

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

#### Program # 5

##### 1. Name of the Planned Program

Health and Wellness of Hawaii's Families and Communities

Reporting on this Program

### V(B). Program Knowledge Area(s)

#### 1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
131	Alternative Uses of Land	0%		7%	
201	Plant Genome, Genetics, and Genetic Mechanisms	15%		0%	
404	Instrumentation and Control Systems	0%		3%	
511	New and Improved Non-Food Products and Processes	0%		3%	
701	Nutrient Composition of Food	0%		5%	
702	Requirements and Function of Nutrients and Other Food Components	0%		13%	
703	Nutrition Education and Behavior	61%		5%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	24%		0%	
724	Healthy Lifestyle	0%		21%	
802	Human Development and Family Well-Being	0%		13%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%		9%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	0%		17%	
806	Youth Development	0%		4%	
	<b>Total</b>	100%		100%	

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

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

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	4.0	0.0

<b>Actual Paid</b>	4.9	0.0	3.2	0.0
<b>Actual Volunteer</b>	39.0	0.0	0.0	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
81059	0	145523	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
572694	0	592930	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
348116	0	100847	0

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

**1. Brief description of the Activity**

An aging population, economic duress, and social and cultural factors affecting food choice all contribute to social, environmental, and health stress in Hawaii. Iron deficiency, obesity, and diabetes are common conditions in Pacific populations; and appropriate choice, handling and preparation of locally available foods are topics requiring integrated research and extension efforts. Analysis of available data indicates that non-anemic iron deficiency is particularly common, with a host of possible negative effects, and may generally escape clinical diagnosis. Seaweed (limu) is an under-utilized vegetable in Hawaii, and prior work identified 10 seaweeds demonstrated greater iron content per gram than spinach; with nori containing twice the iron of spinach, and locally grown red ogo containing 10-fold more iron. However, research in FY2014 indicated that many of these seaweeds, including red ogo do not provide more bioavailability of iron than spinach, due to their low iron absorption efficiency. Notable exceptions were nori and sea lettuce, which provided 3 and 5-fold more iron availability per gram dry matter than spinach. Moreover, vitamin C increased iron bioavailability by over 200% in nori and sea lettuce, although it had no effect on other seaweeds.

Studies on the nutritive value and beneficial dietary effects of other under-utilized local food plants in FY2014 found that bitter melon juice improves glucose and lipid metabolism, improved chronic inflammation, and also prevented weight gain in mice fed a high-fat diet. Mechanistic studies are in progress, and this area of research is particularly important in Hawaii, where Native Hawaiians and Pacific Islanders have more than twice the rate of obesity-associated type 2 diabetes compared to Caucasians, and are more than five times more likely to die from the disease.

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

The target clients are the general public. However, some programs, such as the expanded Food and Nutrition Program and the Supplemental Nutrition Assistance program were geared toward specific groups such as low income families and families on food stamps. Specialized programs are also targeting seniors

and youth. High risk groups include minority populations, Pacific Islanders, obese and diabetic individuals.

**3. How was eXtension used?**

The CTAHR Nutrition Education for Wellness (NEW) Program participates in the national eXtension project "Families, Food & Fitness" through which web based information is available from CES nationwide by incorporating the program's 6 focus messages in statewide training.

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

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	2580	4400	1565	580

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	30	26	56

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of outreach activities and events conducted

Year	Actual
2014	37

**Output #2**

**Output Measure**

- Presentations at international and national meetings.

<b>Year</b>	<b>Actual</b>
2014	12

**Output #3**

**Output Measure**

- Grant proposals submitted.

<b>Year</b>	<b>Actual</b>
2014	17

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of people trained and who receive their pesticide applicators license
2	Number of people who changed their behavior to better their health
3	Number of people who increased their knowledge in health and wellness through outreach activities
4	Total dollar value of grants and contracts obtained.

**Outcome #1**

**1. Outcome Measures**

Number of people trained and who receive their pesticide applicators license

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	0

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

**Issue (Who cares and Why)**

Individuals who want or are required to know how to apply pesticides properly.

**What has been done**

Short courses, newsletters, and study guides educated people about proper pesticide use.

**Results**

Individuals received training and new licenses or recertification, and apply pesticides safely and correctly.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
{No Data}	null

**Outcome #2**

**1. Outcome Measures**

Number of people who changed their behavior to better their health

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	798

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

**Issue (Who cares and Why)**

Residents who want healthier lifestyles.

**What has been done**

Workshops, demonstrations, and presentations educate people about how to have a healthy lifestyle.

**Results**

Residents improve their health through adoption of improved health practices.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
701	Nutrient Composition of Food
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being

**Outcome #3**

**1. Outcome Measures**

Number of people who increased their knowledge in health and wellness through outreach activities

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	2495

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

**Issue (Who cares and Why)**

Health and wellness of families and communities requires that scientific information be presented to the public in ways that they can grasp and use to modify their behavior.

**What has been done**

Workshops, extension publications, informal training and we-based information has been developed and implemented.

**Results**

Hawaii's families and communities have the opportunity to achieve healthier lifestyle and improve wellness.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
701	Nutrient Composition of Food
703	Nutrition Education and Behavior
724	Healthy Lifestyle
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

**Outcome #4**

**1. Outcome Measures**

Total dollar value of grants and contracts obtained.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	704893

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

**Issue (Who cares and Why)**

Extramural funding is needed to augment program funds for health and wellness.

**What has been done**

Grant funds were applied for and received.

**Results**

Health and wellness programs and extension outreach were expanded with the additional grant funds.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
131	Alternative Uses of Land
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

## **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**

- When the economy is weak, public and private funding decreases and is more difficult to obtain.
- When funding has decreased, other issues may be considered priorities and compete for available funds.

## **V(I). Planned Program (Evaluation Studies)**

### **Evaluation Results**

All projects conducted under this program were peer-reviewed before initiation. Annual progress reports were collected and evaluated by Associate Deans for research and extension. Funds were not released for those projects which did not show tangible progress.

### **Key Items of Evaluation**

None.