

Biotechnology and Biodiversity

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Biotechnology and Biodiversity

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

| KA Code | Knowledge Area | %1862 Extension | %1890 Extension | %1862 Research | %1890 Research |
|---------|---|-----------------|-----------------|----------------|----------------|
| 133 | Pollution Prevention and Mitigation | | | | 20% |
| 201 | Plant Genome, Genetics, and Genetic Mechanisms | | | | 10% |
| 203 | Plant Biological Efficiency and Abiotic Stresses Affecting Plants | | | | 10% |
| 302 | Nutrient Utilization in Animals | | | | 10% |
| 308 | Improved Animal Products (Before Harvest) | | | | 20% |
| 311 | Animal Diseases | | | | 10% |
| 403 | Waste Disposal, Recycling, and Reuse | | | | 20% |
| | Total | | | | 100% |

V(C). Planned Program (Inputs)

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

| Year: 2008 | Extension | | Research | |
|---------------|-----------|------|----------|------|
| | 1862 | 1890 | 1862 | 1890 |
| Plan | 0.0 | 0.0 | 0.0 | 2.0 |
| Actual | 0.0 | 0.0 | 0.0 | 3.4 |

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 | 0 | 807005 |
| 1862 Matching | 1890 Matching | 1862 Matching | 1890 Matching |
| 0 | 0 | 0 | 651040 |
| 1862 All Other | 1890 All Other | 1862 All Other | 1890 All Other |
| 0 | 0 | 0 | 105460 |

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct research studies to expand understanding of the mechanism of scours and characterize strains that cause the disease, to improve understanding of the biology of edible and medicinal exotic mushrooms to be able to identify appropriate commercial strains, to develop technologies to convert corn stalks and cheese whey into biofuels and biomaterials including hydrogen, bioethanol and succinic acid, to seek non-antibiotic additives in poultry production to control poultry diseases of Campylobacter jejuni and Salmonella, and to decipher gene expression associated with combating bacterial infection (mastitis) in cattle.

- Give presentations at professional meetings and with Cooperative Extension
- Publish findings in professional journals and in the Agricultural Research Program research magazine
- Seek patents for new discoveries.

Conduct tours, workshops and other activities to share findings with Extension educators and with companies that may commercialize products.

2. Brief description of the target audience

- Companies involved in biotechnology applications
- Farmers involved in producing agricultural products using biotechnology and those who are considering it
- Consumers

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 | 848 | 235000 | 160 | 0 |
| 2008 | 1850 | 485833 | 4309 | 0 |

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

Patent Applications Submitted

| | |
|--------------|---------------|
| Year | Target |
| Plan: | 0 |
| 2008: | 0 |

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

| | Extension | Research | Total |
|-------------|------------------|-----------------|--------------|
| Plan | 0 | 5 | |
| 2008 | 0 | 31 | 0 |

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

articles published in research and other professional journals

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2008 | 5 | 31 |

Output #2

Output Measure

presentations at professional meetings

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2008 | 7 | 33 |

Output #3

Output Measure

media occurrences

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2008 | 2 | 2 |

V(G). State Defined Outcomes

| O No. | Outcome Name |
|-------|--|
| 1 | # of licenses of current patents |
| 2 | # of filings for intellectual property |

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

Public Policy changes

Government Regulations

Brief Explanation

New ideas for patents and intellectual property are underway but there are not reporting new items at this time.

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

1. Evaluation Studies Planned

During (during program)

Evaluation Results

Key Items of Evaluation