

Towne's Harvest Garden

& Community Supported Agriculture Program



Annual Report

2013



Locally, Sustainably and Educationally Grown
MSU Friends of Local Foods



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Tim Reusch, Marketing and Outreach Managers

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For more information about Towne's Harvest, please visit: <http://www.townesharvest.montana.edu>

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Chaz Holt and Alex Ettinger, Production Managers
Tim Reusch, Marketing Manager



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EXECUTIVE SUMMARY

The **Towne's Harvest Garden (THG)** is a project that was initiated by **MSU Friends of Local Foods** Student Organization. Friends of Local Foods was formed in the fall of 2006 to bring a diverse group of students and faculty together to raise awareness about local foods and to encourage sustainable lifestyles on campus and in the community. Since that first year of production, Towne's Harvest has become a cornerstone of the Sustainable Food & Bioenergy Systems Bachelor's Degree Program. Additionally, Towne's Harvest operates as a Community Supported Farm, distributing produce to members, Gallatin Valley Food Bank clients, patrons of the MSU campus farm stand, MSU students, and residents of nearby rural communities via the Community Food Truck. The mission of Towne's Harvest is to be a source of locally, sustainably, and educationally grown food for the campus and members of the surrounding community.

During the 2013 season, Bill Dyer of the Plant Sciences and Plant Pathology Department supervised production at Towne's Harvest, and Alison Harmon of the Department of Health and Human Development supervised marketing. The Production Manager (Chaz Holt), who was hired in 2010 continued on his 4th year as a full-time classified employee of MSU. He was responsible for planning and overseeing all production activities. The Marketing Manager, Tim Reusch focused on accounting, supervision of students and communication with the CSA and community partners. THG Practicum Students were involved in planting, weeding, harvesting, and distribution, along with other volunteers and Montana Dietetic Interns.

In 2013 the Towne's Harvest expenses for administration, capital investment, equipment repairs/fuel, facility rental, marketing and production supplies totaled **\$15,283**. Sources of Income included the sale of CSA shares (\$18,763), sales to the University Foodservice (\$914) Campus Farm Stand sales (\$2,359), Community Food Truck Sales (\$1,013), Student CSA Sales (\$592), and Miscellaneous sales for coursework and to Market Day Foods (\$1,504). Income from all sources totaled **\$25,242** at the end of the year.

Labor was performed by the production manager, marketing manager, 22 THG Summer practicum students, 9 Culinary Marketing Students, 4 Spring and 7 Fall THG interns, 18 Montana Dietetic Interns, volunteers, and organizations visiting the farm.

Towne's Harvest produces a variety of herbs and flowers as well as beans, beets, broccoli, cabbage, carrots, cauliflower, Swiss chard, cucumbers, mixed salad greens, kale, kohlrabi, leeks, arugula, melons, onions, parsnips, peas, peppers, potatoes, pumpkins, radishes, spinach, squash, and tomatoes. The total yield for 2013 was approximately **20,241 lbs of produce** which was distributed to CSA members, patrons of the MSU campus farm stand, patrons of the student CSA, to the University Foodservice, through the Community Food Truck, to the Culinary Marketing Class and the Montana Dietetic internship, to the Food Bank, and as donations to other area organization fundraisers.

More than 50 students were directly involved in production, distribution and marketing at Towne's Harvest in 2013, including students in the THG internship (fall and spring) and summer practicum, Culinary Marketing students, dietetic interns, graduate students and volunteers.

ABOUT TOWNE'S HARVEST

What is Towne's Harvest?

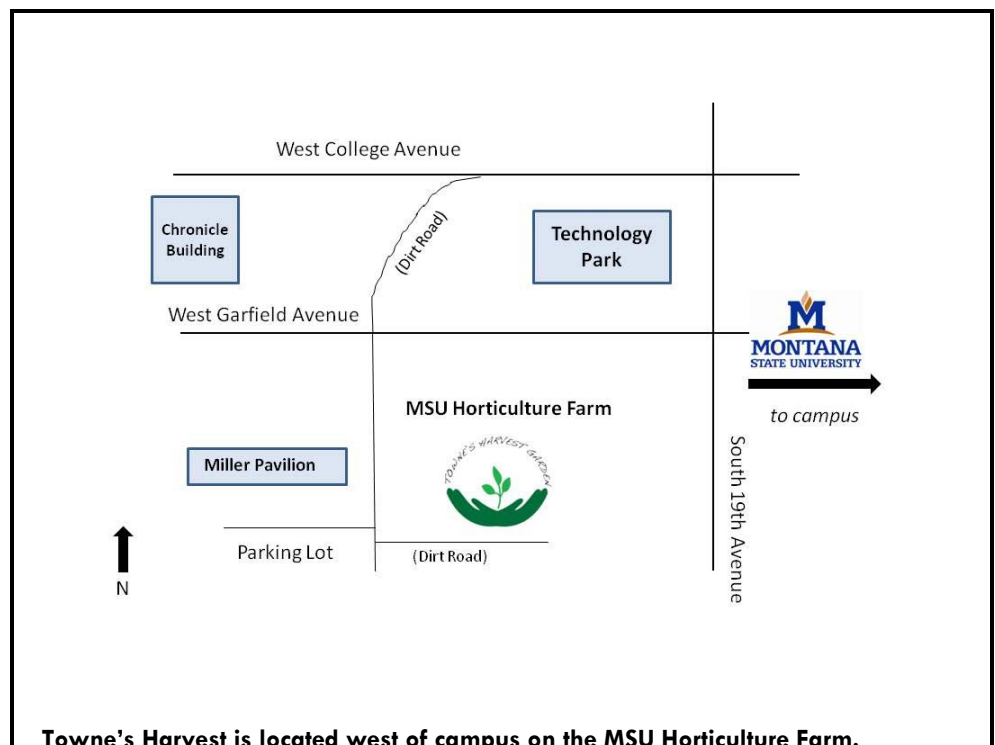
Towne's Harvest Garden is a project that was initiated by MSU Friends of Local Foods Student Organization. Friends of Local Foods was formed in the fall of 2006 to bring a diverse group of students and faculty together to raise awareness about local foods and encourage sustainable lifestyles on campus and in the community. During the summer of 2007, Friends of Local Foods collaborated with the Gallatin Valley Food Bank to support a 2-acre diversified vegetable farm called Towne's Harvest. Towne's Harvest Garden also represents a collaborative effort among students, faculty, and administrators of the MSU Colleges of Agriculture (COA) and Education, Health & Human Development (EHHD) to promote sustainable agriculture and local foods at MSU and in the Gallatin Valley. The garden is located at the MSU Bozeman Area Research and Teaching Farm (on the Horticulture Farm), west of campus. Currently, the primary purpose of Towne's Harvest is serve as an outdoor classroom and cornerstone field experience for students enrolled in the interdisciplinary undergraduate degree program *Sustainable Food and Bioenergy Systems* and related graduate programs. In addition, Towne's Harvest strives to be a source of locally, sustainably, and educationally grown food for members of the garden, clients of the Gallatin Valley Food Bank, the MSU campus and food service, and residents of the surrounding community of Bozeman.

Why Towne's Harvest?

The name of the garden connects the history of the land to the present day. Towne is the surname of one of five farmers who formerly owned land which was eventually deeded to MSU. The land where the Horticulture Farm and the Towne's Harvest Garden is located has been nicknamed Towne's farm for several decades. The piece of land which became the garden actually belonged to E. Broox and the Ella Martin Farm. It was deeded to MSU in 1909. Students, faculty and staff involved in the Towne's Harvest project will continue to be good stewards of the farm so that future generations of Montanans can grow food on this land.

Community Supported Agriculture

CSA is an acronym for Community Supported Agriculture. CSA members pay a set price prior to the growing season for a share of the harvest. By paying ahead, members buy into the local food system and share in the risk of farming. Members in return receive a weekly supply of fresh produce. CSAs are a great way for eaters (members) to build relationships with their produce growers. They know exactly where their food is coming from and can see how it is grown. The superior quality and taste of locally grown and freshly harvested produce is a significant benefit to members who consequently learn how to prepare and consume unique vegetables. Producers benefit from having a more stable source of income, by having capital to spend on supplies before the growing season, and by sharing some of the economic risk of farming with other members of the community. Additional information is provided on the Towne's Harvest Web-site: <http://townesharvest.montana.edu>



MISSION, VISION & VALUES

MSU Friends of Local Foods Mission:

To raise awareness about local foods and encourage sustainable lifestyles on campus and in the community.

The Friends of Local Foods Vision:

- *That students think before they eat and find ways to eat more sustainably.*
- *That the University Food Service offers sustainable food choices in all campus eateries and residence halls.*
- *That there is a sustainable campus farm, "Towne's Harvest," that serves as a model for other institutions and as a place of learning for the community.*
- *That there be coursework that integrates sustainability, agriculture, and nutrition across the disciplines using Towne's Harvest Garden as a classroom.*
- *That students choose MSU as their university on the strength of its sustainable food program.*
- *That students impact the decision making process related to sustainable food systems at MSU.*

Towne's Harvest Garden Mission:

To offer interdisciplinary education opportunities, be an outdoor classroom for SFBS, and a source of locally, sustainably, and educationally grown food for the campus and members of the surrounding community.

The Towne's Harvest Vision:

- *That Towne's Harvest will be a valuable and permanent part of MSU that is enthusiastically supported by the administration.*
- *That Towne's is interdisciplinary center of education for any MSU department and is integrated into MSU as a classroom, research laboratory, and source of good food for the campus community*
- *That Towne's inspires students from diverse backgrounds to become involved in sustainable food production and consumption.*
- *That Towne's continues to diversify crop production to include a large variety of vegetables, fruits, and animals*
- *That Towne's strengthens community food security in Bozeman and the surrounding area, increasing access to fresh nutritious produce for all.*
- *That Friends of Local Foods remains a strong and active supporting student organization.*
- *That Towne's continue to address all aspects of sustainability including ecology, economic viability, and social justice.*



THE VALUE OF TOWNE'S HARVEST GARDEN

Educational Tool

Towne's Harvest Garden is a valuable resource and educational tool for Montana State University and the greater Bozeman community. The benefits of this student-operated farm are numerous and far-reaching. Towne's Harvest serves as a model for sustainable, small scale agriculture in Montana, supports the growing demand among students and other consumers for locally produced food, and provides an attractive hands-on "classroom" for both current and prospective students across multiple academic disciplines. Additionally, THG serves as a research laboratory for studying the science of alternative production methods, economic viability, the efficiency of various distribution scenarios, and impacts on individual health, family dynamics, and community food security. As a venue for teaching and research, Towne's Harvest has been the central focus of externally funded projects. Currently, Towne's Harvest is a cornerstone of the interdisciplinary undergraduate degree program, *Sustainable Food and Bioenergy Systems*. Students enrolled in this degree program spend at least one summer or semester completing the practicum course or internship and taking additional coursework associated with Towne's Harvest Garden, (See <http://www.sfbs.montana.edu>). Additionally, starting in 2011, interns in the Montana Dietetic Internship spend a two-week rotation at Towne's Harvest August-October. The concentration of this accredited dietetic internship program is Sustainable Food Systems.

Demonstration of Sustainable Agriculture and Local Food Systems

Towne's Harvest provides a unique opportunity for students, faculty, volunteers and other community members to support small scale producers who practice sustainable agriculture and promote Montana's agricultural heritage. THG farmers produce food naturally using crop rotation, companion planting, and natural pest and weed control. Marketing produce locally dramatically reduces the need for handling, processing and transporting food. This decreases our collective reliance on fossil fuels and other natural resources and ensures quality produce that is nutritious, safe and affordable.

Interdisciplinary Collaboration

Towne's Harvest represents a collaboration between the College of Agriculture and the College of Education, Health, and Human Development. Additionally, the Towne's project has attracted students and faculty from a wide variety of academic disciplines including Architecture, Agroecology, Plant Sciences, Food & Nutrition, Business, Political Science, Engineering and Native American Studies.

Student Recruitment

The interdisciplinary nature of the Towne's Harvest project creates an attractive showcase and is a powerful tool for recruiting students, faculty and staff at MSU and for helping MSU establish its position as a national leader in sustainable agriculture. With demand for sustainable campus-based food options increasing, Towne's Harvest will help ensure that MSU remains in step with current student desires. As stated above, it is already contributing to the *Sustainable Food and Bioenergy Systems* degree program.

