

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
604	Marketing and Distribution Practices	4%		0%	
607	Consumer Economics	4%		6%	
609	Economic Theory and Methods	0%		6%	
703	Nutrition Education and Behavior	21%		52%	
704	Nutrition and Hunger in the Population	7%		6%	
724	Healthy Lifestyle	19%		30%	
805	Community Institutions and Social Services	45%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	1.5	0.0
Actual Paid	0.2	0.0	1.4	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
57579	0	121286	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
96823	0	380083	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
184553	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Local Food - working with communities of resettled refugee farmers with limited english language skills and new to the county. Continuing assessment of their needs to meet their goals to boost their food security and develop food-based microenterprises.

Healthy Eating: - Grant support guided effort to work with school service professionals and training programs for Childcare Centers

Senior Farm Share: work with senior housing directors who deliver multi-session nutrition workshop for low-income Senior Farm Share participants to increase their consumption of local, fresh produce by enhancing participant's skills to prepare fresh fruits and vegetables and gain nutritional knowledge based on the Dietary Guidelines. Data is being collected soliciting input on why they participate and what is of the greatest benefit to them.

Puentes/Bridges: work with latino farm workers and farm employers in collaboration with the UVM medical school and nursing students providing needs related to health care access or home health, provide health and nutrition education, and food access - farm visits, phone, consultation.

Farm to Plate: unifies business, government and non-profits to scale up local food production and consumption. Network of more than 160 organizations working to achieve goals to re-localize food production and distribution.

Web-based digital imaging training package; dietary assessment work on USDA National School Lunch Program.

Studies to determine time use patterns for food purchasing, preparation/cleanup, eating/drinking and traveling associated with food consumption.

2. Brief description of the target audience

- Agriculture: Beginning Farmers
- Agriculture: Migrant workers
- Communities: Educators
- Communities: Resettled Refugees

- Community: Health Entities
- Extension: Faculty/Staff
- Public: College Students
- Public: Daycare Providers
- Public: Health Providers
- School nutrition experts
- Researchers
- Policymakers

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	624	30	0	0

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
Actual	3	14	17

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Consultation

Year	Actual
2014	171

Output #2

Output Measure

- Consumer Publication
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- Curriculum
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Fact Sheets
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Publication - Newprint

Year	Actual
2014	18

Output #6

Output Measure

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

Output #7

Output Measure

- Workshop Series
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- Workshop - single session

Year	Actual
2014	35

Output #9

Output Measure

- Webpage (new and updated)
Not reporting on this Output for this Annual Report

Output #10

Output Measure

- Presentation
Not reporting on this Output for this Annual Report

Output #11

Output Measure

- Class/course session

Year	Actual
2014	45

Output #12

Output Measure

- Evaluation

Year	Actual
2014	7

Output #13

Output Measure

- Research projects

Year	Actual
2014	5

Output #14

Output Measure

- Radio

Year	Actual
2014	7

Output #15

Output Measure

- Television

Year	Actual
2014	1

Output #16

Output Measure

- Research Poster

Year	Actual
2014	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number the individuals who incorporate one or more healthful eating practices and/or physical activity to prevent/manage disease and/or obesity
2	Number of individuals who use food planning and wise shopping behaviors improve diet and the supply of food
3	The number of individuals who select and prepare a variety of produce to help prevent/manage disease and/or obesity
4	Number of methodologies that measure children's fruit and vegetable consumption in the school setting.
5	Number of individuals who take steps to meet daily needs for health, education, social and personal wellbeing
6	Number of proven strategies that encourage exercise in first year college students.

Outcome #1

1. Outcome Measures

Number the individuals who incorporate one or more healthful eating practices and/or physical activity to prevent/manage disease and/or obesity

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Number of individuals who use food planning and wise shopping behaviors improve diet and the supply of food

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	36

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Poor eating habits during childhood, that frequently result in overweight and obesity, are a serious concern across the U.S. Developing healthy eating habits early in life provides the best chance of preventing ongoing and future health problems. Childcare centers provide an excellent opportunity for early dietary intervention. Because childcare providers are the gatekeepers to the nutrition provided within these centers, they are an appropriate target group for relevant education and mentoring.

