

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

**Program # 4**

**1. Name of the Planned Program**

Childhood Obesity -- Nutrition and Childhood Obesity

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
502	New and Improved Food Products	5%		0%	
603	Market Economics	0%		13%	
607	Consumer Economics	0%		3%	
701	Nutrient Composition of Food	15%		5%	
702	Requirements and Function of Nutrients and Other Food Components	15%		22%	
703	Nutrition Education and Behavior	40%		34%	
724	Healthy Lifestyle	25%		23%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	293.0	0.0	2.0	0.0
Actual Paid Professional	159.9	0.0	1.0	0.0
Actual Volunteer	33028.0	0.0	0.0	0.0

2. Institution Name: Cornell University

**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	208825	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	261821	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**2. Institution Name:** NY State Agricultural Experiment Station

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1329429	0	4158	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1329429	0	1816	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

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

**1. Brief description of the Activity**

This is a statewide multi-disciplinary extension program with emphases cutting across many content areas and audiences. Campus-based faculty and extension associates provide leadership and participate in work teams with CCE educators. Programs draw upon Cornell and other academic research. All are

involved in designing, implementing and evaluating tailored outreach. Trained Extension nutritionists and parenting and 4-H educators lead local program activities. Researchers in horticulture and agricultural economics and marketing investigate options for improving local production and direct marketing of fresh

produce into areas where they are currently lacking. Programs for children and youth are delivered through a variety of settings: 4-H camps, clubs, fairs and afterschool as well as through child-parent/grandparent involvement projects and in-school student education. Family-focused programs promote a positive parent/care-giver-child feeding relationship and planning for good nutrition and physical activity. Extension staff collaborate with community leaders to improve the local environment for healthy eating and active living. Activities include sequential learning events, "community workshops" and engagement with community and civic leaders to improve the environment for nutrition and wellness and support of the local food system.

## 2. Brief description of the target audience

Audiences reached include: moderate and low income families; 4-H youth; children in and out of school; nutrition, health, and family professionals; front-line family workers; school food service staff; community leaders; and government and agency leaders at the local, state, and federal level.

## 3. How was eXtension used?

Cornell Cooperative Extension supports and promotes eXtension communities of practice, the eXtension public site and the professional development offered through eXtension.org. Staff across the state are encouraged to be involved in appropriate COPs, and the link to eXtension is promoted on the front page of the Cornell Cooperative Extension public staff site. Currently 347 staff are registered users of eXtension. Staff have cited the usefulness of COPs - particularly where there are identified national projects - such as with Financial Security for All COP.

- Examples of participation in COPs in this plan of work area include:
- Healthy Food Choices in Schools
- Childhood Obesity and Nutrition
- Families, Food, and Fitness
- Creating Healthy communities

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

### 1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	294094	1855201	371324	2361160

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

#### Patent Applications Submitted

Year: 2013

Actual: 0

#### Patents listed

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

#### Number of Peer Reviewed Publications

2013	Extension	Research	Total
<b>Actual</b>	5	325	330

## V(F). State Defined Outputs

## **Output Target**

### **Output #1**

#### **Output Measure**

- (4.1a) # children, youth, parents/caregivers and other adults reached via healthy eating and active living programs  
Not reporting on this Output for this Annual Report

### **Output #2**

#### **Output Measure**

- (4.1b) # of women and health providers completing education programs addressing healthy weight gain during pregnancy and breastfeeding  
Not reporting on this Output for this Annual Report

### **Output #3**

#### **Output Measure**

- (4.1c) #of extension educators and/or volunteers participating in training programs to enhance obesity prevention educational opportunities for children and youth, and adults who care for them  
Not reporting on this Output for this Annual Report

### **Output #4**

#### **Output Measure**

- (4.2a) # of program participants reached to improve their food resource management and food security  
Not reporting on this Output for this Annual Report

### **Output #5**

#### **Output Measure**

- (4.3a) # of community and/or government/ agency members completing educational programs on issues related to childhood obesity prevention programs and policy related to healthy living  
Not reporting on this Output for this Annual Report

