

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Food Processing, Protection & Safety

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

| KA Code | Knowledge Area | %1862 Extension | %1890 Extension | %1862 Research | %1890 Research |
|--------------|---|-----------------|-----------------|----------------|----------------|
| 204 | Plant Product Quality and Utility (Preharvest) | 0% | 0% | 50% | 0% |
| 216 | Integrated Pest Management Systems | 8% | 0% | 0% | 0% |
| 401 | Structures, Facilities, and General Purpose Farm Supplies | 0% | 10% | 8% | 0% |
| 402 | Engineering Systems and Equipment | 0% | 0% | 5% | 0% |
| 403 | Waste Disposal, Recycling, and Reuse | 0% | 10% | 0% | 0% |
| 501 | New and Improved Food Processing Technologies | 7% | 10% | 0% | 35% |
| 502 | New and Improved Food Products | 0% | 10% | 13% | 0% |
| 503 | Quality Maintenance in Storing and Marketing Food Products | 0% | 10% | 0% | 25% |
| 504 | Home and Commercial Food Service | 23% | 0% | 0% | 0% |
| 511 | New and Improved Non-Food Products and Processes | 0% | 10% | 12% | 0% |
| 512 | Quality Maintenance in Storing and Marketing Non-Food Products | 0% | 10% | 0% | 0% |
| 701 | Nutrient Composition of Food | 0% | 0% | 0% | 20% |
| 712 | Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins | 28% | 30% | 12% | 20% |
| 721 | Insects and Other Pests Affecting Humans | 8% | 0% | 0% | 0% |
| 722 | Zoonotic Diseases and Parasites Affecting Humans | 8% | 0% | 0% | 0% |
| 723 | Hazards to Human Health and Safety | 18% | 0% | 0% | 0% |
| Total | | 100% | 100% | 100% | 100% |

V(C). Planned Program (Inputs)

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

| Year: 2009 | Extension | | Research | |
|------------|-----------|------|----------|------|
| | 1862 | 1890 | 1862 | 1890 |
| Plan | 8.0 | 0.3 | 0.0 | 6.8 |
| Actual | 4.9 | 0.3 | 3.1 | 0.0 |

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

| Extension | | Research | |
|--|--------------------------------|--------------------------------|----------------------------|
| Smith-Lever 3b & 3c 407994 | 1890 Extension 82545 | Hatch 306682 | Evans-Allen 0 |
| 1862 Matching 407994 | 1890 Matching 82545 | 1862 Matching 306682 | 1890 Matching 0 |
| 1862 All Other 0 | 1890 All Other 0 | 1862 All Other 0 | 1890 All Other 0 |

V(D). Planned Program (Activity)

1. Brief description of the Activity

The activities of this planned program include:

- Projects to analyze consumer demand for food
- Development of models
- Publishing of journal papers and other media.
- Workshops and short courses for food industry

Topics for workshops included but were not limited to Serve Safe Education, Agrosecurity, Basic Food Safety, Food Preservation, and HACCP (Hazard Analysis and Critical Control Points).

- Research studies of food processing industry

These research results demonstrated that the Flash & Go automated colony counter is an effective, accurate and time saving alternative to the standard method of manual counting.

2. Brief description of the target audience

Food industry professionals, crop producers, energy firms, HACCP coordinators, microbiologists, third-party auditors, scientists, government inspectors, county extension agents.

V(E). Planned Program (Outputs)

1. Standard output measures

| 2009 | Direct Contacts Adults | Indirect Contacts Adults | Direct Contacts Youth | Indirect Contacts Youth |
|---------------|------------------------|--------------------------|-----------------------|-------------------------|
| Plan | 250 | 1000 | 0 | 0 |
| Actual | 4479 | 14075 | 460 | 555 |

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

Patent Applications Submitted

Year: 2009
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

| 2009 | Extension | Research | Total |
|--------|-----------|----------|-------|
| Plan | 4 | 4 | |
| Actual | 9 | 2 | 11 |

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Educational contacts hours (number of students X teaching hours) from workshops to clientele

| Year | Target | Actual |
|------|--------|--------|
| 2009 | 2000 | 2134 |

Output #2

Output Measure

- Number of significant publications such as extension bulletins, newspaper articles. (excluding peer reviewed articles)

| Year | Target | Actual |
|------|--------|--------|
| 2009 | 15 | 0 |

Output #3

Output Measure

- Number of research projects completed on dairy goat development, food quality and economic evaluation.