Campus & Community Outreach

THG links MSU with the surrounding community by serving as a Community Supported Agriculture farm that provides approximately forty to eighty families from a variety of socio-economic backgrounds with fresh, locally grown produce. Towne's Harvest also enjoys a strong relationship with the Gallatin Valley Food Bank. Since its initiation, THG has been providing the Gallatin Valley Food Bank with 2-8,000 lbs of food per year. In 2011 THG began to collaborate with the Food Bank on a "Community Food Truck" which was funded in 2012 and 2013 by the AARP foundation. We strive to continue to serve the community in this way in the most appropriate and efficient manner as possible. THG offers produce for sale on campus on a weekly basis during the summer just south of the SUB, by the "noodle". Additionally, we began a student CSA in 2012, and will continue to try to improve service to MSU's student population who want access to fresh local produce. Each summer since 2007 THG has hosted its annual "Towne's Harvest President's Lunch" during which we show appreciation for MSU administrators, community partners, and donors.

PARTNER ANALYSIS

Student Organizations

- MSU Friends of Local Foods (FLF)
- ASMSU Sustainability Center
- MSDA, Food Day
- Network of Environmentally Conscious Organizations (NECO)



MSU Administration, Departments, and Faculty

- Office of the President
- College of Agriculture
 - Department of Land Resources and Environmental Sciences
 - Department of Plant Sciences and Plant Pathology
 - Department of Animal and Range Sciences
- College of Education, Health and Human Development
 - Department of Health and Human Development



MT Agriculture Experiment Station

- Horticulture Farm

MSU University Food Service

- Montana Made Program
- MontanaFest
- Montana Mondays
- MSU Catering
- Local Food Fair



Organizations & Programs

- Alternative Energy Resources Organization (AERO)
- Bozeman Community Food Co-op
- Gallatin Valley Food Bank
- Montana WIC Farm Direct
- Montana Organic Association
- Western Sustainability Exchange
- Supplemental Nutrition Assistance Program (SNAP)
- AARP
- MT State Department of Ag Organic Certification
- Market Day Foods



2013 ORGANIZATION FOR THG

FACULTY & STAFF	ROLE AT THG	SUPERVISES	TEACHES
SFBS Faculty Coordinator (Dean Williamson & Alison Harmon)	Oversee outreach and teaching; Compile annual report; Facilitate communication among all stakeholders;		SFBS 296; Practicum in summer (opt.) Interns in Fall and Spring
Alison Harmon (HHD)	Oversee Marketing (Sales) and MDI	Marketing Manager (Tim Reusch); CFT Manager (Marcy Gaston)	MDI Interns; assist with SFBS 296
Bill Dyer (PSPP)	Oversee Production	Production Manager (Chaz Holt)	Field Trip; assist with SFBS 296
Carmen Byker (HHD)	Oversee Community Food Truck Outreach		Culinary Marketing Farm to Table
Bruce Maxwell (LRES)	Oversee Research		Field Trip; assist with SFBS 296
Patrick Hatfield (ANRS)	Oversee Research		
New PSPP faculty	Research		TBD; assist with SFBS 296
David Baumbauer (COA/PSPP)	Hort Farm Manager	Hort Farm Technician	Organic Market Gardening; Green house Management
Chaz Holt	THG Production Manager	Assistant Production Manager (Alex Ettinger); Interns/ Practicum Students/ MDI	Field Supervisor for SFBS 296 and Interns
Alex Ettinger	THG Assistant Production Manager	Interns/ Practicum Students/ MDI	Assists with SFBS 296 and Interns
Tim Reusch	Marketing/Outreach Manager	Interns/ Practicum Students/ MDI	Assists with SFS 296 and Interns
Marcy Gaston	Community Food Truck Manager	Interns/ Practicum Students/ MDI	N/A
Hort Farm Technician (TBA)	Hort farm grounds		N/A
Practicum Students	Production/ marketing/ outreach		N/A
THG Interns	Production/ marketing/ outreach		N/A
MT Dietetic Interns	Production/ marketing/ outreach		N/A
Gallatin Valley Food Bank	Co-organizes Community Food Truck; donations from THG		N/A

2013 EXPENDITURES AND INCOME

Total Operating Expenditures for 2013 season: \$15,283.00*

- Administration: \$846.00
- Capital Investment: \$35.00
- Equipment Repairs/Fuel: \$1898.00
- Marketing: \$2,353
- Production Supplies: \$8,680
- Facility Rental: \$1,471

* Does not include manager salaries or stipends

Total Income for 2013 season: \$25,242.00

- CSA Shares (garden starts \$350; Spring greens \$540; Summer/Fall \$5390; Both shares \$12, 240): \$18,763
- Campus Farm Stand: \$2,360,00
- Community Food Truck: \$1,013.00
- Student CSA: \$592.00
- Market Day: \$413.00
- MSU Foodservice: \$914.00
- MSU Courses/MDI: \$897.00
- Miscellaneous Sales: \$289.00



2013 CROP LIST

The following herbs, vegetables, and flowers were grown at Towne's Harvest Garden during the 2012 season. For a complete list of all crops and variety names see the Appendix of this report.

VEGETABLES:

Arugula
Beans
Broccoli
Onions
Cabbage
Savoy Cabbage
Carrots
Cauliflower
Chard
Chives
Cilantro
Corn
Cucumbers
Edamame
Garlic
Garlic Scapes
Head Lettuce
Kale
Kohlrabi
Leeks
Mixed Braising Greens
Parsnip
Peas
Peppers
Potatoes
Pumpkins
Winter Squash
Radish
Red Onion
SunChokes
Salad Mix
Spinach
Summer Squash
Tomatoes
Tomatillos
Mixed yellow squash
Gourds Specialty
Mizuna Mix

HERBS:

Basil
Fennel
Dill
Mint
Parsley
Sorrel
Coriander

FRUITS:

Raspberries
Strawberries



STUDENT INVOLVMENT

Spring 2013 Interns:	4
Summer 2013 Practicum Students:	22
Culinary Marketing Students:	9
Fall 2013 Interns:	7
MT Dietetic Interns:	18
Graduate Students:	2
Community Food Truck Volunteers:	4
<u>Students in other courses</u>	<u>Not determined</u>
TOTAL:	66+



Morgan Cooper, MT Dietetic Intern, gives THG practicum students an introduction to safe food handling.

COMMUNITY SUPPORTED AGRICULTURE PROGRAM

CSA Membership

In 2013, Towne's Harvest offered a Garden Start share (7 members), a Spring Greens only share which began in May (4 members), a Summer/Fall only share which began in July (14 members), and option to participate in the Spring and Summer/Fall (24). We distributed 4 complimentary shares and had one member joined in mid-season. Only one share size was offered in the 2013 season, though some members chose to split shares. Distribution was on Wednesday afternoons from 4-7pm. Newsletters were provided weekly on the THG website.

Student CSA

A total of 118 food bags were distributed to students who came to the student CSA every Friday from noon –1pm.

FOOD BANK PARTNERSHIP & COMMUNITY FOOD TRUCK

The Community Food Truck, a partnership program between MSU, THG, and the Gallatin County Food Bank, operated on Tuesdays from July 16 to September 24, 2013. Four sites were chosen and paired up according to location. The sites alternated weeks. The sites for 2013 were Three Forks Senior Center, Gallatin Gateway Community Center, Belgrade Senior Center, and Hyalite Elementary School in Bozeman. Three Forks and Gallatin Gateway were paired together every other week. The CFT stopped in Three Forks from 12:15 to 2:00 and in Gallatin Gateway from 3:00 to 5:00. During the alternate weeks, the CFT went to Belgrade from 11:30 to 1:00 and to Hyalite Elementary School from 2:45 to 4:00.

The total sales for the 2013 season was \$1013. Through the help of students in the SFBS THG practicum and dietetics program, the food truck had many volunteers throughout the season. A total of 29 volunteers helped at the 4 locations.

Produce was sold at a 50% reduction compared to the farmer's market rates THG normally charges. A variety of produce and eggs were sold each week, depending on what was in season.

Many efforts were made to market the program to low-income seniors in each of the communities. Newspaper ads were printed, radio announcements were sent to various radio stations in the Gallatin Valley, press releases were sent to all the media outlets, and flyers distributed in each community. Local television stations and Bozeman Daily Chronicle covered the CFT by doing interviews with CFT operators, volunteers, and customers.

TOTAL SALES: \$1,013.00

CAMPUS FARM STAND

The Campus Farm Stand was held every Thursday from 3-6pm, mid-July through mid-October on the lawn in front of the SUB on Grant Avenue. Cash, checks, debit cards, credit cards, WIC and EBT benefits were accepted. Total income from the 2012 Campus Farm Stand season was **\$2,359.53**.

TOWNE'S HARVEST 2013 DISTRIBUTION SUMMARY

Distribution Avenues	
CSA Program	
MSU Campus Farm Stand	
Community Food Truck	
Culinary Marketing Class	
University Foodservice	
MT Dietetic Internship	
Restaurants	
Market Day Foods	
Student CSA	
Special Events	
Total =	20,241 LBS



2013 PRESIDENT'S LUNCH

Students enrolled in SFBS 445R/541: *Culinary Marketing: Farm to Table* prepared a most memorable meal for attendees of the 2014 THG President's Lunch held on July 18. Each main ingredient was obtained from the THG weekly harvest. Flowers decorated the tables. Short presentations were given by THG advisors, THG managers, MSU faculty, and SFBS students. A tour was provided by the David Baumbauer and Chaz Holt following the lunch.

Program

What's New at Towne's Harvest Garden in 2013
Sustainable Food & Bioenergy Systems Degree Program
Update
New Partnerships
Tour of Towne's Harvest Garden



MENU

Beverages: Strawberry Basil Cooler, Water
Soup: Bozeman Borscht
Salads: Braised Kale & Toasted Walnuts, Montana Mixed Greens, Crisp Strawberry & Spinach
Montana Grain: Pearled Barley with Rainbow Chard, Beets, & Love
Coup'De Ville Cuisine: Spinach & Herb Frittata, Deviled Eggs
Bread: Artisan Montana Rustic Loaf
Spreads: Herbed Goat Cheese, Bozeman Honey & Churned Butter, Towne's Green Chutney, Roasted Radish Hummus
Dessert: Summer Berry Clafoutis, Chocolate Mint Shortbread



SFBS AND TOWNE'S HARVEST PUBLICITY & PROJECT DISSEMINATION

2013 Popular print and internet publications:

Montana State University program named one of the 10 best college environmental programs in the U.S. (Montana Associated Technology Roundtables, Jan 31, 2013)
<http://www.matr.net/article-53971.html>

Peer Reviewed Publications:

Malone K., **Harmon A.**, Dyer W., Maxwell B., & Perillo C. (2013) Development and evaluation of an introductory course in sustainable food & bioenergy systems. *Journal of Agriculture, Food Systems, and Community Development*. Feb 2014 (1): 1-13. <http://dx.doi.org/10.5304/jafscd.2014.042.002> Available at: <http://www.agdevjournal.com/volume-4-issue-2/412-intro-course-sfbs.html?catid=155%3Aopen-call-papers>. Published on-line February 8, 2014.

RECENT FUNDING FOR TOWNE'S HARVEST GARDEN

2013-2014. MSU EFAC. Video camera for instructional videos. Bill Dyer and Alison Harmon.

2013. MSU Instructional Innovation Grant, MSU Office of the Provost and Vice President for Academic Affairs: Enhancing Student Understanding of Sustainable Food & Bioenergy Systems through the use of Videos in Coursework and Student Recruitment. Roles: Alison Harmon (PI), Bill Dyer (Co-PI). \$8,900.

2012-2013. AARP Foundation. *CAAAANS: Cultivating Accessible, Affordable, Adequate, and Appropriate Nutrition for Seniors*. Roles: C. Byker (MSU Project Director; Co-PD), A. Harmon (MSU Nutrition Education, Towne's Harvest Garden and Montana Dietetic Internship Student Intern Coordinator), with D. Tarabochia, L. Christenson (Gallatin Valley Food Bank; Co-PD), and T. Trizinski (Gallatin Valley Food Bank). (\$199,239; Montana State University Subaward is \$49,781). January 2012.

2012. MSU Strategic Investment Proposal, MSU Budget Council; Office of the President: *Sustainable Food & Bioenergy Systems: An Interdisciplinary Degree Program*. Roles: Bill Dyer (PI), Alison Harmon (Co-Principal Investigator). (\$105,000 annually for HHD and PSPP Departments). March 20, 2012.

2012. SFBS and Towne's Harvest Garde: A Proposal for Critical Equipment Needs at the MAES Horticulture Farm. Bill Dyer, Alison Harmon, Bruce Maxwell, and Pat Hatfield. \$13,446.