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

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

O. No.	OUTCOME NAME
1	(4.1d1) of children and youth who demonstrate knowledge or skill gains related to healthy eating and active living
2	(4.1e) #of women and health providers demonstrating increased knowledge or skill gains related to healthy weight gain during pregnancy and breastfeeding
3	(4.1f) # of extension educators or volunteers demonstrating knowledge or skill gains related to healthy eating and active living programs for obesity prevention
4	(4.1g) # of youth program participants documented to have applied healthy eating and/or active living, recommendations
5	(4.1h) # of adult program participants documented to have applied healthy eating and/or active living, recommendations
6	(4.1i) #of extension educators and/or volunteers reporting increased delivery of healthy living-related programs.
7	(4.1j) # of vulnerable children and youth documented to have reduced incidence of overweight and obesity as a result of participating in relevant educational programs.
8	(4.1k) # of adult program participants documented to have reduced one or more chronic disease indicators associated with overweight.
9	(4.2b) #of program participants who demonstrate knowledge or skill gains related to food resource management and food security
10	(4.2c) # of program participants who adopt food resource management and/or food security practices
11	(4.2d) # of program participants documented to have improved food resource management and/or food security
12	(4.3b) # of program participants who demonstrate increased knowledge or skill gains related to childhood obesity prevention programs and policies
13	(4.3c) # of program participants documented to have increased involvement in public/community childhood obesity prevention actions
14	(4.3d) # of participating schools and/or communities documented to have made practice and/or policy changes to promote healthy eating and active living
15	(4.3e) # of participating schools and/or communities reporting decline in incidence of childhood overweight and/or indicators of chronic diseases associated with obesity.
16	(4.1d2) # parents/caregivers and other adults who demonstrate knowledge or skill gains related to healthy eating and active living
17	Encouraging Youth to Make Healthier Food Choices

**Outcome #1**

**1. Outcome Measures**

(4.1d1) of children and youth who demonstrate knowledge or skill gains related to healthy eating and active living

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2013	25303

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**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

**Outcome #2**

**1. Outcome Measures**

(4.1e) #of women and health providers demonstrating increased knowledge or skill gains related to healthy weight gain during pregnancy and breastfeeding

Not Reporting on this Outcome Measure

**Outcome #3**

**1. Outcome Measures**

(4.1f) # of extension educators or volunteers demonstrating knowledge or skill gains related to healthy eating and active living programs for obesity prevention

Not Reporting on this Outcome Measure

**Outcome #4**

**1. Outcome Measures**

(4.1g) # of youth program participants documented to have applied healthy eating and/or active living, recommendations

**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>
2013	27506

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**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

## **Outcome #5**

### **1. Outcome Measures**

(4.1h) # of adult program participants documented to have applied healthy eating and/or active living, recommendations

### **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>
2013	21627

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

### **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

## **Outcome #6**

### **1. Outcome Measures**

(4.1i) #of extension educators and/or volunteers reporting increased delivery of healthy living-related programs.

Not Reporting on this Outcome Measure

## **Outcome #7**

### **1. Outcome Measures**

(4.1j) # of vulnerable children and youth documented to have reduced incidence of overweight and obesity as a result of participating in relevant educational programs.

Not Reporting on this Outcome Measure

## **Outcome #8**

### **1. Outcome Measures**

(4.1k) # of adult program participants documented to have reduced one or more chronic disease indicators associated with overweight.

Not Reporting on this Outcome Measure

## **Outcome #9**

### **1. Outcome Measures**

(4.2b) #of program participants who demonstrate knowledge or skill gains related to food resource management and food security

Not Reporting on this Outcome Measure

## **Outcome #10**

### **1. Outcome Measures**

(4.2c) # of program participants who adopt food resource management and/or food security practices

### **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>
2013	59224

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
701	Nutrient Composition of Food
703	Nutrition Education and Behavior

**Outcome #11**

**1. Outcome Measures**

(4.2d) # of program participants documented to have improved food resource management and/or food security

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2013	15621

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
701	Nutrient Composition of Food
703	Nutrition Education and Behavior

