

V(A). Planned Program (Summary)**Program # 5****1. Name of the Planned Program**

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
607	Consumer Economics	0%		4%	
609	Economic Theory and Methods	0%		4%	
703	Nutrition Education and Behavior	100%		39%	
704	Nutrition and Hunger in the Population	0%		5%	
724	Healthy Lifestyle	0%		48%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	1.3	0.0	1.6	0.0
Actual Paid Professional	1.5	0.0	1.5	0.0
Actual Volunteer	0.2	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
54586	0	125120	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
112714	0	494640	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
119074	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- **Diabetes Education: eXtension leadership role in Diabetes CoP; fact sheets and web access**

- **Healthy Eating: Nutrition classes designed for a wide range of people, with an emphasis on national dietary guidance. Participants learn the latest information about how to choose a healthy diet, practice food safety and to incorporate physical activity into their day. Classes range from one to six sessions, with the topics tailored for the group requesting the program.**

- **Farm to School: strategy to increase children's fruit and vegetable consumption. New state regulation requires children to add (2) fruit/vegetables to their school lunches.**

- **Around the table with local food exposes participants to some of the many benefits of producing and consuming locally produced food. A cooperative effort of the Center for Sustainable Ag and the EFNEP program.**

- **Develop a better understanding of the mechanisms by which traits influence healthy diet behavior through a comparison of Chinese and U.S. college students.**

- **Develop a feasible, reliable and valid methodology to measure children's fruit and vegetable consumption in the school setting.**

2. Brief description of the target audience

- Age 13 - 18 Youth
- Age 25 - 60 Adult
- Age 46 - 65 Adult
- Age 60 - Senior
- Age 8 - 18 Youth
- Extension: Faculty/Staff
- Food Industry: Food Service Workers
- Public: Adults
- Public: Age 6-12 (Children)
- Public: Daycare Providers
- Public: Families with Limited Resources
- Public: General
- 4-H: Youth
- Pediatricians
- Clinicians
- College Students

Researchers

3. How was eXtension used?

Faculty member is serving as a leader in eXtension Diabetes CoP

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	200	20	215	0

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

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	8	4	12

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Conference
- Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Consultation

Year	Actual
2012	48

Output #3

Output Measure

- Consumer Publication

Year	Actual
2012	15

Output #4

Output Measure

- Curriculum
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Fact Sheets

Year	Actual
2012	10

Output #6

Output Measure

- Publication - Newprint

Year	Actual
2012	16

Output #7

Output Measure

- Train the trainer program
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- Workshop Series

Year	Actual
2012	8

Output #9

Output Measure

- Workshop - single session

Year	Actual
2012	8

Output #10

Output Measure

- Webpage (new and updated)

Year	Actual
2012	18

Output #11

Output Measure

- Research studies

Year	Actual
2012	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of people who have an increased preference for at least one fruit or vegetable.
2	Number of youth or adults who self report an increase in mastery of the life skills Healthy Lifestyle Choices and Decision Making.
3	Number the people that show an improvement in healthful eating practices
4	Number of methodologies that measure children's fruit and vegetable consumption in the school setting.
5	Number of research results that increase the understanding on the effect of food venue choice
6	Number of proven strategies that encourage exercise in first year college students.
7	Number of individuals who select and prepare a variety of produce to help prevent/manage disease and/or obesity.

Outcome #1

1. Outcome Measures

Number of people who have an increased preference for at least one fruit or vegetable.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	126

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that consuming locally produced food is beneficial to individuals, the environment and the local economy. Individuals often perceive that fresh, local food is more expensive and the fresh food may be and/or look unfamiliar. They also may not know how to prepare the produce. Many limited resource families do not access or use family coupons that can be used at farmers markets though they can be provided up to \$60 in family coupons.

What has been done

The University of Vermont Ctr for Sustainable Agriculture with Extension's EFNEP program delivered three series called Around the Table with Local Food. The program is a series of seven 2 1/2 hour lessons designed to teach families the benefits of including locally produced foods in their diets. Each class had a local farm partner, were provided an assortment of produce each week utilized in a cooking activity. Focus groups were asked for input on the series, the input was used in developing the current EFNEP curriculum.

Results

Responses from participants showed that the classes exposed them to some of the many benefits of producing and consuming locally produced foods. One participant from the Hardwick class stated, "I never knew that the vegetables at the farmer's market could be cheaper than (at) the grocery store." And from the Newport class, "I'll get farm to family coupons from WIC next year now that I know one of the farmers that sells at the farmer's market" and "I never thought to use zucchini for anything other than sweet bread." Each family that takes the \$60 in family coupons is increasing the families consumption of healthy local foods and up to \$60/family goes into the local economy directly to the farmers. Some materials developed in this pilot project are used in the current EFNEP curriculum.

4. Associated Knowledge Areas

KA Code **Knowledge Area**
703 Nutrition Education and Behavior

Outcome #2

1. Outcome Measures

Number of youth or adults who self report an increase in mastery of the life skills Healthy Lifestyle Choices and Decision Making.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Number the people that show an improvement in healthful eating practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	210

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obese children are more likely to grow to be obese adults. Obesity is hitting youth so hard that health experts warn that this generation of children will be the first to have a shorter life expectancy than their parents. Prevention programs are valuable and can reduce costs associated with obesity and chronic disease management. 4-H Afterschool offers a wealth of research-based, ready-to-use curricula including the healthy living nutrition-based programs.