2014 PROPOSED ORGANIZATION FOR THG

FACULTY & STAFF	ROLE AT THG	SUPERVISES	TEACHES
Alison Harmon (HHD)	Oversee Marketing (Sales) and MDI	Marketing Manager (Tim Reusch); CFT Manager (Marcy Gaston)	MDI Interns; assist with SFBS 296
Bill Dyer (PSPP)	Oversee Production	Production Manager (Chaz Holt)	Field Trip; assist with SFBS 296
Janet Gamble (HHD)			Culinary Marketing Farm to Table SFBS 445R
Bruce Maxwell (LRES)	Oversee Research		Field Trip; assist with SFBS 296
Patrick Hatfield (ANRS)	Oversee Research		
Mac Burgess (PSPP)	Research; Teaching THG Practicum		SFBS 296; Practicum in summer Interns in Fall and Spring
David Baumbauer (COA/ PSPP)	Hort Farm Manager	Hort Farm Technician	Organic Market Gardening; Green house Management
Chaz Holt	THG Production Manager	Assistant Production Manager (Alex Etinger); Interns/ Practicum Students/ MDI	Field Supervisor for SFBS 296 and Interns
Kara Landofli	Marketing/Outreach Manager; compile 2014 annual report; facilitate communication with CSA members; operate and manage Com- munity Food Truck.	Interns/ Practicum Students/ MDI	Assists with SFS 296 and Interns
Hort Farm Technician (TBA)	Hort farm grounds		N/A
Practicum Students	Production/ marketing/ outreach		N/A
THG Interns	Production/ marketing/ outreach		N/A
MT Dietetic Interns	Production/ marketing/ outreach		N/A
Gallatin Valley Food Bank	Co-organizes Community Food Truck; dona- tions from THG		N/A

2014 PREDICTED EXPENDITURES AND INCOME

For a detailed record of actual THG income and expenditures, see past annual reports 2007-2012. The THG budget has been greatly simplified by the provision of permanent monies for paying the salary and benefits of the Production Manager. Alison Harmon will continue to oversee produce marketing at THG and Bill Dyer will continue to oversee production. Produce sales and other external funds will be used to cover the costs of production and marketing including supplies and labor expenses. Funds available in excess of our operational needs can be spent on capital improvements and student projects, as outlined below.

Towne's Harvest Proposed Budget 2014:

THG Projected Income from Produce Sales:

CSA memberships:	\$22,000
Student CSA:	\$ 1,000
Community Food Truck	\$ 1,000
Foodservice/Restaurant Sales:	\$ 3,000
Coursework/MDI Sales:	\$ 1,000
Campus Market:	\$ 3,000
TOTAL:	\$31,000

Staff and Supplies:

Production Supplies:	\$6,000
Equipment Repairs; Fuel	\$2,000
Communication, Promotion, Marketing	\$2,000
Facility Rental of PGC/Hort Farm	\$2,000
Marketing and Outreach Manager:	\$17,000 (year round)
TOTAL:	\$29,000

Other Optional Expenses as funds are available from produce sales or grants:

Capital Improvements
 Work Study Student
 THG Staff Travel
 Student Travel
 Student Projects
 Alumni Events
 Scholarships and Awards

RESEARCH AT TOWNE'S HARVEST



Casey Delphia, PhD. Entomology research assessing the effects of native flowering plants potential to draw in or create habitat for native pollinator species on vegetable crop yields

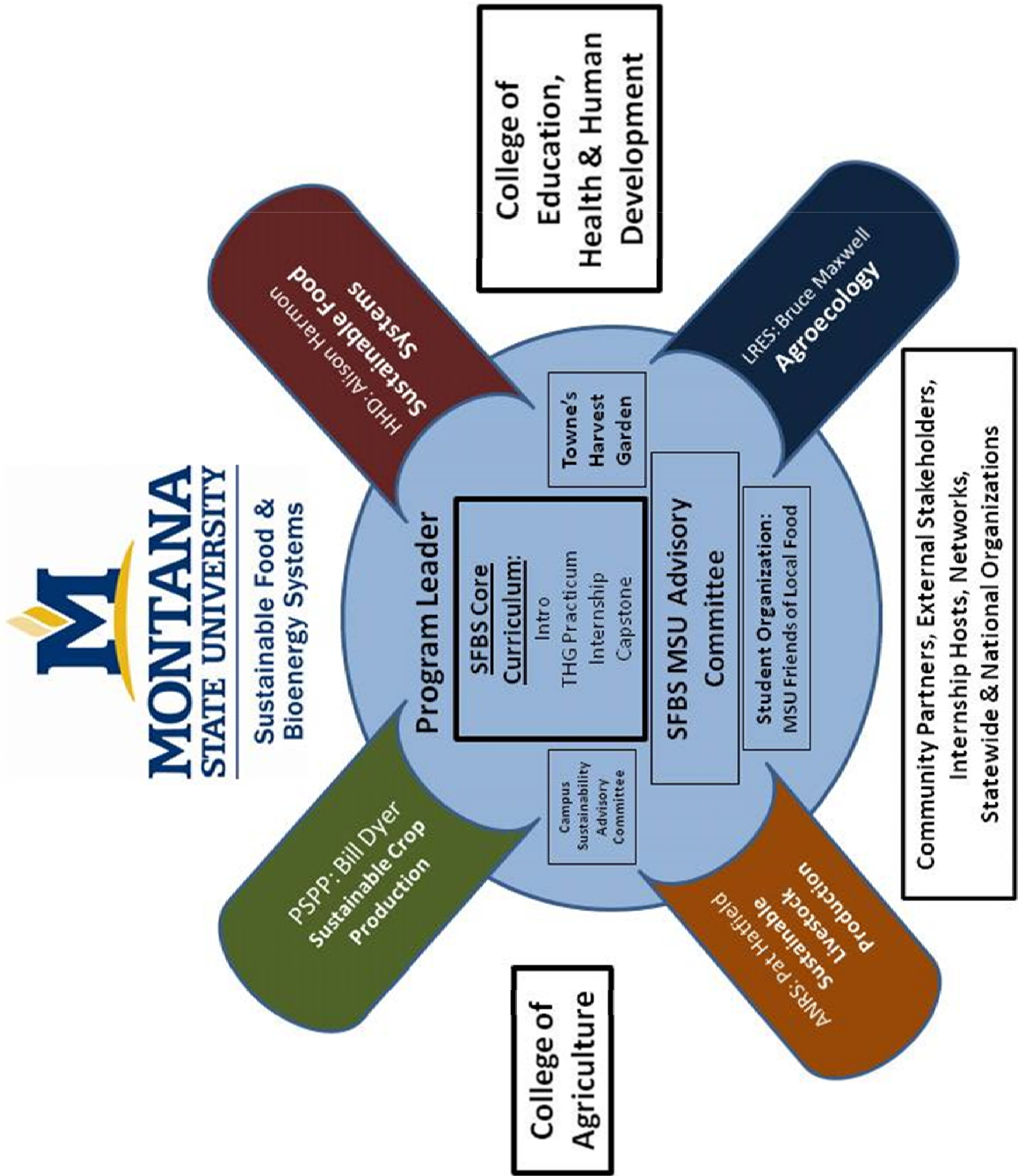
Sean McKenzie, M.S. candidate. Studying the comparisons between mowing or grazing cover crops and the relationships to beetle populations, soil temperature, soil moisture, weed diversities, weed densities.

Charles Holt, M.S. candidate. Studying the comparisons between mowing or grazing cover crops and the relationships between weed densities to multiple species of vegetable crops and their marketable yield; Solarization using black plastic for perennial weed control

Tony Hartsorn, PhD. Soil research looking at carbon emissions, timing and volume, from different compost mixtures incorporated into the soils; introductory soils lab class uses THG for observing soil attributes in the valley such as type, depth, and structure.

Karin Neff, PhD candidate. Studying the relationships between different soil treatments to soil microbial populations to antioxidant levels in select vegetable crops.

Michael Fox, MS Candidate in HHD. Studying the impact of fresh lettuces on blood sugar control.



APPENDIX

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Crop Planting Plan 2013
2013 Harvest Log: Certified Organic, Non Organic
CSA Distribution Totals
Michael Fox Research Poster
THG Application for the 2014 APLU Magrath Award



THG 2013 INCOME REPORT

Share Type	Amount	Cost	Total	Category	Amount	
Column1	Column2	Column3	Column4	Column5	Column6	Column7
Garden Start		7	50	350	Bridger Brewing	\$93
Spring Green		4	135	540	MSU Salad Department	\$914.21
Summer and Fall		14	385	5390	MDI Invoice	\$680.72
Both Share Options		24	510	12,240	Market Day Foods	\$413.66
Total		49		18,520	Local Produce Expo	\$28.50
					Campus Farm Stand	2,359.88
Non Paying Members					Food Truck	1,013.60
Maddy Pope		1	385		Rocky Creek	\$167
Dean Ransdell		1	510		President's Luncheon	\$216.37
Michael Fox		1	510		Student CSA	\$592
Zach George and Paul Gorsuch		1	385			
Mid Season Member						
Michael Brady		1	243.5			

CSA Total 18,763.50

Sales Total \$6,479

Income Total 25,242.50

2013 THG Expense Report

Sum of Amount	
Row Labels	Total
Administration	845.75
Capital Investment	35
Equipment Repairs/Fuel	1898.47
Facility Rental	1471.38
Marketing	2352.96
Production Supplies	8680
Grand Total	15283.56

2013 THG Expense Details

Date	Location	Amount	Payment For	Category	Details
2/1/2013	MSU Bookstore	\$ 74.15		Administration	Printer Ink
5/7/2013	Dollar Spree	\$ 41.86		Administration	Office Supplies
5/10/2013	Rosauers	\$ 15.08		Administration	Handwash Supplies
7/17/2013	Target	\$ 50.45		Administration	Office Supplies
8/2/2013	Rosauers	\$ 8.15		Administration	soap
8/8/2013	Rosauers	\$ 23.74		Administration	Supplies
8/13/2013	Zach George	\$ 52.00		Administration	Framed Map
11/6/2013	Office Depot	\$ 25.99		Administration	Office Supplies
9/17/2013	Quickbooks	\$ 93.24		Administration	January-September 2013
11/13/2013	Lil' Stinkers	\$ 287.50		Administration	Handwash Station Season costs
3/11/2013	Double Tree	\$ 152.09		Administration	Chaz Conference
3/11/2013	UC Dining Hall	\$ 9.50		Administration	Chaz Conference
7/9/2013	Three Forkes Senior Center	\$ 12.00		Administration	Lunch
4/11/2013	Mechanical Transplanter	\$ 35.00		Capitol Investment	mechanical transplanter
2/21/2013	Loaf N Jug	\$ 58.30		Equipment Repairs/Fuel	Gas
4/3/2013	Loaf N Jug	\$ 23.24		Equipment Repairs/Fuel	Gas
4/3/2013	Loaf N Jug	\$ 15.41		Equipment Repairs/Fuel	Gas
4/22/2013	Loaf N Jug	\$ 46.62		Equipment Repairs/Fuel	Gas
4/22/2013	Loaf N Jug	\$ 62.07		Equipment Repairs/Fuel	Gas
4/22/2013	Loaf N Jug	\$ 37.04		Equipment Repairs/Fuel	Gas
5/6/2013	Loaf N Jug	\$ 48.25		Equipment Repairs/Fuel	Gas
5/10/2013	Casey's Corner	\$ 32.17		Equipment Repairs/Fuel	Gas
5/10/2013	Casey's Corner	\$ 67.63		Equipment Repairs/Fuel	Gas
5/21/2013	Loaf N Jug	\$ 34.96		Equipment Repairs/Fuel	Gas
7/1/2013	Loaf N Jug	\$ 34.65		Equipment Repairs/Fuel	Gas
7/15/2013	Loaf N Jug	\$ 33.96		Equipment Repairs/Fuel	Gas
7/15/2013	Loaf N Jug	\$ 32.03		Equipment Repairs/Fuel	Gas

7/25/2013	Casey's Corner	\$	54.19	Equipment Repairs/Fuel	Gas
7/25/2013	Casey's Corner	\$	10.52	Equipment Repairs/Fuel	Gas
8/5/2013	Casey's Corner	\$	38.60	Equipment Repairs/Fuel	Gas
8/5/2013	Casey's Corner	\$	16.58	Equipment Repairs/Fuel	Gas
8/23/2013	Casey's Corner	\$	27.79	Equipment Repairs/Fuel	Gas
8/23/2013	Casey's Corner	\$	42.71	Equipment Repairs/Fuel	Gas
10/22/2013	Loaf N Jug	\$	42.82	Equipment Repairs/Fuel	Gas
7/23/2013	Kamp Implement	\$	55.68	Equipment Repairs/Fuel	Repairs
8/23/2013	Belgrade Sales Service	\$	173.75	Equipment Repairs/Fuel	Repairs
4/18/2013	Bill Boswell	\$	75.00	Equipment Repairs/Fuel	Weed wacker repair
2/8/2013	Bozeman Transmission		\$834.50	Equipment Repairs/Fuel	Truck Repair
1/31/2013	Plant Growth Center	\$	199.43	Facility Rental	Rent
4/30/2013	Plant Growth Center	\$	271.95	Facility Rental	Rent
8/13/2013	Ag Experiment Station	\$	1,000.00	Facility Rental	Rent
2/14/2013	Rocky Mountain Embroidery	\$	500.00	Marketing	Hats
5/8/2013	Intrigue Ink	\$	395.00	Marketing	CSA Totes
5/16/2013	Eggboxes.com	\$	76.00	Marketing	Egg cases
7/17/2013	Montana Party Rentals	\$	288.00	Marketing	President's Lunch
7/23/2013	Bridger Analytical Lab	\$	194.55	Marketing	Water testing
7/22/2013	Rosauers	\$	63.81	Marketing	Intern Cookout
8/7/2013	Amazon	\$	43.30	Marketing	Berry Containers
7/10/2012	Apriva Frontline Processing	\$	204.75	Marketing	Year Total
1/2/2013	Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
2/4/2013	Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
3/1/2013	Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
4/3/2013	Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
5/3/2013	Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
6/2/2013	Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
7/1/2013	Verizon Wireless	\$	30.00	Marketing	Ipad Wireless

