

V(A). Planned Program (Summary)

Program # 23

1. Name of the Planned Program

Food 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 |
|---------|---|-----------------|-----------------|----------------|----------------|
| 307 | Animal Management Systems | | | 20% | |
| 315 | Animal Welfare/Well-Being and Protection | | | 5% | |
| 504 | Home and Commercial Food Service | | | 5% | |
| 711 | Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources | | | 10% | |
| 712 | Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins | | | 50% | |
| 723 | Hazards to Human Health and Safety | | | 10% | |
| | Total | | | 100% | |

V(C). Planned Program (Inputs)

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

| Year: 2010 | Extension | | Research | |
|------------|-------------------|-------------------|-------------------|-------------------|
| | 1862 | 1890 | 1862 | 1890 |
| Actual | {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} |
| 1862 Matching | 1890 Matching | 1862 Matching | 1890 Matching |
| {NO DATA ENTERED} | {NO DATA ENTERED} | {NO DATA ENTERED} | {NO DATA ENTERED} |
| 1862 All Other | 1890 All Other | 1862 All Other | 1890 All Other |
| {NO DATA ENTERED} | {NO DATA ENTERED} | {NO DATA ENTERED} | {NO DATA ENTERED} |

V(D). Planned Program (Activity)

1. Brief description of the Activity

Because the work reported for 2010 in the annual review of the older Planned Programs includes effort that will be duplicated by also reporting under the newly mandated goals, quantitation of effort is not included under Inputs. However, we estimate that about 4% of Hatch expenditures were in this area.

Research in the area of Food Safety has focused primarily on microbiological contamination but has also included research and technical ability to determine chemical contamination of food. Work carried out in the WSU College of Veterinary Medicine has concentrated on learning the dynamics of highly pathogenic E. coli and S. typhimurium bacteria in animal production systems, especially related to cattle, and has included epidemiological studies to measure the prevalence and population biology of pathogens in different dairy and beef cattle operations, with a special focus on the transmission and persistence of antibiotic resistance traits. Research on bovine mastitis is also included in this effort, in an attempt to deal more effectively with infective Staphylococcus and a newly emerging Mycobacterium problem. At the level of the introduction of pathogens into the food supply, we are investigating how these bacteria might be introduced into field crops and developing faster methods for detecting pathogens on vegetables and in processed foods like cheese. This has included experiments to reexamine the ability of pathogens to survive composting conditions used to convert animal waste into manure. In addition, several groups are investigating methods for decontaminating or decreasing numbers of viable pathogens using methods including microwave irradiation, chemical washes, and cold plasma technology. In association with IR-4 certification support programs, we also test levels of chemical contamination and pesticide and herbicide residues in food.

2. Brief description of the target audience

For the researchers, the initial audience is other researchers who can validate and test how robust the results are. The ultimate audience is some mixture of producers and processors, regulators who attempt to balance the costs of procedures and their efficacy and applicability, and ultimately, the people who consume the food and are trying not to risk their health in doing so.

V(E). Planned Program (Outputs)

1. Standard output measures

| 2010 | Direct Contacts Adults | Indirect Contacts Adults | Direct Contacts Youth | Indirect Contacts Youth |
|---------------|------------------------|--------------------------|-----------------------|-------------------------|
| Plan | {NO DATA} | {NO DATA} | {NO DATA} | {NO DATA} |
| Actual | {NO DATA} | {NO DATA} | {NO DATA} | {NO DATA} |

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

Patent Applications Submitted

Year: 2010

Plan:

Actual: {No Data}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

| 2010 | Extension | Research | Total |
|------|-----------|----------|-------|
|------|-----------|----------|-------|

| | | | |
|--------|-------------------|-------------------|-------------------|
| Actual | {No Data Entered} | {No Data Entered} | {No Data Entered} |
|--------|-------------------|-------------------|-------------------|

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. Outcome Measures

{No Data Entered}

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

Brief Explanation

Changes in funding patterns have affected all research programs at the university but especially worrying is the serious decline in state funding that can be reallocated at the level of the Agricultural Research Center. This trend is likely to continue for at least another two years and will have significant consequences for the strength of our research programs. While or faculty have been working hard to obtain external funding to substitute for some of this state support, contraction at the federal level presents us with what has been described as a Perfect Storm, which has the potential to severely impact the land grant mission of supporting agricultural industries in the state and region.

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

1. Evaluation Studies Planned

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}