What has been done

4-H Afterschool engages youth in long-term, structured learning in partnership with adults. By recruiting a 4-H Afterschool program educator from the Vermont Youth Development Corps AmeriCorps State program, UVM Extension has been able to offer more programs to schools. Afterschool coordinators who offered programs in the past two years were surveyed.

Results

Afterschool coordinators observed the following changes with their students: 100% were willing to try new foods and able to identify healthy foods; 60% now take part in daily physical activity, eats fruit and vegetables when served; and 33% of the students eat fewer high fat snack foods. If preventative measures are effectively implemented, and if obese or would-be obese children instead grow into healthy adults, the U.S. could see a return on investment of almost \$200 billion (\$1226/adult in Vermont) in adult healthcare costs saved in 2018. (1) (1)?The Future Costs of Obesity: National and State Estimates of the Impact of Obesity on Direct Health Care Expenses,? America?s Health Rankings (Nov. 2009), <http://www.nccor.org/downloads/CostofObesityReport-FINAL.pdf>.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

Outcome #4

1. Outcome Measures

Number of methodologies that measure children's fruit and vegetable consumption in the school setting.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

USDA regulations made significant changes to school meals in 2012. Children are now required to take a fruit or vegetable with their school lunches. The study is to see if the new regulations were effective and look at what children are eating.

What has been done

The study is examining the feasibility and validity of measuring school children's fruit and vegetable consumption, as estimated by direct observation and digital photography, against the gold standard of actual food weight in a variety of elementary school cafeteria environments. The aim is to develop a reliable, feasible and valid tool to measure children's fruit and vegetable consumption in a variety of school cafeteria settings.

Results

The investigators have completed the first phase of data collection and data analysis is underway. Peer reviewed papers are under review from this project.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5

1. Outcome Measures

Number of research results that increase the understanding on the effect of food venue choice

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The amount of time spent preparing food and cleaning up since the 1960s has dropped by nearly 50%. This had led to more people eating unhealthy, such as processed foods. The primary research interest is the effect of food venue choice on BMI for health weight, overweight, and obese individuals.

What has been done

The project investigates the effects of food venue choice and time use on obesity in men and women using structural equation modeling (SEM) techniques. The scientist used a cross-sectional study linking the American Time Use Survey(ATUS) and the Consumer Expenditure survey (CE) using structural equation modeling (SEM).

Results

Food venue and time use choices impact men and women differently. Estimates indicate that decreasing television screen time by 30 minutes per day, and replacing it with food preparation, activity, and mindful eating can save the health care industry one half billion dollars.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
609	Economic Theory and Methods
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

Outcome #6

1. Outcome Measures

Number of proven strategies that encourage exercise in first year college students.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The results of this study can be used by insurance companies or employers who may be interested in providing financial incentives for health behavior change.

What has been done

Students were randomly assigned to one of three groups; control group (no incentives); continued incentives (received incentives in the fall and spring semesters) and discontinued incentives (only received incentives in the fall semester). Students were given goals for fitness center use and the goals progressively increased over the semester as did the incentives. Measurements (weight, height, exercise enjoyment and internal and external motivation) were measured at baseline, end of fall semester, beginning of spring semester and end of spring semester. The results of this study can be used by insurance companies or employers who may be interested in providing financial incentives for health behavior change.

Results

Incentives significantly increased the number of students who met fitness center goals. When incentives were removed for the discontinued group, they stopped attending the fitness center. Attendance at the fitness center did not help to prevent weight gain seen in first year students. Incentives did help to improve attendance to the fitness center for first year students. Incentives

need to be sustained in order to be effective.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #7

1. Outcome Measures

Number of individuals who select and prepare a variety of produce to help prevent/manage disease and/or obesity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	78

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Latino farm workers are critical to the viability of our Agriculture industry providing a willing labor force. But life is not easy for the migrant workers. 98% of the approximate 140 Latino farm workers in Franklin County do not have access to transportation, relying on others to provide even the most basic of needs. The majority depend on their employers to purchase all food items. Almost half of workers surveyed reported that they do not know what food items are available in local grocery stores.

What has been done

In collaboration with the Migrant Education Program, the VT Migrant Farmworker Solidarity Project, and local vegetable farmers a garden project loosely organized last year was organized more thoroughly. As a result 65 farm workers, 21 farms had home gardens with over 40 different types of produce being grown and harvested.

Results

Participants have more autonomy over some of their food choices and have access to fresh produce that they themselves care for. Almost 80 individuals, by access to their home gardens selects and prepares a variety of produce, a proven practice for improving health and in the prevention and care of chronic illness. It is estimated that health care costs for chronic disease treatment account for over 75% of national health expenditures. [1] Centers for Disease Control

and Prevention. Rising Health Care Costs Are Unsustainable. April 2011.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
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 Programmatic Challenges

Brief Explanation

Research; Increase cost of food lead to consumer changes.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

- Incentives significantly increased the number of students who met fitness center goals.
- USDA regulations made significant changes to school meals in 2012. Children are required to take a fruit or vegetable with their lunch.

Outcome measures in this report outline mid-level changes occurring due to the latest research and education in the field. Staff are employing varying techniques to gather data post-event to determine changes made.

Narratives with the outcome measures highlight some of those results and explain the value of those changes.

Stakeholder input continues to inform program efforts direction and content, format and accessibility.

Key Items of Evaluation