**Outcome #12**

**1. Outcome Measures**

(4.3b) # of program participants who demonstrate increased knowledge or skill gains related to childhood obesity prevention programs and policies

Not Reporting on this Outcome Measure

**Outcome #13**

**1. Outcome Measures**

(4.3c) # of program participants documented to have increased involvement in public/community childhood obesity prevention actions

**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>
2013	310

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

#### Outcome #14

##### 1. Outcome Measures

(4.3d) # of participating schools and/or communities documented to have made practice and/or policy changes to promote healthy eating and active living

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2013	129

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #15**

**1. Outcome Measures**

(4.3e) # of participating schools and/or communities reporting decline in incidence of childhood overweight and/or indicators of chronic diseases associated with obesity.

Not Reporting on this Outcome Measure

**Outcome #16**

**1. Outcome Measures**

(4.1d2) # parents/caregivers and other adults who demonstrate knowledge or skill gains related to healthy eating and active living

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2013	26408

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**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

**Outcome #17**

**1. Outcome Measures**

Encouraging Youth to Make Healthier Food Choices

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2013	0

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

**Issue (Who cares and Why)**

Since 1980, obesity among children and adolescents has almost tripled, and currently about 17% of children and adolescents aged 2 to 19 years are obese. Childhood obesity is a risk factor for many chronic diseases that reduce quality of life and increase health care costs, estimated to total \$14 billion in direct health expenses annually. Some critics say part of the problem is the content of school lunches. School lunches are eaten by 75% of students, provide approximately a third of weekday calories and typically have 40 to 120 calories more than bagged lunches. Interventions to reduce obesity during childhood are particularly important, because obese adolescents are more likely to become obese adults.

**What has been done**

Developing Strategies to encourage Healthier Food Choice in New York School Cafeterias (Wansink, Just, and Payne: ended in 2012) analyzed how the school lunchroom environment influences food choices among middle and high school students. Lunchroom makeovers were undertaken and consisted of moving fruits, vegetables and white milk to more visible positions on the lunch line; using color, decoration, and placement to draw attention to targeted items; and using suggestive selling through verbal prompts and signs. Pilot tests of lunchroom interventions were conducted in four school districts, followed by a larger project of 50 New York City Schools and six New York State school districts.

**Results**

Results from studies showed that environmental interventions do impact students' food choices in the lunchroom. As a result of the intervention, students took between 13% and 47% more fruits and vegetables. And they ate more of the fruits and vegetables that they put on their trays, resulting in decrease in food waste of between 10% and 22%. This knowledge, bundled into the Smarter Lunchroom Movement, has been disseminated to over 3,000 child nutrition

professionals, including school foodservice directors and managers; health, academic, and extension professionals; registered dietitians and extension educators through live presentations and webinars.

This and other research around childhood obesity prevention and the effectiveness of related educational programs have influenced the quality and types of educational programs provided through Cornell Cooperative Extension. In 2013 698,446 individuals participated in programs focused on food and nutrition offered by Cornell Cooperative Extension, representing a 56% increase since 2011. During that same time there has been a 25% increase in the number of youth who demonstrate knowledge and skill gains about food and nutrition and a 16% increase in those reporting that they have applied healthy lifestyle recommendations such as increased activity and making healthier food and beverage choices as a result of training participation.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

##### Brief Explanation

Local governments, an important funder for local extension staff, face diminished revenues and increased mandated costs outside of the non-mandated extension programs. Thus having professionals available to implement new research-based programming is not always possible. A very slow recovery from the recession and pockets of high unemployment in the state affect how public and private funds are allocated to educational activities. In some instances, family subsistence is a higher priority than improved nutrition and opportunities for physical activity. There has been more support and research interest in ecological approaches to childhood obesity prevention, including support for policy changes such as eliminating non-nutritious snacks from after school activities, interest in school and community gardens and active community approaches such as walking school buses. At the same time changes to publicly funded food and nutrition program funding structures has impacted the ability to fully engage program management and hands-on staff in working in communities. Some program staff have been furloughed and services ceased while funding decisions were made.

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

## Evaluation Results

In general, the evaluation approach included in our plan can more accurately be described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. Program documentation results are aggregated in a statewide accountability system which includes both qualitative and quantitative data for reporting and helping us to better understand our impacts.

