

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Food and Non-Food Products: Development, Processing, Quality, and Delivery

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
501	New and Improved Food Processing Technologies	0%		24%	
502	New and Improved Food Products	0%		27%	
503	Quality Maintenance in Storing and Marketing Food Products	0%		3%	
504	Home and Commercial Food Service	80%		0%	
511	New and Improved Non-Food Products and Processes	0%		45%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%		1%	
703	Nutrition Education and Behavior	10%		0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	10%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	2.0	0.0	24.6	0.0
Actual Volunteer	0.0	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
158881	0	340580	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
158881	0	383734	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct Research on Co-products of Corn and Soybeans
- Research and Improve Biofuel Production Processes
- Develop Methods to Improve Acceptability of Fresh and Processed Meats
- Conduct Barbeque Bootcamp Workshops
- Partner with South Dakota Beef Industry Council
- Partner with South Dakota Pork Producer's Council

2. Brief description of the target audience

- Farmers
- Biofuels Industry
- Beef Science Community
- Beef Producers
- Food Businesses
- Consumers

3. How was eXtension used?

eXtension is not part of this Planned Program.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2345	592148	1452	62564

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

Patent Applications Submitted

Year: 2012
 Actual: 4

Patents listed

Forefront - Spring Wheat
 Ideal - Winter Wheat
 Streaker - Oats
 Colt - Oats

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	28	28

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Percentage of all Hatch Research Projects in Food and Non-Food Products: Development, Processing, Quality, and Delivery

Year	Actual
2012	13

Output #2

Output Measure

- Number of BBQ Bootcamp Workshops

Year	Actual
2012	5

Output #3

Output Measure

- Number of Articles Posted on igrow Website

Year	Actual
2012	51

Output #4

Output Measure

- Number of Podcasts Posted on igrow Website

Year	Actual
2012	5

Output #5

Output Measure

- Number of Radio Programs Posted on igrow Website

Year	Actual
2012	32

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of Food and Non-Food Products: Development, Processing, Quality, and Delivery Hatch Research Projects
2	Number of BBQ Bootcamp Participants

Outcome #1

1. Outcome Measures

Number of Food and Non-Food Products: Development, Processing, Quality, and Delivery Hatch Research Projects

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	15

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The challenge today of producing enough food, fiber and fuel for more than 9.5 billion people by 2050 is almost daunting, especially because it needs to be done using less land, less water and less energy than is used today. Science driven technologies must be developed for this to be accomplished in a sustainable manner.

What has been done

Within the College of Agricultural and Biological Sciences, there are 15 Hatch projects that are categorized in the Planned Program of Food and Non-Food Products: Development, Processing, Quality, and Delivery. The research activities in this program are primarily supported by our Department of Agricultural and Biosystems Engineering, Department of Dairy Science, and our Department of Biology and Microbiology. Projects include but are not limited to research studies in milk and whey protein, methods to augment beef flavor and tenderness, the development of oilseed biofuels, processing co-products of corn and soybeans as valuable chemicals, and the advancement of technologies for improving food safety.

Results

Through research, we continue to build a scientific knowledge base to improve and understand value added protein fractions from milk, the significance of biomass, mechanisms involved in regulating meat aging, increased shelf life for meat products, and milk homogenization. In addition, graduate students gain valuable knowledge and skills while collaborating on research projects.

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies

502	New and Improved Food Products
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
511	New and Improved Non-Food Products and Processes
512	Quality Maintenance in Storing and Marketing Non-Food Products
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Number of BBQ Bootcamp Participants

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	180

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In recent years, there has been a lot of negative information surrounding consumer meats. Often times this information is incorrect or misleading, leaving the consumer grasping for answers.

What has been done

SDSU Extension, partnering with the South Dakota Beef Industry Council and South Dakota Pork Producer's Council conducted five workshops in four cities. The workshops provided intensive, hands-on opportunities to enhance the understanding of meat cookery, barbequing, smoking, food safety, new value meat cuts and nutrition of meat products.

Results

Participant evaluations indicate the workshops were very successful in educating consumers. The BBQ Bootcamp program greatly enhanced the understanding of cookery, selection, and nutritional content of meat cuts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Other (N/A)

Brief Explanation

There are no external factors that hindered the efforts of this Planned Program.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Due to continued budget constraints, a full-time evaluator has not been hired. However, we are diligent in our efforts to teach staff how to collect and report meaningful, useful programming data. This includes establishing baseline data, templates that correspond to NIFA reporting, and writing impacts that show strong results.

Barbeque Bootcamp

180 participants 105 respondents

Presentation

1 = not valuable; 10 = highly valuable

8.1 - Grilling and Nutrition

8.3 - Smoking, Barbequing, Retail Selection

8.3 - Food Safety & Degrees of Doneness

8.5 - Spices, Rubs, & Marinades

Question

1 = absolutely not, 10 = absolutely; 1 = no knowledge, 10 = expert knowledge

9.2 - Did the speaker effectively explain the information?

6.0 - Knowledge level before program?

8.3 - Knowledge level after program?

9.4 - Was the program beneficial?

8.9 - Was the program beneficial in helping understand food safety, handling, and proper cooking temperatures for meat?

Key Items of Evaluation

Nothing significant to report.