2014	18.2	0.0	25.4	0.0
2015	18.2	0.0	25.4	0.0
2016	18.2	0.0	25.4	0.0
2017	18.2	0.0	25.4	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

South Dakota State University will conduct research and Extension programs to increase understanding of safe food handling, preparation and storage practices.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Workshop ● Group Discussion ● Demonstrations 	<ul style="list-style-type: none"> ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (social media)

3. Description of targeted audience

Parents, food service workers and managers, consumers

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Increase Knowledge of Food Safety through the Food Safety Virtual Lab program.
- Increase Food Safety Knowledge through Certification or Re-certification Programs.
- Increase Knowledge of IPM Techniques.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of people that adopted 1 or more food preparation, storage, or preservation practices for increased access to a safe food supply
2	Number of People Participating in the Food Safety Virtual Lab Program.
3	Number of Participants in IPM Programs.
4	Number of People that were Certified or Re-certified in Food Safety Programs.

Outcome # 1

1. Outcome Target

Number of people that adopted 1 or more food preparation, storage, or preservation practices for increased access to a safe food supply

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of People Participating in the Food Safety Virtual Lab Program.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of Participants in IPM Programs.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 4

1. Outcome Target

Number of People that were Certified or Re-certified in Food Safety Programs.

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 722 - Zoonotic Diseases and Parasites Affecting Humans

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

The greatest external factor is the economy, which has created budget cuts from state and federal sources for the last several years, leading to the restructuring of SDSU Extension. Some outcomes will be affected by the loss of approximately 45 field educators throughout the fiscal year.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research projects will be peer reviewed, and published in appropriate scientific journals and lay publications. Research information will also be provided in oral presentations at a variety of meetings.

Due to the restructuring of SDSU Extension, many factors have made good evaluation results practically impossible. Many changes started taking place half way through the reporting year and many changes will be taking place for at least the next full year. While SDSU's College of Agriculture and Biological Sciences resources have been greatly reduced, SDSU Extension is finding opportunities to make big improvements. With the increased importance of program impact and evaluation, SDSU Extension is taking several steps to become more accountable. Currently, we do not have a single individual dedicated to evaluation, but we are now in the process of hiring a fulltime evaluator. We are also beta testing a new Program Business Plan that includes a detailed section on evaluation plans. The completion of the plan will be mandatory for all SDSU Extension programs. As we move forward, we will not only know that our programs are successful and making a difference, we will be able to prove it empirically.