

# Human Nutrition, Diet Adequacy, Health and Wellbeing

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

### 1. Name of the Planned Program

Human Nutrition, Diet Adequacy, Health and Wellbeing

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

### 1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
604	Marketing and Distribution Practices	5%		20%	
701	Nutrient Composition of Food	0%		10%	
702	Requirements and Function of Nutrients and Other Food Components	0%		10%	
703	Nutrition Education and Behavior	50%		20%	
704	Nutrition and Hunger in the Population	15%		20%	
723	Hazards to Human Health and Safety	20%		10%	
724	Healthy Lifestyle	10%		10%	
	<b>Total</b>	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
<b>Plan</b>	10.0	0.0	5.0	0.0
<b>Actual</b>	32.9	0.0	5.8	0.0

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

Extension		Research	
Smith-Lever 3b & 3c 1602760	1890 Extension	Hatch 574869	Evans-Allen 0
<b>1862 Matching</b> 1322952	<b>1890 Matching</b> 0	<b>1862 Matching</b> 574869	<b>1890 Matching</b> 0
<b>1862 All Other</b> 11094509	<b>1890 All Other</b> 0	<b>1862 All Other</b> 1792034	<b>1890 All Other</b> 0

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

### **1. Brief description of the Activity**

Activities under the sub goal "To determine the effects of dietary and environmental factors on human health and disease" include cell culture and piglet studies to determine whether soy isoflavone could reduce the ability of rotavirus to infect cells; development of an improved lycopene extraction method from tomato cell culture that provides plant scientists, food scientists, and natural product chemists with an optimized method for lipophilic compound extraction [and thus enhance our understanding of potential mechanisms of how tomato carotenoids improve health outcomes]; a study that showed that both low protein and high fructose affects insulin signaling pathway and adiposity, indicating a profound effect of macronutrient composition on energy metabolism [understanding the mechanism of macronutrient effects on fat deposition and energy metabolism will contribute to improving dietary recommendations for optimal health]; and a study which has shown that fresh broccoli contains a cofactor that causes ingested glucoraphanin to form inactive nitrile in place of bioactive sulforaphane - and that steaming for 2-4 minutes can destroy the cofactor without destroying the myrosinase enzyme, thus enhancing sulforaphane production from a broccoli meal.

A significant investment of Extension's effort is focused on helping limited resource families and youth improve knowledge of nutrition practices through the Family Nutrition Program and developing materials that are shared through the Wellness Ways website. Specific programs developed and offered to youth include "Get Up and Move," a series of meeting guides that can be used with youth groups that include brief nutrition and physical activity information, physical activities, and healthy snacks focused on increasing youths' physical activity to 60 minutes per day and the "Healthy Moves for Healthy Children" program focused on helping pre-schoolers to encourage motor skill development and healthy snacking. "Live Well Be Well" is new program in the pilot stage that addresses holistic self-management for adults with any type of ongoing health condition [s]. The program meets once a week for six-seven weeks and is taught by trained lay-leaders and professionals.

A number of Extension programs focus on chronic diseases including osteoporosis, heart disease, and diabetes. "Dining with Diabetes" was taught as a three-part Extension program that combines lecture, food demonstrations, activities, and samples of healthy foods. In addition, a second series "Eating Well with Diabetes," a three-part program following the format of Dining with Diabetes, is also offered. One time diabetes programs include "Eating to Reduce the Risk of Diabetes", "Diabetes and the Holidays", and related topics on awareness and managing diabetes. A bi-monthly newsletter "Diabetes Lifelines" is sent via mail to over 10,000 subscribers including agencies. Two websites also make information available to the public. The "Your Guide to Diet and Diabetes" site provides information in both English and Spanish to clientele on a variety of diabetes-related topics at <http://www.urbanext.uiuc.edu/diabetes2> [over 27,000 hits per month]. The "Diabetes Recipes" website had 169,045 visits to the English site and 217,608 visits to the Spanish website during the 2007-2008 program year at <http://www.urbanext.uiuc.edu/diabetesrecipes/>.

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

Parents, physicians, the soy industry, infant formula manufacturers, the medical and nutrition communities, individuals with chronic malabsorption, fiber producers/manufacturers around the country, producers and consumers of organic foods, the general public who have interests in tomato products and prostate cancer, plant scientists, food scientists, natural product chemists who work on secondary metabolite production and plant tissue extraction, and adults with type two diabetes. Extension programming focused on consumers and youth, especially those with limited resources, Spanish-speaking, or dealing with chronic diseases.

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

**1. Standard output measures**

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

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	291000	608000	342000	408000
2008	786679	87750	587899	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**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	27	
2008	0	18	18

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

**Output Target**

**Output #1**

**Output Measure**

Number of completed research projects.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	5	3

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

<b>O No.</b>	<b>Outcome Name</b>
1	Number demonstrating or reporting KASA changes.
2	Number demonstrating or reporting behavior changes.
3	Improving Patient Compliance With Long-Term Insulin Therapy
4	Increased Knowledge Of Safe And Nutritional Food Preparation Skills
5	Increased Knowledge Of Types Of Foods That Affect Blood Glucose Level

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

Appropriations changes

Competing Programmatic Challenges

**Brief Explanation**

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

**1. Evaluation Studies Planned**

Before-After (before and after program)

**Evaluation Results**

Evaluation results are given in the indicator on increased knowledge of safe and nutritional cooking skills [for youth].

**Key Items of Evaluation**