8/2/2013 Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
9/2/2013 Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
10/2/2013 Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
11/2/2013 Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
12/2/2013 Verizon Wireless	\$	30.00	Marketing	Ipad Wireless
7/29/2013 MSU Copy Cats	\$	38.00	Marketing	Flyers
6/20/2013 Insty-Prints	\$	189.55	Marketing	Farm maps
1/3/2013 Murdochs	\$	65.96	Production Supplies	Feed
1/8/2013 Dripworks	\$	864.24	Production Supplies	Irrigation
1/10/2013 Nourse Farms	\$	124.25	Production Supplies	Irrigation
1/10/2013 Nourse Farms	\$	48.45	Production Supplies	Irrigation
1/14/2013 Seed Savers	\$	34.95	Production Supplies	Seeds
1/15/2013 Murdochs	\$	325.40	Production Supplies	Supplies
1/17/2013 Johnny's	\$	2,004.89	Production Supplies	Seeds
1/18/2013 Johnny's	\$	20.25	Production Supplies	Seeds
1/22/2013 Lowe's	\$	36.95	Production Supplies	Supplies
1/28/2013 Territorial	\$	47.10	Production Supplies	Seeds
1/30/2013 Johnny's	\$	11.50	Production Supplies	Seeds
2/11/2013 Murdochs	\$	102.11	Production Supplies	Feed
2/18/2013 Lowe's	\$	99.86	Production Supplies	Supplies
2/22/2013 Johnny's	\$	26.50	Production Supplies	Seed
2/25/2013 Murdochs	\$	49.92	Production Supplies	Supplies
3/1/2013 Johnny's	\$	39.00	Production Supplies	Seeds
5-Mar Owenshouse	\$	118.63	Production Supplies	Supplies
13-Mar Murdoch's	\$	56.24	Production Supplies	Supplies
25-Mar Lowe's	\$	166.64	Production Supplies	Supplies
25-Mar Murdochs	\$	55.47	Production Supplies	Feed
3-Apr Lowe's	\$	86.80	Production Supplies	Supplies
8-Apr Murdochs	\$	89.44	Production Supplies	Supplies

4/11/2013 Owenshouse	\$	68.44	Production Supplies	Supplies
4/17/2013 Murdochs	\$	113.92	Production Supplies	Feed/Supplies
4/29/2013 Owenshouse	\$	101.55	Production Supplies	Supplies
4/29/2013 Lowe's	\$	68.54	Production Supplies	Supplies
4/30/2013 Planet Natural	\$	124.45	Production Supplies	Supplies
5/2/2013 Murdochs	\$	293.85	Production Supplies	Supplies
5/2/2013 Murdochs	\$	388.18	Production Supplies	Supplies
5/2/2013 Seed Savers	\$	388.18	Production Supplies	Seed
5/3/2013 Owenshouse	\$	18.34	Production Supplies	Supplies
5/3/2013 Johnny's	\$	164.00	Production Supplies	Seed
5/6/2013 Johnny's	\$	26.00	Production Supplies	Seed
5/9/2013 Owenshouse	\$	16.85	Production Supplies	Supplies
5/13/2013 Lowe's	\$	52.54	Production Supplies	Supplies
5/13/2013 Owenshouse	\$	39.56	Production Supplies	Supplies
5/24/2013 Field Day Farms	\$	30.00	Production Supplies	Seed
5/21/2013 Murdochs	\$	73.96	Production Supplies	Supplies
6/10/2013 Owenshouse	\$	49.06	Production Supplies	Supplies
6/11/2013 Owenshouse	\$	4.72	Production Supplies	Supplies
6/6/2013 Wheat and Thistle	\$	140.00	Production Supplies	Feed
6/4/2013 Lowe's	\$	123.43	Production Supplies	Supplies
5/29/2013 Amazon	\$	32.38	Production Supplies	Egg wipes
5/29/2013 Amazon	\$	20.60	Production Supplies	Plant ties
7/1/2013 Johnny's	\$	201.99	Production Supplies	Seeds
7/15/2013 Johnny's	\$	44.30	Production Supplies	Seeds
7/19/2013 Owenshouse	\$	140.97	Production Supplies	Supplies
7/22/2013 Owenshouse	\$	36.99	Production Supplies	Supplies
7/23/2013 Field Day Farms	\$	30.00	Production Supplies	Herbs
7/30/2013 Murdochs	\$	94.98	Production Supplies	Supplies
8/16/2013 Murdochs	\$	86.43	Production Supplies	Supplies

9/5/2013	Murdochs	\$	50.97	Production Supplies	Feed
8/29/2013	Owenshouse	\$	186.01	Production Supplies	Supplies
10/14/2013	Murdochs	\$	62.45	Production Supplies	Feed
10/28/2013	Mudochs	\$	73.95	Production Supplies	Feed
12/2/2013	Murdochs	\$	91.43	Production Supplies	Feed
6/7/2013	Office Depot	\$	41.55	Production Supplies	Farm calenders and supplies
8/23/2013	Gardeners Club	\$	60.00	Production Supplies	CSA Rhubarb
8/30/2013	Montana Dept. Ag.	\$	374.77	Production Supplies	Organic Certification
11/25/2013	Chaz Holt	\$	28.86	Production Supplies	Reimbursement
7/25/2013	McMurray Hatchery	\$	261.25	Production Supplies	Chicks

Administration
 Capitol Investment
 CFT
 Equipment Repairs/Fuel
 Facility Rental
 Marketing
 Production Supplies
Running Total 15283.56

2013 Crop and Planting Plan

PGC
Plantings
Feb-Mar

Crop	Variety	Type	Field Planting	PGC Seed starting	Cold Frame plantings	Amount	
Leeks		TP	May/June	14-Feb		2000	5.5 trays
Garlic		sets	Oct 15 '11				
			June 1st				
Onions	bunching red and white	TP	May/June	14-Feb		1300	10 trays replanted 5 trays 3/4
	cipolini			15-Feb		4 trays	replanted 3 trays 3/4
	red and white bulb	TP	May/June	14-Feb		3400	11 trays replanted 7 trays 3/4
Shallots		TP	May/June	14-Feb		1000	3 trays
Lettuce	coastal star romaine	TP		14-Feb	10-Mar	144	2 trays
	flashy troutback			10-Mar		98	
	red saladbowl			10-Mar		98	
Cumin				26-Feb		132	
Kale	Red	TP		14-Feb	20-Mar	36	1 tray
	Blue			14-Feb	20-Mar	36	
Chard	rainbow	TP	May	14-Feb	20-Mar	72	1 tray
Parsley	flat leaf	TP	May	14-Feb		72	
Cabbage	Savoy			15-Feb	20-Mar	72	
Salad Micro greens		seed			3/7 & 4/11		
Tomatoes	Cherokee P	TP		26-Feb		122	
	Black Russian	TP		26-Feb		122	
	Green Zebra	TP		26-Feb		144	
	Arbason	TP	June 5th	26-Feb		144	
	Big Beef	TP	June 5th	26-Feb		72	
	Cherry Sakura	TP	June 5th	26-Feb		48	
	German Stripe	TP	June 5th	26-Feb		36	
	Amish Paste	TP	June 5th	26-Feb		54	
Basil	green			26-Feb		132	
Peppers	Yankee Bell	TP	June 15th outside	14-Feb		144	
	Yellow karlo	TP	June 15th outside	14-Feb		174	
	Jalepeno	TP	June 15th outside	14-Feb		104	
	Antohi Romanio	TP	June 15th outside	15-Feb		144	
	Hungarian Hot Wax	TP	June 15th outside	15-Feb		144	
		TP	June 15th outside				
Bok Choi				28-Mar		144	
Orange Cauliflower				28-Mar		216	
Anise				28-Mar		143	

ALL TRANSPLANTS FROM PGC

Direct Seed

to Field	Beans	seed	June 1st	
Plantings	Lettuce	TP and Seed	Late May, Mid June, Late July	
May-June	Cover Crop	seed	Mid June	
	Quinoa	seed	11-Apr	
	Corn	seed	June when able	
	Soy Beans	seed	Mid June	
	Cilantro	seed	11-Apr	
	Cucumber	seed	Maybe? Late June	
	Beets	seed	May/June	
	Carrots	seed	May/June	
	Salad Mixtures	seed	ASAP every two weeks	
	Braising Green Mixtures	seed	ASAP every two weeks	
	Parsnips	seed	ASAP	
	Dill	seed	May	
	Potatoes	seed	June 1st	
	Peas Sugar snap	seed	11-Apr	
	Spinach	seed	11-Apr	
	Radish	seed	ASAP	
	Parsley Root	seed	June 1st	
	Sorghum and millet			

Garden Start CSA

6 - 6packs of veggies	6pk	Cucumbers	
20-Mar	6pk	Onions	red and yellow
28-Apr	6pk	Basil and parsley	
20-Mar	6pk	peppers mixed	jalepeno, bell, hungarian
28-Apr	6pk	chard	
28-Apr	6pk	cabbage	
6 - 4" pots	1 4"	Tomato	black russian
	1 4"	Tomato	amish paste
	1 4"	Tomato	cherry sakura
	6pk	straightneck squash	

	28-Apr	1 4"	zuchinni
	28-Apr	1 4"	pumpkin
8" perennial		2 - pots	pots flowers

2013 THG HARVEST LOG

ORGANIC
2.4 acre block field production and One high tunnel and orchard
plus .5 acre in cover crop
began harvesting 1st of June and continued to mid October

Crop	Pounds	Each	First harvest
arugula	108		7-Jul
Basil	61		17-Jul
Beans	583		14-Aug
Beets	1311		23-Jul
Broccoli	78		23-Jul
bunch onion	83		16-Jul
Cabbage	270.5		5-Aug
Carrots	608		13-Aug
Cauliflower	19.25		6-Aug
Chard	100		8-Jul
Chives	11		
Cilantro	39		26-Jun
Corn 14 oz each	485	554	
cucumber	1473		6-Aug
Edamame	25		
Fennel	174		23-Jul
Dill	3		
Garlic	261.25	1600	5-Jun 6-Aug
Garlic scapes	29		8-Jul
Head Lettuces	266.25		26-Jun

NON ORGANIC
high tunnels 3 and 4
began harvesting late April and finalized end of October

Crop	Pounds	Each	First harvest
Arugula	16.3		28-May
Basil	3.5		
Beets	72		11-Jun
Canteloupe	164		19-Sep
Braise Mix	21		17-May
Chard	44		28-May
Cucumbers	95		30-Aug
Cilantro	52.25		22-May
lettuce	57.09		28-May
Kale	39		28-May
Greens Salad	74.5		20-May
Mizzuna Mix	24		29-Jul
Radish	51		17-May
Savoy Cabbage	69		18-Jun
Sorrel	5.9		10-Jun
Spinach	38.4		28-Apr
Peppers	97		
Total lbs	923.94		

Kale	53.3	16-Jul
Kohlrabi	671	
Leeks	211	
Mint	8	26-Jun
Mixed Braising Greens	35	8-Jul
Maize Corn	75	75
Parsley	22	20-Aug
Parsnip	168	
peas	210	15-Jul
Peppers	108	
Potato Mixed	1493	22-Aug
Pumpkins/Winter Squash	3981	
Radish	199.7	26-Jun
Raspberries	44.2	27-Jul
Red Onion	1907	
SunChokes	35	
salad mix	118	8-Jul
sorrel	12	28-May
Spinach	98	26-Jun
Strawberries	59	1-Jul
Sum. Squash	1724	29-Jul
Corriander	8	6-Aug
Tomatoes	1121	1-Aug
Tomatillos	165	8-Aug
Mixed/yellow,cipolini,red	665	20-Aug
Guords specialty	138	

organic total lbs 19317.45

Eggs

March	20
April	88 Approx 45 hens laying
May	62 In August we started raising
June	24 new baby chicks
July	0 for next season production
Aug	20
Sept	25
Oct	10

Total farm lbs	20241.39	Nov	5
			254
		value of	\$5 doz
			\$1,270

Observation;

From May thru August 8: If retail were only outlet our total harvets for sales is approximatly 2,500 # or \$7,500

So most value/sales comes from August 8 thru Oct 31

(usually an average of \$1 per pound average over the total yeild, however early crop is averaged at \$3 per lb because of greens prices)

Summery of lower over all yeilds

Going into the growing season, we did not have MSU or Food Bank commitments to grow for, so:

Half the onions were planted and more than half less the winter squash were planted in 2013 from 2012

and the varieties of winter squash that were planted were mostly smaller varieties.