What has been done

Green Mountain Healthy Kids Challenge (GMHKC) was a grant-funded project with a component designed to expand and enhance training programs for childcare centers enrolled in the federally funded Child and Adult Care Food Program (CACFP). This was done by utilizing three behavior-focused strategies, including: training and technical assistance to enable preparation and distribution of nutritious and appealing meals to children, providing fun and interactive nutrition education, and building community support for creating healthy food environments.

Results

A representative of each childcare center enrolled in the project completed a rubric self-assessment at the beginning (April 2012) and end (April 2013) of their project participation. Pre and post rubrics comparisons found broad categories of change were focused on 1) nutrition standards, 2) the eating environment, 3) nutrition education, 4) physical activity, and 5) communication, promotion and monitoring. The majority of responses were found to have improved, addressing topics such as menu planning, staff modeling of healthy behaviors, food service personnel qualifications and training, physical environments that promote safe play, and promotion of healthy food choices. Providing healthy options in a child's daily environment support lifelong healthy habits.

4. Associated Knowledge Areas

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

Outcome #3

1. Outcome Measures

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

Not Reporting on this Outcome Measure

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 Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

USDA National School Lunch Program implemented regulation requiring children to select a fruit or vegetable with their lunch meal. Assessing whether these efforts result in children's increased consumption of fruit or vegetable intake or simply lead to increased waste is vital to evaluate the impact.

What has been done

Research team tested the feasibility, reliability, and validity of methods assessing children's fruit and vegetable consumption.

Results

It was determined that digital imaging (DI) was reliable to assess children's fruit and vegetable consumption during school lunch and DI and O (observation) were valid for assessing mean consumption but less precise for estimating individual consumption.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5

1. Outcome Measures

Number of individuals who take steps to meet daily needs for health, education, social and personal wellbeing

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	204

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Vermont is experiencing a growing immigrant and refugee population who often has a strong history of growing their own food. Vermont's very different climate, cost of land, this populations ability to communicate outside of their community, knowledge of local crops and other issues are challenges. These challenges can threaten their food access, security and overall well being. Extension programs can bridge some of these barriers.

What has been done

The New American Farmer program began in 2013 with programming continuing in 2014 to help resettled refugees meet their food production and processing needs. A survey was conducted to identify future needs for land and technical assistance. Interpreter and cultural liaison services were provided to improve communication and access to support. Through workshops and discussion group meetings best marketing strategies and niche market opportunities were identified.

Results

As a result of programming >50 growers established productive farming plots demonstrating many best practices, 31 growers stated they saved money by growing their own food and used these savings for other household expenses. One participants said, "we can pick healthy vegetables instead of spending money. We definitely eat healthier..?" In addition to feeling connected to their culture and community, 10 growers obtained markets securing future income in addition to growing their own food. Efforts contributed to the establishment of multiple culturally important crop operations such as rice, spices and medicinals. In addition to improved access to culturally important food, business opportunities for their crop operations, they have brought a part of their culture to the growing local food movement.

4. Associated Knowledge Areas

KA Code	Knowledge Area
604	Marketing and Distribution Practices
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
2014	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The majority of first year college students do not meet exercise guidelines. Study examines weight change of first year students to determine the use of monetary incentives to help motivate exercise and when discontinued will that exercise remain.

What has been done

117 Students were randomly assigned to control, discontinue incentive, and continued incentive conditions for 12 weeks.

Results

When monetary incentive was discontinued fitness center goal achievement decreased from 63% of goals met to 3% of goals met.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Government Regulations
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Staffing changes in Extension and grant funding have shifted programming from nutrition education for those with diabetes and some youth programming to working with underserved latino migrant farmers and a growing immigrant and resettled refugee population. Migrant farmers often have challenges with access to health care and food including, importantly, access to familiar foods. The immigrant and resettled refugee farming communities face challenges of food insecurity and access as well with additional need for support for issues that enable them to grow their own food, often an important part of their culture. Some desire to explore options enabling them to begin food

enterprises..

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluation Study #1

Poor eating habits during childhood, that frequently result in overweight and obesity, are a serious concern across the U.S. Developing healthy eating habits early in life provides the best chance of preventing ongoing and future health problems. Given the number of young children currently being cared for outside of the home, childcare centers provide an excellent opportunity for early dietary intervention. Because childcare providers are the gatekeepers to the nutrition provided within these centers, they are an appropriate target group for relevant education and mentoring.

