

2. Hawaii's Diversified Tropical Crop Systems for Sustainability and Competitiveness

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V(A). Planned Program (Summary)

1. Name of the Planned Program

2. Hawaii's Diversified Tropical Crop Systems for Sustainability and Competitiveness

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

| KA Code | Knowledge Area | %1862 Extension | %1890 Extension | %1862 Research | %1890 Research |
|--------------|---|-----------------|-----------------|----------------|----------------|
| 201 | Plant Genome, Genetics, and Genetic Mechanisms | 0% | | 6% | |
| 202 | Plant Genetic Resources | 10% | | 2% | |
| 203 | Plant Biological Efficiency and Abiotic Stresses Affecting Plants | 10% | | 20% | |
| 204 | Plant Product Quality and Utility (Preharvest) | 10% | | 11% | |
| 205 | Plant Management Systems | 10% | | 40% | |
| 206 | Basic Plant Biology | 10% | | 20% | |
| 211 | Insects, Mites, and Other Arthropods Affecting Plants | 10% | | 0% | |
| 212 | Pathogens and Nematodes Affecting Plants | 10% | | 0% | |
| 213 | Weeds Affecting Plants | 10% | | 0% | |
| 214 | Vertebrates, Mollusks, and Other Pests Affecting Plants | 10% | | 0% | |
| 216 | Integrated Pest Management Systems | 10% | | 1% | |
| Total | | 100% | | 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 | 21.5 | 0.0 | 36.0 | 0.0 |
| Actual | 14.3 | 0.0 | 13.1 | 0.0 |

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

| Extension | | Research | |
|-------------------------------|----------------|-----------------|----------------|
| Smith-Lever 3b & 3c 283563 | 1890 Extension | Hatch 409600 | Evans-Allen |
| | 0 | | 0 |
| 1862 Matching 1334609 | 1890 Matching | 1862 Matching | 1890 Matching |
| | 0 | 3831987 | 0 |
| 1862 All Other 216828 | 1890 All Other | 1862 All Other | 1890 All Other |
| | 0 | 150202 | 0 |

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V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct basic and applied research to increase production, efficiency and profitability of diversified agricultural industries while protecting the environment.

Provide diagnostic and analytical services for soil testing, water analysis, plant tissue analyses, plant disease identification, insect pest identification, and feed and forage analyses.

Conduct outreach programs to provide best management practices needed to grow and market existing and new crops.

Increase the competitiveness of local agricultural production systems by reducing costs and increasing efficiency.

Provide training in identification and management of costs of production, identification of niche market opportunities.

Incorporate research-based technology that reduces losses due to pests, disease, and inefficient use of resources into production systems.

Perform a Sector-wide analysis by industries or clusters of industries for existing industries. Use this information to set priorities.

Conduct analysis of sustainable agriculture programs and needs for research and extension. Review and Evaluate academic programs as they relate to sustainable agriculture.

2. Brief description of the target audience

As intended by the Land Grant perspective, CTAHR's "targeted" clients for this program in **teaching** are the undergraduate and graduate students in agriculture and allied fields. Targeted clients for **research** are peers and extension specialists. Clients for **extension specialists** are CTAHR's county extension agents and the counterpart professional personnel of sister state and federal agencies (such as the Hawai'i State Departments of Agriculture, Health, and Land and Natural Resources, and the USDA Natural Resources Conservation Service – there are a whole bunch of human service groups here too). Clients for **extension agents** are potential and existing farmers/producers and their organizations (such as the Hawai'i Association of Soil and Water Conservation Districts, Hawai'i Macadamia Nut Association, Hawai'i Papaya Industry Association, and the Hawai'i Farm Bureau Federation), packing houses and shippers, extension colleagues, and other members of the community who are involved in the agriculture sector.

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 | 14000 | 8000 | 1000 | 175 |
| 2008 | 1251 | 3695 | 82 | 373 |

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

Patent Applications Submitted

Year Target

Plan: 2

2008: 1

Patents listed

John Cho; Colocasia Esculent #2005-23, Plant patent filed 1/4/08.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

| | Extension | Research | Total |
|------|-----------|----------|-------|
| Plan | 15 | 30 | |
| 2008 | 16 | 58 | 74 |

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V(F). State Defined Outputs

Output Target

Output #1

Output Measure

Number of workshops, research/field day demonstrations conducted

| Year | Target | Actual |
|------|--------|--------|
| 2008 | 135 | 226 |

Output #2

Output Measure

Published information such as extension newsletters, fact sheets, videos, and other publications

| Year | Target | Actual |
|------|--------|--------|
| 2008 | 220 | 71 |

Output #3

Output Measure

Stakeholder participation in on-farm cooperative trials

| Year | Target | Actual |
|------|--------|--------|
| 2008 | 12 | 112 |

Output #4

Output Measure

Number of publications

| Year | Target | Actual |
|------|--------|--------|
| 2008 | 30 | 74 |

Output #5

Output Measure

Presentations at international and national meetings

| Year | Target | Actual |
|------|--------|--------|
| 2008 | 20 | 39 |

Output #6

Output Measure

Number of diagnostic samples analyzed

| Year | Target | Actual |
|------|--------|--------|
| 2008 | 12000 | 11807 |

Output #7

Output Measure

Number of grant proposals submitted.

| Year | Target | Actual |
|------|--------|--------|
| 2008 | 25 | 60 |

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V(G). State Defined Outcomes

| O No. | Outcome Name |
|-------|--|
| 1 | Increased awareness of best management practices to promote environmentally responsible agricultural and landscape management |
| 2 | Adoption of best management practices to promote environmentally responsible agricultural and landscape management |
| 3 | Number of people completing non-formal education programs |
| 4 | Number of agency professionals, including extension agents who actually implement or install demonstration or similar programs for clientele education |
| 5 | Number of people who adopt one or more recommended practices |
| 6 | Number of commodities with increased exports |
| 7 | Number of commodities where reliance on imports is reduced |
| 8 | Total dollar value of grants and contracts obtained. |

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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

Natural Disasters (drought, weather extremes, etc.)

Economy

Appropriations changes

Public Policy changes

Government Regulations

Competing Public priorities

Competing Programmatic Challenges

Brief Explanation

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

1. Evaluation Studies Planned

Before-After (before and after program)

During (during program)

Evaluation Results

Key Items of Evaluation