Carrots were not planted in bulk this year, but we yeiled roughly the same

The summer squash was half the size as in prior years but yiedled quite well. This was because we cant sell what we can grow, so we decided to grow more of other crops that were more marketable.

For the most part, the main Certified organic field prodcution was the same as last year.

The lower overall weights were results of less planted and varieties of smaller yeilding weights.

CSA Distribution 2013

Spring Greens CSA	28 members	Value returned per share	\$142.50
22-May		12-Jun	
Radish	\$2.00	Beets	\$3.50
Braising Mix	\$3.00	Chard/Kale	\$3.00
2 bunches Cilantro	\$3.00	Head Lettuce	\$2.00
2 dozen Eggs	\$10.00	Arugula	\$2.00
Chives	\$2.00	Sorrel	\$2.00
Spinach	\$2.00	Rhubarb	\$4.00
Salad Mix	\$2.00	1/2 doz eggs	\$3.00
THG Bag	\$5.00	oregano	\$2.00
	\$29.00		\$21.50
29-May		19-Jun	
Radish	\$2.00	Spinach and salad	\$4.50
Salad Mix	\$2.00	sage	\$2.00
Romaine	\$3.00	green garlic	\$2.00
Sorrel	\$2.00	Beets	\$3.50
Eggs	\$5.00	1/2 doz eggs	\$3.00
Chard/Kale	\$4.00	cilantro	\$2.00
Cilantro	\$2.00	Savoy cabbage leaves	\$3.00
Arugula	\$3.00		\$20.00
	\$23.00	26-Jun	
5-Jun		sorrel	\$2.00
Chocholate Mint	\$2.00	eggs	\$3.00
Green Garlic	\$2.00	chard	\$3.00
Bock Choi	\$2.00	basil	\$2.00
Eggs	\$5.00	radish	\$2.00
Red Lettuce	\$3.00	garlic scapes	\$2.00
Cilantro	\$2.00	peppermint	\$2.00
Salad Mix	\$3.00	kale	\$3.00
Braize Mix	\$3.00	cilantro	\$2.00
Radish	\$2.00	wild salad mix	\$4.00
	\$24.00		\$25.00

Summer CSA distribution

	46 members	value returned per share	\$400.50
10-Jul			
strawberries	\$3.00		
garlic scapes	\$2.00		
salad mi	\$3.00		
braise mix	\$3.00		
spinach	\$3.00		
cilantro	\$2.00		
radish	\$2.00		
chard	\$3.00		
THG bag	\$5.00		
	\$26.00		
17-Jul			
baby beets	\$2.00		
green onions	\$2.00		
arugula	\$3.00		
kale	\$3.00		
snap peas	\$3.00		
head lettuce	\$3.00		
radish	\$2.00		
basil	\$2.00		
peppermint	\$2.00		
	\$22.00		
24-Jul			
basil	\$2.00		
fennel	\$2.00		
2 red kohlrabi	\$3.00		
bunch onion	\$2.00		
salad	\$3.00		
broccoli	\$2.00		
peas 1/2#	\$3.00		
chard	\$3.00		
radish	\$1.00		

\$21.00

31-Jul

10 oz peas	\$4.00
raspberries	\$3.00
summer squash	\$2.00
beets large	\$3.00
red onion	\$2.00
basil	\$2.00
parsley	\$2.00
peppers	\$2.00
salad mix	\$3.00

\$23.00

7-Aug

3 peppers	\$2.00
2 garlic	\$2.00
2 fennel	\$4.00
kale/chard	\$4.00
3 summer squash	\$3.00
2 red kohlrabi	\$4.00
arugula	\$3.00
radish	\$2.00
corriander	\$2.00
cabbage	\$2.00
raspberries	\$2.00

\$30.00

14-Aug

raspberries	\$2.00
2 kohlrabi	\$4.00
4 summer squash	\$4.00
bag pickling cucumbers	\$3.00
1/2# green beans	\$3.00
chiogga beets	\$3.00
carrots	\$3.00
tomatillos/tomatoes/peppers	\$5.00

basil	\$2.00
bunch onions	\$2.00
broccoli	\$3.00
	\$34.00

21-Aug

parsley	\$2.00
swiss chard	\$3.00
salad mix	\$3.00
red cabbage	\$3.00
2 slice cucumbers	\$2.00
pickling cucumbers	\$2.00
4 summer squash	\$4.00
1 # green beans	\$4.00
2.5# tomatoes	\$10.00
2 yellow onions	\$2.00
cut flowers	\$2.00
	\$37.00

28-Aug

tomatillos	\$3.00
2# potatoes	\$2.00
3 leeks	\$2.50
1# yellow beans	\$3.00
summer squash (as much as want)	\$2.00
carrots	\$2.00
fennel	\$3.00
2 garlic	\$2.00
radish	\$1.50
2# cucumbers	\$4.00
2.5# tomatoes	\$10.00
	\$35.00

4-Sep

2 red onions	\$2.00
cut flowers	\$3.00
2# mixed potatoes	\$3.00

4 peppers	\$2.50
1.5# green beans	\$3.50
Beets w/ greens	\$3.00
2# cucumbers	\$4.00
2 kohlrabi	\$4.00
2# tomatoes	\$8.00
basil	\$2.00
squash (as many as want)	\$2.00
	\$37.00

11-Sep

1/2# tomatillos	\$2.00
Yellow Onions	\$2.00
Parsley	\$2.00
carrots	\$2.00
2# Tomatoes	\$8.00
Dill	\$2.00
5# Pickling cucumber	\$7.50
1# green beans	\$3.00
2 peppers	\$1.50
5 ears Sweet Corn	\$2.50
	\$32.50

18-Sep

2 shallots	\$2.00
3 large beets	\$1.50
1.5# fingerling potato	\$4.00
4 leeks	\$4.00
2 peppers	\$1.50
2# green tomatoes	\$2.00
1/2# edomome	\$4.00
2 garlic	\$2.00
1 Delacatta	\$2.50
2 slicing cucumber	\$1.50
	\$25.00

25-Sep

2# potatoes	\$2.00
2 Kohlrabi	\$3.00
acorn squash	\$2.50
carrots	\$2.00
2 onions	\$2.00
2# tomatoes	\$8.00
2# cucumbers	\$4.00
Parsley	\$2.00
	\$25.50

2-Oct

pie pumpkin	\$3.00
garlic	\$1.00
5 large beets	\$3.00
sunchokes or melon	\$3.00
2 onions	\$2.00
2 delacatta	\$3.50
braise mix	\$2.00
3 peppers	\$2.00
2 Tomatoes	\$2.00
2.5# Potatoes	\$3.50
	\$25.00

9-Oct

4 parsnips	\$3.00
2 onions	\$2.00
jackolantern	\$5.00
garlic	\$2.00
carrots	\$3.00
chioce of wintersquash	\$3.00
ornamental guords choic	\$2.00
2.5# potatoes	\$2.50
parsley	\$2.00
2 kohlrabi	\$3.00
	\$27.50

A Comparison of Freshly Harvested Organic Lettuce and Conventionally Grown Bagged Lettuce as Assessed by Blood Glucose Levels and Insulin Requirements in Type 1 and Type 2 Diabetic Subjects



Chopped Romaine, Sysco distributed, Taylor Farms produced, Salinas, CA



Organic Flashy Troutback Romaine, Harvested by hand, Towne's Harvest Garden, Bozeman, MT

Michael Fox, Alison Harmon, PhD, RD, LN, Mary Miles, PhD, Carmen Byker, PhD

Abstract

It is well accepted that a plant-based diet benefits the glycemic control of diabetics. Although the specific mechanisms of action remain largely unknown, and correlating dietary intake with health outcomes presents challenges, there is convincing evidence that the consumption of fresh vegetables increases insulin sensitivity. Following a randomized crossover design, this study compared the effects that freshly harvested organic lettuce (treatment 'a') and conventionally grown bagged lettuce (treatment 'b') had on blood sugar levels and insulin requirements in six type 1 and type 2 diabetic subjects. Involving two days of participation, treatments were separated by one week. Diets were identical on all days except for the lunch interventions, composed of 10 ounces of selected lettuce. Subjects ate the same lunch meal on both days of a given treatment, bolusing meal time insulin as usual for the control meal and testing blood sugars at times 0, 30 and 60 min. In contrast, subjects did not bolus for the test meal and tested blood glucose six times over the two hours postprandial. Results indicated that treatment 'a' induced a 46.1% greater incremental Area Under the Curve after the test meal but surprisingly required 11.6% less insulin during the time between dinner on Day 1 and dinner on Day 2.

Background

Over the past ten to fifteen years there has been much research relating to diet's effect on diabetes and insulin sensitivity. Research indicates that fiber, the microbiological activity and bioavailability of dietary nutrients, and their subsequent influence on short chain fatty acids and microbiome proliferation can influence gene expression to increase insulin sensitivity. In addition, pesticides such as organophosphorus have been shown to induce high blood sugar (hyperglycemia).

The American Diabetes Association (ADA) recommends a method known as Carb Counting for diabetics to achieve glycemic control. Using it, insulin dosing diabetics count their carbohydrates to determine the amount of insulin required for dietary intake. In the case of nonstarchy vegetables such as lettuce the ADA recommends *not* counting these carbohydrates due to the minimal amount of carbohydrates provided, and thus labels foods like lettuce as 'free'.

Purpose/Hypothesis

- To determine whether there is a difference in glucose and insulin levels after the consumption of freshly harvested organic lettuce and conventionally grown bagged lettuce in type 1 and type 2 and diabetic subjects.
- Based on the published research, it was hypothesized that the bagged, conventional lettuce would induce a greater elevation of blood sugars and require more insulin.

Methods

Participants

6 subjects completed the study. 4 type 1 diabetics, 2 type 2 diabetics. Aged 20-70 years old, BMI 20-29, diagnosed with diabetes minimum of 2 years prior and had an HbA1c between 6%-11%. (HbA1c is the average blood glucose level.)

No diagnosed chronic GI distress, hospitalization for hypoglycemic reaction or treatment for repeated overnight hypoglycemic reactions.

Study Design

The study followed a randomized crossover design, covered two weeks and involved an active two days of participation; separated by five days. Lettuce treatments were randomly assigned and consumed for the lunch meals. On day 1, subjects taking insulin were to administer the insulin as they would normally. On day 2, insulin dosing subjects were asked to take their final bolus two hours before the test meal in the Nutrition Research Lab so that post-prandial blood sugar values would be independent of the bolus insulin.

Methods

Diet Composition

Dietary intake was based on a plant-based 2000 kcal diet. Treatment meals were composed of 10 ounces of the randomly selected lettuce with a measured vinaigrette dressing.

Sample collection and analysis

Subjects tracked their food intake, blood glucose levels, insulin doses and exercise performed. On day 1, subjects measured blood glucose levels after lunch and dinner meals at times 0 and 60 min. On day 2, in addition to the same tracking as day 1, subjects arrived at the Nutrition Research Lab to eat the lunch meal and test pre and post prandial blood glucose at times 0, 30, 45, 60, 90 and 120 min.

Data Analysis/ Statistical Analysis

Analysis of the data utilized the Nonparametric Wilcoxon Signed Rank Test. Due to small number of subjects, results cannot be generalized to a larger population.