Cornell Cooperative Extension works with the Cornell Office of Research and Evaluation (CORE) to strengthen evaluation practice and build evaluation capacity in CCE. CORE has developed a Protocol for evaluation that takes a systems approach, recognizing that individual programs and their evaluations are part of larger program portfolios and are shaped by needs and context at multiple levels of the Extension system. CORE has tested and refined this Protocol in partnership with CCE programs since 2006. A key step in the Protocol is to develop program models, in both familiar columnar form as logic models and in a visual form called pathway models. These models form the basis for focusing evaluation efforts in Extension programs.

Beginning in 2013, CORE and CCE partnered to initiate program modeling and evaluation planning at the level of the statewide Plans of Work. This effort, which is ongoing, will contribute to a framework for programming and evaluation at multiple levels. The Protocol is also being integrated into professional development in CCE, in collaboration with CCE leadership, to promote consistent approaches to evaluation of county-based, regional, and state-wide programs. CCE organizational development efforts are also being devoted to organizing common high-quality measures that can be used by a wide range of programs where applicable.

Some of the food and nutrition programs implemented through Cornell Cooperative Extension are the result of larger grant/contract supported projects that require specific evaluation strategies. Programs like EFNEP, Eat Smart New York, Choose Health Action Teens, Choose Health at Camp are evaluated with consistent measures and strategies across the state. This information now feeds into our State Defined Outcomes related to Nutrition and Childhood Obesity.

- The Expanded Food and Nutrition Education Program (EFNEP) and Supplemental Nutrition Assistance Program - Education (SNAP-Ed) are nutrition education programs designed to enhance the quality of life for a low-income ( $\leq 185\%$  of poverty) participants and their families. EFNEP is provided to participants who are parenting, pregnant, or influencing the nutritional well-being of children under the age of 19 years, and who meet the income guidelines. SNAP-Ed is provided to any person who meets the income guidelines.
- Participants complete an assessment form at entry into the program and at exit. The question sets used are based on the content of classes delivered. Enrollment in the program is usually limited to 4 - 12 lessons, but may occasionally be longer, depending upon the needs and desires of the individual participant. The assessment form collects

demographic information, a maximum of 25 behavior checklist items and a 24-hour dietary recall. These collected data are entered into a web-based electronic database, specifically designed by the USDA to capture these evaluation data.

- The web-based system provides multiple levels of assessment on participant and program outputs. The web-based system provides individual assessment: providing output reports which summarize participant reported behaviors to use with program participants to facilitate awareness of current practices and improved practices, at the conclusion of the sessions. The web-based system provides aggregated reports of program participant data which summarizes output and outcome (reported behavior and diet changes) at the local county level. The web-based system then enables to aggregation of data at the state and federal levels, to facilitate program reporting and evaluation assessment at each of these levels.

- Participants reached through one-time education complete a form which captures demographic characteristics and an assessment of topic-specific intent to change behavior, e.g. intent to choose water and low-fat milk instead of sweetened beverages. Data will not be linked to participant's name or address. Data on enrolled participants are used to 1) assist staff in establishing goals and objectives with the participants for program delivery and 2) assess outcomes of the program. Aggregated data are shared with the Federal and State funding agencies at the end of each Federal Fiscal Year as required for Cornell University and Cornell Cooperative Extension to receive the Federal funding.

In 2013 the CORE cohort around statewide Plans of Work related to Nutrition, Food Safety and Security and Obesity Prevention identified the Choose Health Food Fun and Fitness program as a major initiative that will be the focus of a more systematic evaluation. The cohort is currently developing an evaluation plan for this specific new program, as it is expected to be disseminated widely to audiences across NYS once the pilot development stage is concluded. In addition, the Nutrition and Obesity Prevention Working Group developed an evaluation plan for exploring the nature of and extent to which the research-based ecological approach to obesity prevention is being incorporated into community outreach in CCE. This evaluation will be conducted in 2014.

### **Key Items of Evaluation**

See cross-cutting outcomes in state defined outcomes.