# Program in Food Science and Human Nutrition

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

### 1. Name of the Planned Program

Program in Food Science and Human Nutrition

## 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 | | | 17% | |
| 502 | New and Improved Food Products | | | 15% | |
| 503 | Quality Maintenance in Storing and Marketing Food Products | | | 11% | |
| 504 | Home and Commercial Food Service | | | 3% | |
| 701 | Nutrient Composition of Food | | | 2% | |
| 702 | Requirements and Function of Nutrients and Other Food Components | | | 23% | |
| 703 | Nutrition Education and Behavior | | | 11% | |
| 712 | Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins | | | 18% | |
| | **Total** | | | 100% | |

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

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

| Year: 2007 | Extension | | Research | |
|---|---|---|---|---|
| | 1862 | 1890 | 1862 | 1890 |
| Plan | 0.0 | 0.0 | 41.2 | 0.0 |
| Actual | 0.0 | 0.0 | 24.0 | 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 |
| 0 | 0 | 136970 | 0 |
| 1862 Matching | 1890 Matching | 1862 Matching | 1890 Matching |
| 0 | 0 | 1413156 | 0 |
| 1862 All Other | 1890 All Other | 1862 All Other | 1890 All Other |
| 0 | 0 | 1489337 | 0 |

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

**1. Brief description of the Activity**

We will conduct research and disseminate results to the public, industry and scientists on food safety, quality and technology, (1) expand the existing pilot plant to better serve the needs of the food industry, and (2) deliver educational programs on food handling, HACCP, food sanitation, food safety, food quality, and emerging food processing technologies to the public.

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

Our target audience includes research and extension scientists in the disciplines of food sciences and human nutrition, food engineering, the medical community, persons interested in policy, legislators and the general public. We also have an audience in the Native American and Hispanic communities.

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

**1. Standard output measures**

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

| | Direct Contacts Adults | Indirect Contacts Adults | Direct Contacts Youth | Indirect Contacts Youth |
|---|---|---|---|---|
| Year | Target | Target | Target | Target |
| Plan | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 |

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

**Patent Applications Submitted**

| Year | Target |
|---|---|
| Plan: | 3 |
| 2007: | 1 |

**Patents listed**

Dewi Setiady, Barbara Rasco's PhD student on 'Optical scanner for food color measurement.'

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

**Number of Peer Reviewed Publications**

| | Extension | Research | Total |
|---|---|---|---|
| Plan | | | |
| 2007 | 0 | 4 | 4 |

## V(F). State Defined Outputs

**Output Target**

**Output #1**

**Output Measure**

Peer reviewed journal publications

| Year | Target | Actual |
|---|---|---|
| 2007 | 21 | 22 |

**Output #2**

**Output Measure**

Graduate students supported by experiment station funding and grants

| Year | Target | Actual |
|---|---|---|
| 2007 | 10 | 12 |

## V(G). State Defined Outcomes

| O No. | Outcome Name |
|---|---|
| 1 | Investigation of rapid detection systems for food contamination |
| 2 | Investigation of novel food processing and storage methods |
| 3 | Scientists and companies would use the information we have published to further their research and food production practices |
| 4 | Rapid detection systems move to a pilot plant testing phase |
| 5 | Information in published research is incorporated into production practices thus improving the safety of the food supply. |
| 6 | Novel rapid detection methods for food pathogens become available to the food and processing industries improving the safety of the food supply |

Program in Food Science and Human Nutrition
**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 |
|---|---|---|

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area |
|---|---|

## 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
Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

In 2007, the Special Grants funds were interrupted. Two Program faculty commented on the consequences in their areas: The loss of Special Grants funds in 2007 has been a disaster for regional collaborative projects in aquaculture as special grants are the only source of funds nationally for this work (with minor amounts of commodity funds for catfish in the south). To set a context, aquaculture and fisheries safety and utilization research came to an end in the US in the late 1980s with the elimination of this research emphasis from the NMFS budget and major cutbacks at the federal labs. Because this area of research and the associated commodities were never a focus of USDA and fisheries science (with exception of biology and genetics) was not part of the mission of NSF (or Commerce, etc.), we would be completely floundering about if not for USDA Special Grants. Our current 10-year collaboration between UC-Davis, the Oregon universities, Idaho and WSU and most recently Montana and Florida, where they raise Siberian sturgeon!! These efforts have resulted in the launching a commercial sturgeon industry in the US. In addition, because of this work, we have a better understanding of life history, physiology, reproduction, of these species and this knowledge has had an impact on threatened and endangered species in the US. One of the most successful Special Grants has been the Northwest Center for Small Fruit Research. A joint regional effort between ARS and three universities (WSU, OSU, and UI), the research performed has helped numerous industries critical to the Pacific Northwest (PNW). In addition, the Center has provided badly needed support for graduate students (MS and PhD), individuals who are then hired by these same industries. Any further loss of funding will be highly destructive to the small fruits industries in the PNW and remove opportunities to train new students.

## V(l). Planned Program (Evaluation Studies and Data Collection)

**1. Evaluation Studies Planned**

Other (See below)

**Evaluation Results**

Peer reviewed Publications;

**Key Items of Evaluation**