Results

Treatment 'a' = Freshly harvested, organically grown lettuce
Treatment 'b' = Conventionally grown, bagged lettuce

Table 1. iAUC measurements of Test Meal for both Treatment 'a' and Treatment 'b'

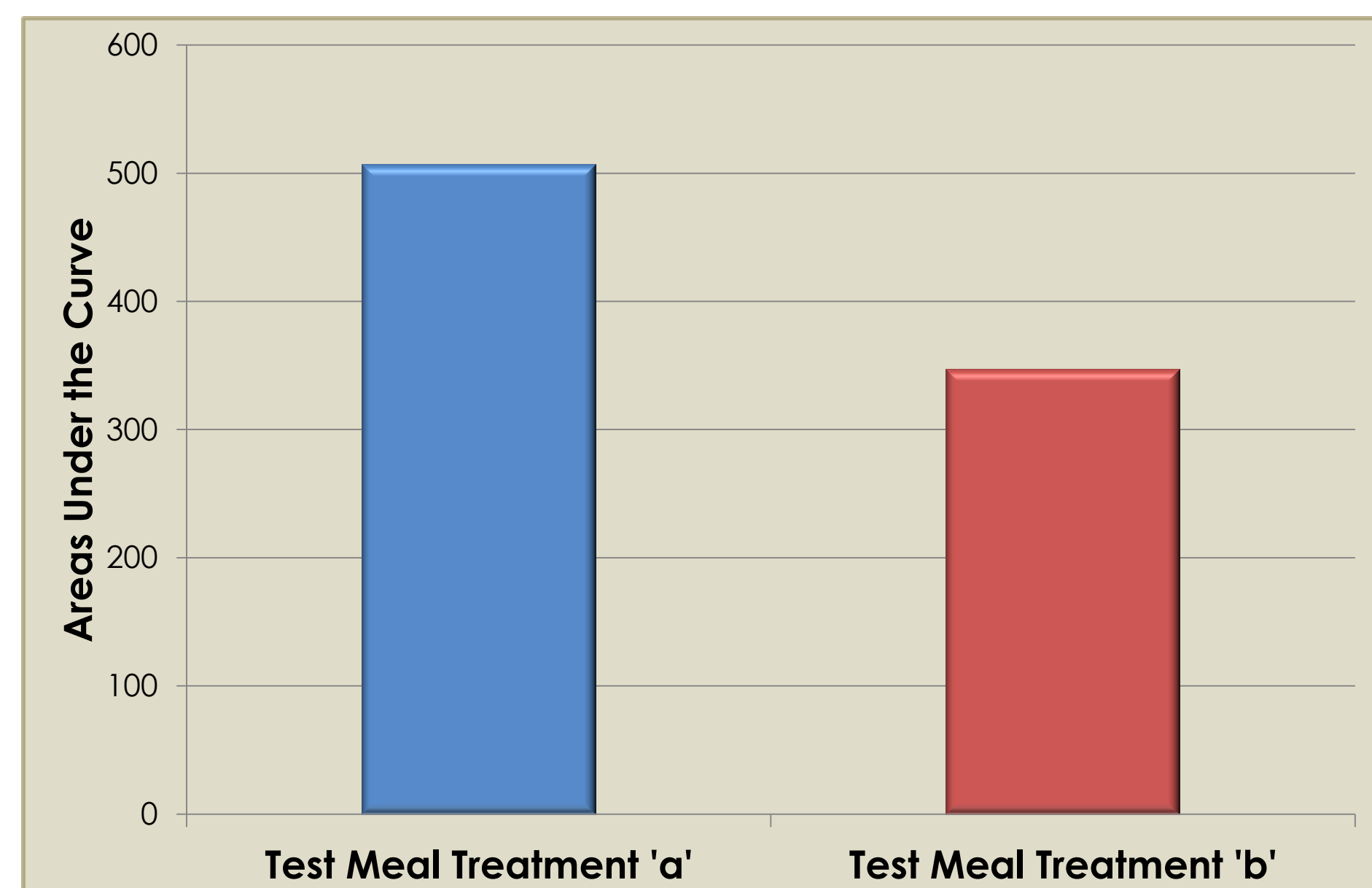


Table 2. Total insulin administered between predinner of Day 1 to predinner of Day 2 (dinner bolus included)

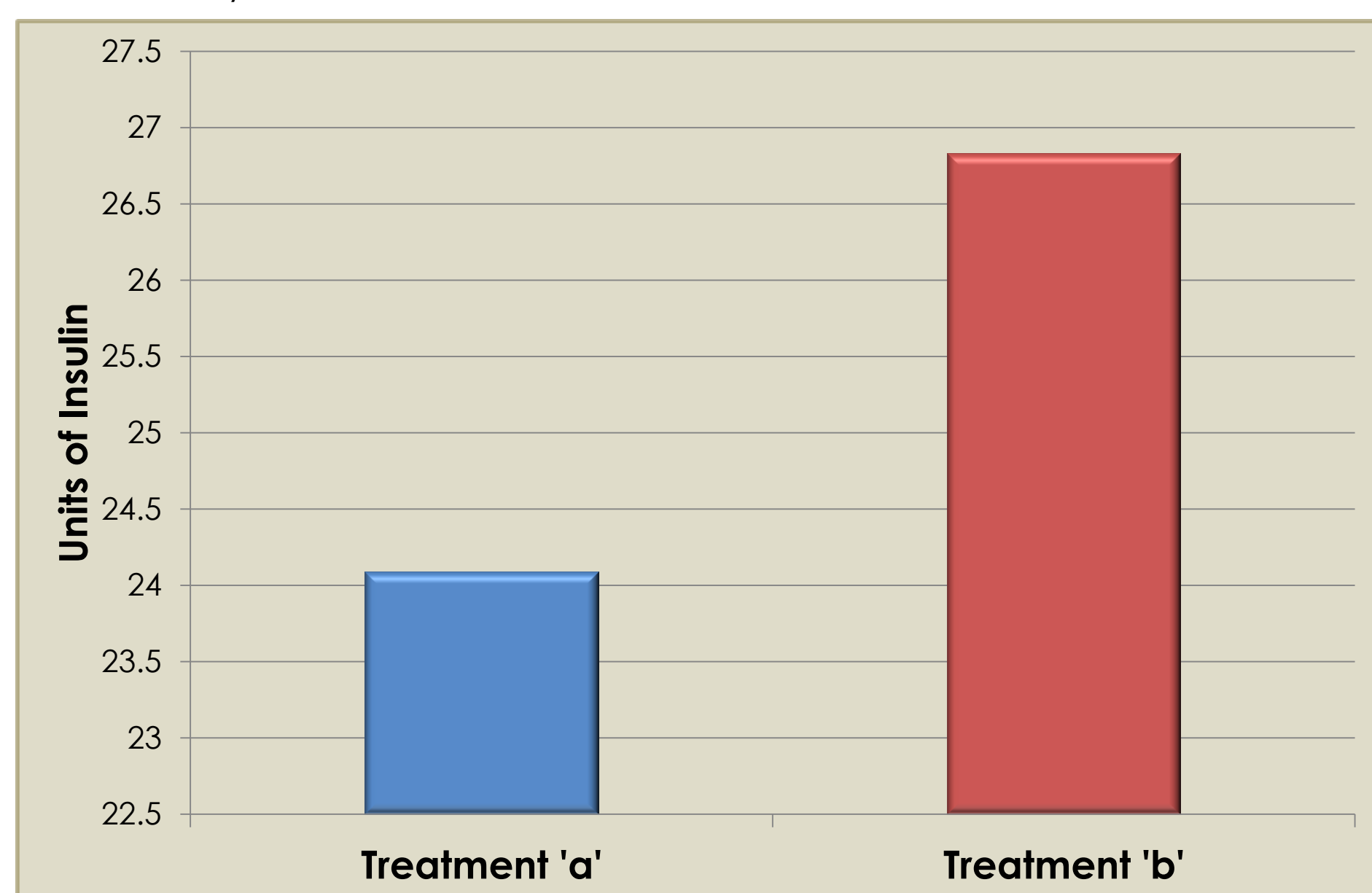
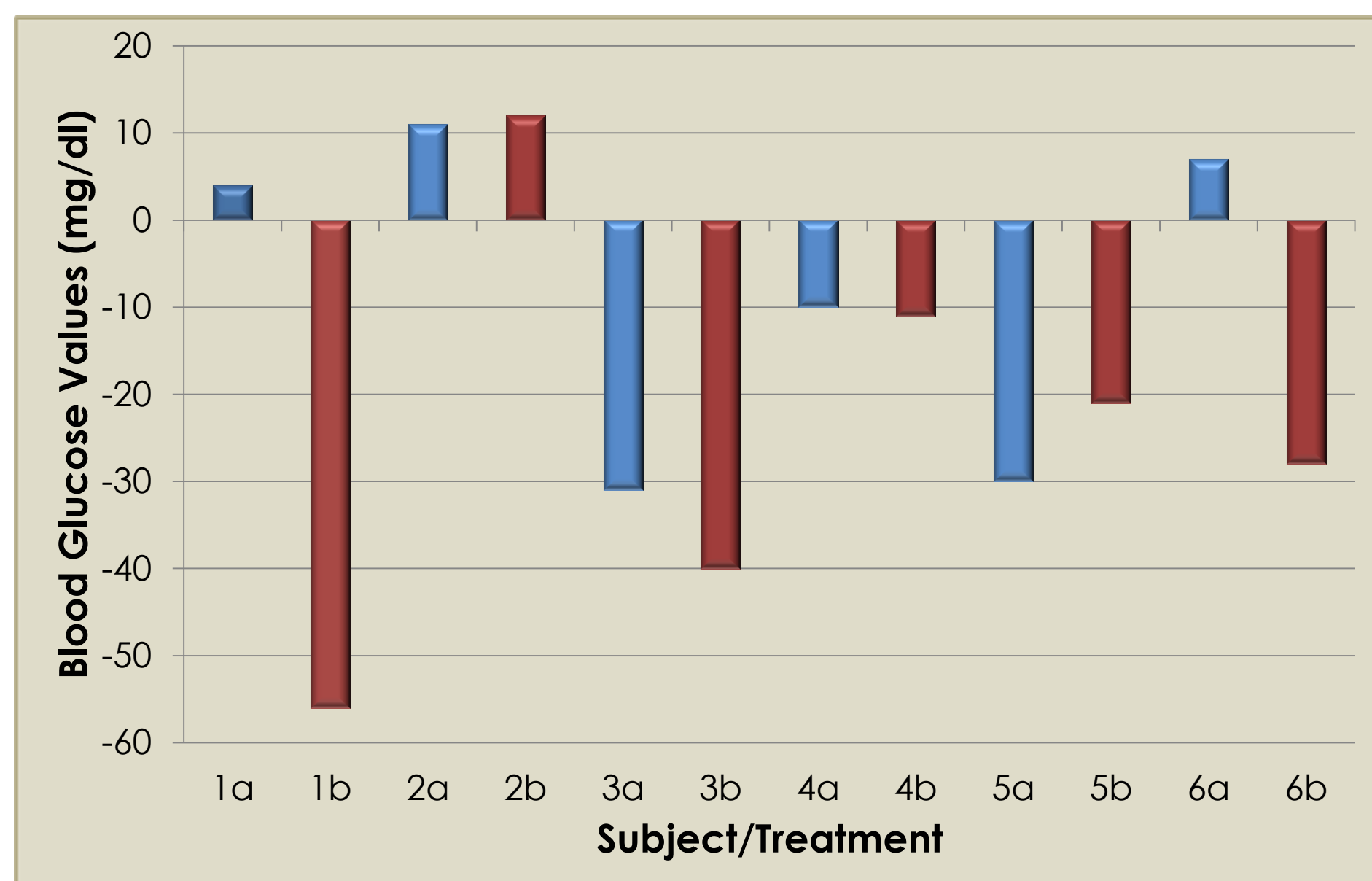
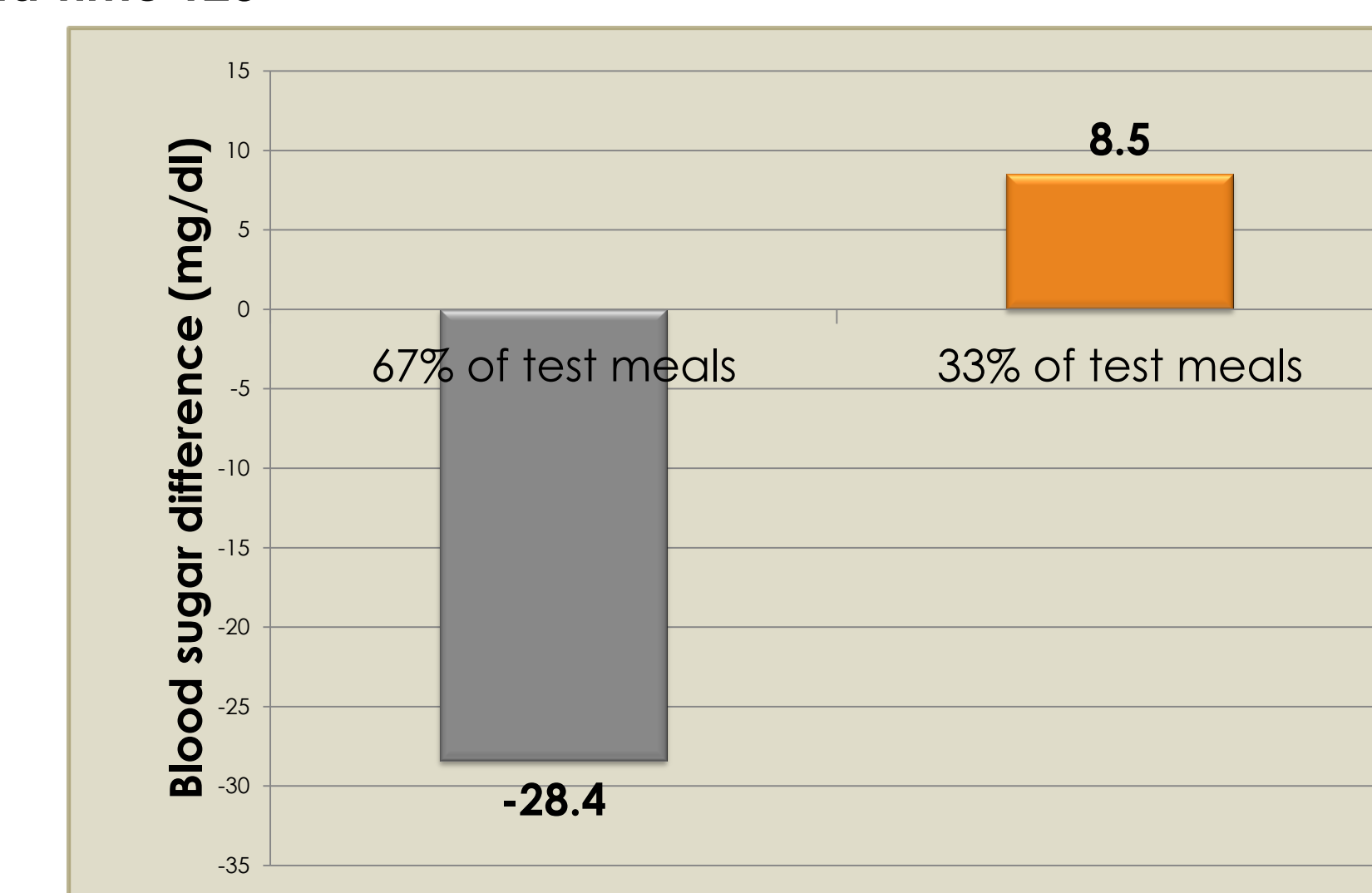


