

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

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

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

### 1. Name of the Planned Program

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

## 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	31%		31%	
502	New and Improved Food Products	22%		22%	
503	Quality Maintenance in Storing and Marketing Food Products	18%		18%	
504	Home and Commercial Food Service	2%		2%	
511	New and Improved Non-Food Products and Processes	25%		25%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	2%		2%	
	<b>Total</b>	<b>100%</b>		<b>100%</b>	

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

### 1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.5	0.0	14.5	0.0
<b>Actual</b>	8.9	0.0	21.5	0.0

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

Extension		Research	
Smith-Lever 3b & 3c 248492	1890 Extension	Hatch 429610	Evans-Allen 0
1862 Matching 319886	1890 Matching 0	1862 Matching 484997	1890 Matching 0
1862 All Other 71394	1890 All Other 0	1862 All Other 843897	1890 All Other 0

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

**1. Brief description of the Activity**

- conducted research
- developed programs and conduct workshops
- developed extension curricula
- provided outreach training programs
- established distance education programs and web-based programs
- coordinated meetings with important stakeholders (researchers, industry, farmers, regulatory, etc.)
- worked with media

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

There are a wide variety of target audiences including:

- Farmers
- Animal production personnel
- Plant production personnel
- Biofuels processing industry personnel
- Food manufacturing and processing plant personnel
- Non-food manufacturing plant personnel
- Professional engineers
- State and county health departments
- Federal regulatory officials
- State industry associations

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1000	10000	100	1000
2007	3758	2337	14563	345

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	1
2007:	8

**Patents listed**

- \* Biobased Hydrophobic Surface Treatment Agent for Porous Materials
- \* Adjustable Rocking Chair
- \* A Process to Prepare Enzymatically Modified Starch
- \* Enzymatically Modified Starch to Extend the Bowl-life of Cereals
- \* New Process to Produce Maltose from Starch
- \* Method of Making Water-Soluble Maltodextrins with Glycemic Index
- \* Fiberization and Densification of Agriculture Waste and Their Utilizations Thereafter
- \* Construction of Carbohydrate-Based Self-Assembling Nanoshell Encapsulation for Biofactor-Triggered Controlled Release

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

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

**Output Target**

**Output #1**

**Output Measure**

Number of programs offered to farmers or production agriculture specialists

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	10	35

**Output #2**

**Output Measure**

Number of programs offered to the food industry

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	10	41

**Output #3**

**Output Measure**

Number of programs offered to the non-food industry

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	33

**Output #4**

**Output Measure**

Number of research projects on bioprocessing

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	12

**Output #5**

**Output Measure**

Number of research projects on air quality

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	1

**Output #6**

**Output Measure**

Number of research projects on wood science and technology

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	0

**Output #7**

**Output Measure**

Number of research projects on grain storage and processing

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	15

**Output #8**

**Output Measure**

Number of research projects related to dairy products

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	5

**Output #9**

**Output Measure**

Number of research projects related to aquaculture products

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	7

**Output #10**

**Output Measure**

Number of research projects related to enology and viticulture

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	{No Data Entered}	14

**Output #11**

**Output Measure**

Number of research projects related to food processing

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	{No Data Entered}	11

**Output #12**

**Output Measure**

Number of research projects related to food quality

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	{No Data Entered}	6

**Output #13**

**Output Measure**

Number of workshops offered to the general public

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	{No Data Entered}	1

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

O No.	Outcome Name
1	Number of persons gaining knowledge in bioprocessing
2	Number of products produced using new bioprocessing technologies
3	Increased number of new products produced by new bioprocessing, bioenergy, and biotechnology
4	Increased efficiency (%) with new bioprocessing techniques
5	Number of persons gaining knowledge in food processing and food processing automation
6	Numbers of persons or companies adopting new food automation technologies
7	Increased % use of food and non-food automation technologies
8	Number of persons gaining knowledge in wood science and wood technologies
9	Numbers of persons and companies involved in new wood technologies
10	Increased % production of furniture and other wood products
11	Number of persons gaining knowledge in air quality control systems
12	Number of farming operations using air quality control systems
13	Numbers of animal production facilities adopting better air quality practices
14	Increased air quality % in production facilities
15	Number of persons gaining knowledge in grain processing
16	Numbers of persons and companies adopting better grain processing practices
17	Increased % yield of higher quality grain products
18	Number of persons gaining knowledge in enology and viticulture
19	Number of persons gaining knowledge of government programs
20	Number of persons gaining knowledge of marketing trends
21	Number of persons gaining knowledge on food packaging applications

**Outcome #1**

**1. Outcome Measures**

*Not reporting on this Outcome for this Annual Report*

**2. Associated Institution Types**

**3a. Outcome Type:**

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
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**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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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.)

Other (State & National Priorities)

**Brief Explanation**

**V(I). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

After Only (post program)

Retrospective (post program)

Before-After (before and after program)

During (during program)

Comparison between locales where the program operates and sites without program intervention

**Evaluation Results**

**Key Items of Evaluation**