| Year | Target | Actual |
|------|--------|--------|
| 2009 | 2 | 3 |

Output #4

Output Measure

- Number of persons taking and passing the HACCP certification exam.

| Year | Target | Actual |
|------|--------|--------|
| 2009 | 70 | 131 |

Output #5

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

| Year | Target | Actual |
|------|-------------------|--------|
| 2009 | {No Data Entered} | 1008 |

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

| O. No. | OUTCOME NAME |
|--------|--|
| 1 | Reduction of incidence of foodborne illness due to better training methods on handling and processing food safety. |
| 2 | Placement of graduate students in food related industry, government agencies or institutions of higher education. |
| 3 | Number of invited presentations at professional society meetings |
| 4 | Number of food handlers receiving ServSafe certification from Extension Agent programs. |
| 5 | Average percent increase in food safety test scores as a result of programs conducted statewide. |

Outcome #1

1. Outcome Measures

Reduction of incidence of foodborne illness due to better training methods on handling and processing food safety.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Placement of graduate students in food related industry, government agencies or institutions of higher education.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Number of invited presentations at professional society meetings

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|-------------|----------------------------|---------------|
| 2009 | 2 | 31 |

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

| KA Code | Knowledge Area |
|----------------|---|
| 204 | Plant Product Quality and Utility (Preharvest) |
| 216 | Integrated Pest Management Systems |
| 401 | Structures, Facilities, and General Purpose Farm Supplies |
| 402 | Engineering Systems and Equipment |
| 501 | New and Improved Food Processing Technologies |
| 502 | New and Improved Food Products |

| | |
|-----|---|
| 503 | Quality Maintenance in Storing and Marketing Food Products |
| 701 | Nutrient Composition of Food |
| 712 | Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins |
| 722 | Zoonotic Diseases and Parasites Affecting Humans |
| 723 | Hazards to Human Health and Safety |

Outcome #4

1. Outcome Measures

Number of food handlers receiving ServSafe certification from Extension Agent programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2009 | {No Data Entered} | 717 |

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

| KA Code | Knowledge Area |
|---------|---|
| 403 | Waste Disposal, Recycling, and Reuse |
| 501 | New and Improved Food Processing Technologies |
| 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 |
| 712 | Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins |
| 721 | Insects and Other Pests Affecting Humans |
| 722 | Zoonotic Diseases and Parasites Affecting Humans |
| 723 | Hazards to Human Health and Safety |

Outcome #5

1. Outcome Measures

Average percent increase in food safety test scores as a result of programs conducted statewide.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2009 | {No Data Entered} | 20 |

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Due to the fact that 76 million Americans suffer from foodborne illnesses each year and Georgia Food Service regulations are changing, there is a need to increase food safety knowledge to improve food safety behavior. Safe food handling practices can be learned and a high demand for foodservice certification exists.

What has been done

1)ServSafe Education classes were conducted for Extension Agents and clientele. 2)Two workshops were conducted on basic agrosecurity awareness for agents, emergency personnel and food industry representatives. 3)Basic food safety training was provided to new Family and Consumer Sciences Extension Agents. 4)Food Safety was taught as a part of specific Foods and Nutrition Classes 5)Food Preservation training was provided to new Family and Consumer Sciences Extension Agents.

Results

717 food handlers received ServSafe certification.

170 agents increased their knowledge as a result of food safety training provided by specialists.

A 20% increase in food safety test scores was reported as a result of programs conducted statewide.

4. Associated Knowledge Areas

| KA Code | Knowledge Area |
|---------|------------------------------------|
| 504 | Home and Commercial Food Service |
| 723 | Hazards to Human Health and Safety |

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Regulations may change the requirement for training hours and content emphases. Disaster/emergency

situations may impact time committed to particular topics in food safety.

Targeting hard-to-reach audiences may require a larger commitment of time.

Tightened economy reduces attendance because of budget cutbacks. Government regulations may mandate HACCP training in new areas, which will increase attendance. Shift in priorities by consumers may cause changes in programming to meet those new mandates. Commodity organizations and other universities sponsoring their own HACCP training courses could reduce our attendance.

The largest concern with nanoparticles is their safety. This creates competing priorities (the possibility of more funding going toward safety projects as opposed to this type of project) and the potential for changes in policy that may put a moratorium on use of engineered nanoscale features in the food supply.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}