Table 3. Difference in blood glucose values between time 0 and time 120 min. after test meals



Results

Table 4. Percentage of test meals with average blood glucose difference between Time 0 and Time 120



Conclusion

There was no statistical difference between the two treatments when analyzed by iAUC ($p=.500$) and insulin dose requirements ($p=.715$). However, the iAUC values after the freshly harvested organic lettuce were 46.1% greater than those produced after the conventionally grown bagged lettuce. In addition, the fresh organic lettuce required 11.6% less insulin than the conventionally grown lettuce when looking at the period between predinner of day 1 and predinner of day 2 (a time period in which the treatments would be most effective).

When both treatments were considered, the difference in blood glucose values at time 0 and two hours after the test meal was statistically significant ($p=.045$). Even though insulin dosing subjects did not administer their bolus insulin for the test meals, blood glucose decreased an average of 28.4 mg/dl in 67% of the meals while the remaining 33% increased by a mere average of 8.5 mg/dl. These results suggest a potential revision to the ADA's assessment of nonstarchy vegetables as 'free'.

In spite of the lack of significant difference between the treatments, the difference in insulin intake and the overall drop in blood sugars after the test meal consumption were curious. The results indicate that there may be factors of influence that effect human biology and insulin sensitivity in ways not well understood. Food source, production methods and vegetable type are particular areas of interest. Further research in this area would benefit nutritional science as well as the nutritional counsel provided to diabetics.

Acknowledgements

I would like to thank Charles Holt and Towne's Harvest Garden for their participation and cooperation, my supportive and ever-helpful committee members, and Drs. Robert Szilagyi and Robin Gerlach. In particular, I would like to thank Mary Miles for her guidance and the subjects who participated in this study for their time, efforts and patience.

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April 1, 2014

Ms. Jean Middleton
APLU
1307 New York Avenue, NW
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Dear Ms. Middleton:

With the attached packet, Montana State University is submitting an application for the two engagement awards sponsored by the Association of Public and Land-grant Universities. Thank you for your recognition of outreach and engagement partnerships and your support of the Outreach Scholarship/W.K. Kellogg Foundation Engagement Awards and the C. Peter Magrath University/Community Engagement Award.

As the 1862 land grant institution, Montana State University can showcase many outstanding examples of outreach and community engagement. The unique, long-term partnership described in this application is an exemplary engagement effort comprised of students, community leaders, and faculty and was designed to help meet a specific need in the community by providing fresh produce to the local food bank. Initiated by a student organization in 2007, Towne's Harvest Garden provides fresh produce for low-income families in rural communities in the region who lack access to farmers' markets and fresh produce in retail stores. Students have the ability to learn all aspects of small scale food production from planting, marketing, and customer relations. In addition it provides agricultural research and education, promotes healthy lifestyles, and works to improve relations among producers and consumers.

As you will read, the impacts of the partnership are wide-ranging and meaningful, and the program has evolved as it has grown, establishing new partnerships and educational programs. The program is truly a living laboratory for research, an outdoor classroom, and an avenue for students to learn through service to others. As Chair of the University Outreach and Engagement governance council, I am pleased to submit this application with unanimous endorsement of the Outreach and Engagement Council.

Thank you again for all of your efforts to support and strengthen community engagement.

Sincerely,

Kim Obbink, Ed.D.
Director, MSU Extended University
Chair, MSU Outreach and Engagement Council

Extended University

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Mountains & Minds



TOWNE'S HARVEST GARDEN:

*Locally, Sustainably, and Educationally Grown
Community Engagement*



WEST REGION

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SECTION 1: Significance of Outreach/Engagement Partnership

1.1 ABSTRACT

Towne's Harvest Garden (THG), MSU's campus farm and Community Supported Agriculture (CSA) Program, is a dynamic outdoor classroom, living laboratory for research, and a primary venue for community engagement. THG was initiated by a student organization in 2007 in partnership with the Gallatin Valley Food Bank (GVFB), and has been sustained by curricular integration and institutional support. THG's mission is to be a source of locally, sustainably, and educationally grown food for the campus and members of the surrounding community. Students in the Sustainable Food & Bioenergy Systems (SFBS) Degree Program spend their first summer at MSU participating in a hands-on THG practicum course designed to teach all aspects of small-scale food production from planting seeds to marketing produce and customer relations. THG also provides service-learning opportunities for other MSU students from food and nutrition students to architecture and engineering students. THG students are eager to share their knowledge with members of the community on tours led throughout the growing season. Students distribute the food they have grown through a CSA (where members pay an upfront fee for a weekly share of the harvest); at a weekly campus farm stand; and through the Community Food Truck (CFT), a mobile farm stand created in partnership with the GVFB. The CFT brings fresh produce to low-income families in the rural communities surrounding Bozeman who lack access to farmers' markets and fresh produce from retail sources. Faculty from across disciplines have advanced their scholarship in research, teaching, and community engagement through THG involvement. THG activities have attracted external funds, formed the basis of countless conference presentations and have been featured in numerous peer-reviewed and outreach publications. In summary, Towne's Harvest is well-aligned with the land grant mission and the mission of MSU to educate students, create knowledge and art, and serve communities by integrating learning, discovery, and engagement.

SECTION 2: Relationship and Reciprocity between the University and the Community

The dynamic relationship between the Gallatin Valley Food Bank (GVFB) and Towne's Harvest Garden (THG) began in 2006 when the GVFB's need for fresh produce for their clients became linked to the desire of MSU students to start a vegetable garden on the campus horticulture farm. In exchange for financial support, THG supplied the food bank with approximately 25% of the vegetables grown during the 2007 season. Additional start-up funds for THG were provided by the MSU President and the Deans of two colleges: Agriculture and Education, Health and Human Development. The THG-GVFB partnership, while as strong as ever, has evolved over the eight years of the project as the needs of both partners have changed. GVFB and THG have mutual interests, exchanging technical expertise in food production for practical expertise in connecting with low-income households on an annual basis. As THG has become more established at MSU, its need for financial support from GVFB has diminished. Similarly, as GVFB has established its own raised bed gardens (with assistance and support from THG staff and students), and created new partnerships with additional farms in the region, its need for produce from THG has diminished. As a result, the partnership has become more complex and far-reaching.

The Community Food Truck (CFT) Project is an example, of an innovative and resourceful THG-GVFB collaboration, which serves surrounding rural communities by providing affordable fresh produce to low-income families and seniors. In 2012 the AARP Foundation funded a two-year proposal to create the CFT, which is a mobile farm stand. In total, THG and GVFB have collaborated to provide more than 30,000 lbs of free or discounted produce to families in need, while also providing MSU students with opportunities for community engagement, leadership skill development, and business management experience.

MSU is Montana's land-grant institution with a mission to educate students, create knowledge and art, and serve communities by integrating learning, discovery, and engagement. THG em-

bodies this institution's mission by serving as a dynamic outdoor classroom, a living laboratory for research, and an avenue for students to learn through service to others. THG also represents an interdisciplinary collaboration of students, staff, faculty, and administrators from two MSU colleges and four academic departments—becoming the backbone of an inter-college undergraduate degree program called Sustainable Food and Bioenergy Systems (SFBS). Additional university partners include University Foodservice, the Associated Students of MSU (ASMSU) Sustainability Center, the Montana Dietetic Internship, and the MT Agriculture Experiment Station.

SECTION 3: Impacts

3.1 Impacts on the Gallatin Valley Food Bank and Bozeman Community:

Improving the Emergency Food Supply. A significant impact of the THG program has been the response to increased community awareness about the need for fresh produce in the emergency food supply. THG has made a significant difference in the availability of fresh vegetables for GVFB clients. In addition to a weekly delivery of produce during the growing season, THG has provided GVFB with technical assistance and volunteer student labor to establish and maintain raised vegetable garden beds on-site. This partnership has encouraged other local growers, home gardeners, and non-profit organizations to contribute to improving the healthfulness of the emergency food supply. The CFT project has allowed GVFB and THG to expand our collective reach to seniors and low-income families in neighboring rural communities—places where there are no regular farmers' markets and where access to high quality produce through retail sources is limited.

Expanded Market for Locally Grown Produce. When THG began operating as a CSA in 2007, there was significant demand at the local farmers' market for more fresh produce vendors. Summer practicum students sold vegetables at the market in addition to providing outreach and information about THG, its partnership with the GVFB, and the importance of local production and sustainable agricultural methods. By 2010, increasing numbers of local farms were represented at the mar-

ket. Consequently THG sought alternative venues for retailing its produce, so as not to be a source of competition for other small-scale producers. MSU is proud of the leadership role THG has played in improving the self-reliance of the community's food system.

Facilitating Healthier Lifestyles. THG has served more than 200 unique households over the past 8 years. These participating members in the CSA, have benefited from positive impacts on individual and family health and improved relationships among producers and consumers. THG member surveys confirm CSA membership results in the increased consumption of fresh produce, increased time spent cooking with family members, and a greater number of meals eaten at home with the family. All of these impacts have the potential to improve individual and public health by reducing risk for chronic disease.

Strengthened Community Food System. Each year a cohort of SFBS students spends the summer at THG experientially learning about small-scale production: planting, transplanting, weeding, irrigating, harvesting, preparing for distribution, and marketing. Additionally, beginning in 2011, students were also assigned to "partner farms" in the community, where they volunteer labor in exchange for expanded learning opportunities, and most importantly develop mentoring relationships with operators of successful small-scale farms in the community. These mutually beneficial relationships will strengthen the community food system, as students become interns and apprentices, and eventually farm operators in their own right. The local supply of fresh produce does not meet current demand in this community, but with continued training and relationship building, it could in the future. THG plays a key role in developing and nurturing these relationships.

Making Agricultural Education Accessible. THG students gain additional community service experience when they conduct educational tours for CSA members and the public, both informally and during field days coordinated by extension specialists at the MSU Horticulture Farm. Since THG is located in the middle of a research farm, participants are exposed to both practical food

production and a wide variety of agricultural research. To improve this experience, graduating seniors in the Sustainable Food & Bioenergy Systems degree program recently completed a capstone project proposing a plan for an interactive agricultural park to be integrated into a new community recreation space adjacent to GVFB. In the future, THG will have another venue to provide public education as a service to the surrounding community.