Green Mountain Healthy Kids Challenge (GMHKC) was a grant-funded project with a component designed to expand and enhance training programs for childcare centers that were enrolled in the federally funded Child and Adult Care Food Program (CACFP). This was done by utilizing three behavior-focused strategies, including: training and technical assistance to enable preparation and distribution of nutritious and appealing meals to children, providing fun and interactive nutrition education, and building community support for creating healthy food environments.

A representative of each childcare center that was enrolled in the project was asked to complete a 14-page rubric self-assessment at the beginning (April 2012) and end (April 2013) of their project participation. Pre and post rubrics were compared to identify any statistically significant changes in the responses over time. The broad categories of change were focused on 1) nutrition standards, 2) the eating environment, 3) nutrition education, 4) physical activity, and 5) communication, promotion and monitoring. Pre-post comparisons were done using a statistical approach (Wilcoxon sign ranked test) to identify significant changes over the year. The vast majority of responses were found to have improved in the positive direction, addressing topics such as menu planning, staff modeling of healthy behaviors, food service personnel qualifications and training, physical environments that promote safe play, and promotion of healthy food choices.

Evaluation study #2

Healthy eating and physical activity patterns that are established at an early age are essential for students to achieve their full academic potential. Vermont Nutrition and Fitness Policy guidelines provide schools with the most recent information on best practices. However, many schools participating in the National School Lunch Program need on-going training, technical assistance, mentoring and financial support to effectively convert nutrition and physical activity resources and activities into best practices that improve student food choices and physical activity.

Team Nutrition Training Grant funds were used to provide training and technical assistance to foodservice professionals through:

- multiple workshops on the 2010 Dietary Guidelines;
- a three day institute in June 2012;
- technical assistance provided through year-long mentoring; and
- support from a graduate student of UVM's Masters in Dietetics program for each school program.

Additionally, training to improve nutrition education in the classroom was provided by

offering multiple workshops and mentoring for school teams on integrating nutrition education into the curriculum.

School menus (including details on recipes) that depicted one week in May 2012 and one week in May 2013 were provided by the nine participating school teams so that potential changes from one year to the next could be identified. Given current nutrition priorities as defined in the U.S. Dietary Guidelines for Americans, offerings of fruits, vegetables and whole grains were the focus of this analysis. A significant and positive difference in the menu offerings was identified for three of the five categories being assessed. Significant differences were found in whole grains served at breakfast and lunch, as well as vegetables served at lunch.

School teams were also asked in June 2012 and June 2013 to complete a seven-page self-assessment rubric that contained questions designed primarily to determine the extent to which a school believed they were meeting the Healthier U.S. School Challenge guidelines provided by USDA. Schools tended to overestimate how well they were meeting the Guidelines in the self-assessment completed in 2012, but significant improvement occurred by the second self-assessment in 2013.

Key Items of Evaluation

Evaluation #1

Green Mountain Healthy Kids Challenge (GMHKC) was a grant-funded project with a component designed to expand and enhance training programs for childcare centers that were enrolled in the federally funded Child and Adult Care Food Program (CACFP). The vast majority of responses were found to have improved in the positive direction, addressing topics such as menu planning, staff modeling of healthy behaviors, food service personnel qualifications and training, physical environments that promote safe play, and promotion of healthy food choices.

Evaluation #2

Team Nutrition Training Grant funds were used to provide training and technical assistance to foodservice professionals. School menus (including details on recipes) that depicted one week in May 2012 and one week in May 2013 were provided by the nine participating school teams so that potential changes from one year to the next could be identified.

A significant and positive difference in the menu offerings was identified for three of the five categories being assessed. Significant differences were found in whole grains served at breakfast and lunch, as well as vegetables served at lunch.

School teams were also asked in June 2012 and June 2013 to complete a seven-page self-assessment rubric that contained questions designed primarily to determine the extent to which a school believed they were meeting the Healthier U.S. School Challenge guidelines provided by USDA. Schools tended to overestimate how well they were meeting the Guidelines in the self-assessment completed in 2012, but significant improvement occurred by the second self-assessment in 2013.