Support for THG came initially from a GVFB contribution, the MSU President, and the Deans of two colleges: Agriculture and Education, Health and Human Development. Over the past seven years, additional funding for the program has been provided by the Montana Nutrition and Physical Activity 5-a-day Program, the Bozeman Community Food Co-op, the MT Department of Agriculture's Growth through Agriculture Program, USDA's Western SARE Program, a USDA Higher Education Challenge Grant, the Bozeman United Methodist Church, and the AARP Foundation. In all, THG and the associated curriculum have been supported by externally funded grants totaling more than \$730,000 since 2007. Finally, the MSU Budget Council and Office of the President have provided significant on-going support (\$327,250) to sustain THG, including providing funding for a new building at the horticulture farm for classes, storage, and food distribution.

3.2 Impacts on the Montana State University Community:

Integrating Learning, Discovery, & Engagement. As a vehicle for community service and engagement, THG is a key component of the undergraduate interdisciplinary SFBS degree program. The rapid growth in the degree program since 2009 is reflected in the current enrollment of about 90 majors, and 25 alumni. THG was formally folded into the SFBS curriculum in 2010, when a Practicum course was offered, integrating hands-on learning, reflective writing, and community service projects. Five years of student surveys clearly show that the course is an influential experience. *All students* relay having gained a deep appreciation for the work involved in growing food for the community. For some, the experience solidifies their plans to operate a small-scale farm.

In addition to SFBS students, THG provides hands-on experience for students in classes studying horticulture, soils, nutrition, and culinary marketing. Food and nutrition students have written THG cookbooks as service learning projects. Architecture and engineering students have completed infrastructure projects at THG related to sustainable building design and renewable energy. Graduate level dietetic interns spend two weeks at THG each fall, connecting small-scale production with the preparation and marketing of fresh produce.

Collaborative Research across Disciplines. THG also serves as an interdisciplinary research laboratory, where MSU faculty conduct pedagogical, horticultural science, animal science, and health science research. Research projects and grant proposals most often involve faculty from more than one MSU department. A large USDA-funded project investigating the effects of using sheep for cover crop termination would not have been possible without THG facilities. The student practicum, the THG-GVFB partnership, and the associated SFBS curriculum have been the subject of countless conference presentations for a variety of audiences and numerous publications. The potential of THG to enhance scholarship for faculty and students is just beginning to be realized; it will continue to serve as a connector for faculty on opposite ends of the food system spectrum who collaborate to address multi-factorial food and agriculture problems.

Fresh Produce for the Campus Community. THG maintains a strong presence on the MSU campus by offering CSA memberships, operating a weekly campus farm stand, and managing a weekly *student* CSA, encouraging students to venture to the farm (one mile west of campus) to procure a generous assortment of produce for a nominal fee. Being a source of locally and educationally grown food for students is an important part of the THG mission.

SECTION 4: LESSONS LEARNED AND BEST PRACTICES

Over the last eight years, THG has faced and overcome many challenges. Interdisciplinary projects require more effort due to the need for more communication among non-traditional part-

ners. Lack of understanding about varying procedures in academic units can likewise lead to conflict. By overcoming these barriers, a number of highly successful collaborations have formed that allow faculty and students to conduct projects not possible elsewhere. Alignment of mission and goals among stakeholders is critical for collaboration and enduring partnerships. It is evident that the successes of THG and SFBS are tightly interwoven.

Farming, even on a small-scale, is not a “seasonal occupation”. THG turnover in the employment of production managers was cause for inefficiencies where stability of personnel would have decreased training needs and increased production and educational effectiveness. University leadership saw the wisdom in supporting a full-time, year- round farm production manager and since 2012, has committed to the program through permanent, annual funds. This dedicated support strengthened our relationship with GVFB, since THG could now offer additional technical assistance for their on-site production. Further, a level of production could be guaranteed, resulting in the revenue stream needed to sustain our commitment to improving food access.

Section 5: FUTURE

Future plans for THG include further broadening and enriching our GVFB partnership, reaching out to residents in more rural communities and involving more local vegetable growers in food distribution using the CFT. We would like to expand service and outreach within the MSU university community as well, offering discounted CSA shares to lower income staff and increasing participation in the student CSA. Curricular expansion might include training for current and future health and science teachers who want to incorporate school gardens into K-12 curricula, and incorporating THG into future programs in culinary arts and hospitality management. Award funds would be used to 1) sustain the CFT until it can reach the economy of scale that would allow it to support itself; 2) provide scholarships for students to make THG management internships more economically feasible; and 3) support the development of a THG satellite garden in a new community park to be used for public education and outreach.



March 31, 2014

Ms. Jean Middleton
APLU
Suite 400
1307 New York Avenue, NW
Washington, DC 20005

Dear Ms. Middleton and the Magrath Award Committee:

I am happy to endorse the application from Montana State University for the APLU 2014 C. Peter Magrath University Engagement Award. Towne's Harvest Garden (THG) has been an example of Montana State University's commitment to engagement since it began in 2007, and continues to embody MSU's mission to *educate students, create knowledge and art, and serve communities by integrating learning, discovery, and engagement.*

THG has attracted a large number of students to the study of sustainable food and agricultural systems, while serving as a key experiential component of the Sustainable Food & Bioenergy Systems Undergraduate Degree Program. For this reason, Montana State University is pleased to provide institutional support to sustain it. Permanent university funds now support the full-time salary of the THG production manager. In 2012 new infrastructure was built at the horticulture farm to serve as a safe and comfortable classroom and cold storage space, as well as space appropriate for weekly food distribution. A university policy forbidding commercial activity on central campus was amended specifically to allow THG students to operate a campus farm stand—for the benefit of the students' experience and also for the benefit of the campus community.

The annual Towne's Harvest President's lunch is a highlight of the summer and serves to showcase students' hard work, both on the farm and in the foods lab. It is also a time to bring all of the critical community partners together to offer gratitude for their support and to affirm our mutually aligned goals.

In addition to being an outdoor classroom that supports the Sustainable Food & Bioenergy Systems Degree Program, it is an opportunity for faculty from many different departments to work together on exciting interdisciplinary research projects. Working with the Gallatin Valley Food Bank has been a wonderful opportunity to have a very tangible positive impact on those in need in the surrounding community. I am proud that we are able to collaborate to provide thousands of pounds of food on an annual basis for this purpose.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Waded Cruzado'.

Waded Cruzado
President

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March 31, 2014

Ms. Jean Middleton
APLU
1307 New York Avenue, NW
Suite 400
Washington, DC 20005

Dear Ms. Middleton and Magrath Award Committee:

We would like to express our support for the Montana State University application for the APLU 2014 C. Peter Magrath University Engagement Award. The Gallatin Valley Food Bank (GVFB) is pleased to be the key community partner for Towne's Harvest Garden, and we would agree that our 8-year partnership is worthy of recognition at this level.

The evolution of our partnership reflects our growth and changing needs. When Towne's Harvest was initiated by students, GVFB was very interested in supporting this effort, as it was clear there was a shortage of high quality fresh produce available for our food bank clients. Knowing the importance of fresh produce in the diet and its role in preventing and managing chronic disease, we were very interested in improving client access.

For each of the first several years of the project, GVFB provided financial support for THG and THG supplied several thousand pounds of fresh produce during the growing season. In 2011, we sought to establish some of our own on-site production at the food bank and THG provided technical assistance and student volunteer labor to help make it possible.

Our need for produce from THG has diminished over time as has their need for supporting funds. However, our collaboration has only gotten stronger. In 2012 we worked together to obtain a grant from the AARP Foundation to formalize a mobile farm stand called the Community Food Truck. During this 2-year project, we have distributed approximately 4,000 lbs of fresh produce to low income seniors and families. Our emphasis has been on rural communities surrounding Bozeman where access to farmers' markets and fresh produce from retail sources is limited.

In the upcoming 2014 we will work together to sustain the Community Food Truck by seeking additional sources of funds, and strategizing to economize in a variety of ways. We expect that our partnership will continue to develop as we have a common mission to improve food access in the Gallatin Valley.

Sincerely,

Tim Trzinski
Director, Gallatin Valley Food Bank



Lori Christenson
Program Manager, Gallatin Valley Food Bank





March 31, 2014

Ms. Jean Middleton
 APLU
 1307 New York Avenue, NW
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 Washington, DC 20005

Dear Ms. Middleton and Magrath Award Committee:

As Dean of the College of Education, Health and Human Development (EHHD), I am writing to enthusiastically support the Montana State University application for the APLU 2014 C. Peter Magrath University Engagement Award. Our college is a key player in the Towne's Harvest Garden collaboration and interdisciplinary Sustainable Food & Bioenergy Systems Degree Program.

When I assumed my current role as Dean, I was awarded a complimentary share of the Towne's Harvest Community Supported Agriculture (CSA) Program. Visiting the farm on a weekly basis to retrieve a supply of vegetables gave me an insider's look at the THG operation, and allowed me to personally experience the benefits of being a farm shareholder. As a benefit of having this complimentary CSA, I had my mom over for weekly meals, and we cooked recipes with vegetables that I have not previously eaten (e.g., turnips and beets). My mom is a fantastic cook, so the CSA provided us with a way to continue her legacy cooking from "scratch." In addition, I got to know several of the students who work in the garden. Every week, when I went to pick up the harvest, the students would describe the vegetables and give us ideas as to how to cook and prepare them. I particularly enjoyed learning about heritage vegetables and how they are showcased through initiatives such as our Towne's Harvest Garden.

Towne's Harvest provides a first class opportunity for our students to learn in a field-based classroom, where they have a chance to apply their traditional classroom learning in very tangible ways, gaining valuable experience that will benefit them in their chosen career path. Several of our graduates have gone on to initiate their own small-scale farm operations.

I am very proud of the partnership Towne's Harvest has with the Gallatin Valley Food Bank, providing students with a chance to develop professionally while serving and engaging with the community. The Community Food Truck has become a well-known entity on campus and in the community as a way we collaborate to improve rural resident access to nutritious fresh produce. It is an example of how we seek to fulfill the Health and Human Development Department's mission to *enrich human wellbeing*. The Community Food Truck has been the subject of an MSU Alumni Foundation Initiative, as we hope to secure additional funds to sustain this valuable project. Thank you for considering this worthy project for a Magrath Award.

Sincerely,

Lynda Ransdell
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March 29, 2014

Ms. Jean Middleton
APLU
1307 New York Avenue, NW
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Washington, DC 20005

Dear Ms. Middleton and Magrath Award Committee:

We are writing in support of the Montana State University application for the APLU 2014 C. Peter Magrath University Engagement Award. Towne's Harvest Garden (THG) is a project with which we are proud to be affiliated, as it has had a visible impact on the MSU Child Development Center, the laboratory preschool program in the Department of Health and Human Development at Montana State University.

In our tenure as director of the MSU Child Development Center and Program Leader for the Early Childhood Education & Child Services academic program, respectively, we have had the pleasure of interacting with Towne's Harvest students and interns in a variety of ways. In 2010, a THG student led the installation of a garden adjacent to our playground. We have used this garden to teach the children about where our food comes from and how it grows. We also installed a greenhouse to provide increased opportunities for children, parents, and teachers to participate in our food production and nutrition curriculum. Children delight in turning the soil of the raised beds, planning our crops, planting and tending the seeds and young plants, and of course, harvesting and eating our bounty! Parents in our preschool have become more invested and involved in our gardening projects as well. Because of the THG presence on campus, our teachers, too, have become inspired to use gardening in creative ways both inside and outside the classroom.

Since the inception of the Montana Dietetic Internship (MDI), interns spend one week at the MSU Child Development Center, after completing their rotation at THG learning to harvest and prepare fresh produce in the foods lab. During their rotation at our preschool, the interns have used their experience at THG to plan menus with a "Montana Made" theme using only local ingredients, connect parents to local farmer's markets, and prepare and eat food with children.

For the upcoming 2014 season, the MSU Child Development Center has become a member of the THG Community Supported Agriculture (CSA) Program. We will walk with the children to the campus farm stand on a weekly basis to pick up our vegetable share, and bring it back to our classroom kitchen to prepare and eat together. In this way, children will get to see food production from the farm and garden all the way to their plate. We are grateful that MSU has a resource like THG to make this hands-on education possible for our preschoolers. The MSU Child Development Center is just one example of the ripple of impact THG has on the MSU community.

Sincerely,

Miranda Kacer
Preschool Director
113A Herrick Hall
Bozeman, MT 59717

Christine Lux, Ed.D.
Assistant Professor
210D Herrick Hall
Bozeman, MT 59717

March 28, 2014

Ms. Jean Middleton
APLU
1307 New York Avenue, NW
Suite 400
Washington, DC 20005

Dear Ms. Middleton and Magrath Award Committee:

I would like to express my support for the Montana State University application for the APLU 2014 C. Peter Magrath University Engagement Award. I am a 2013 graduate of the Sustainable Food and Bioenergy Systems Degree Program at MSU, who spent the summer of 2011 at Towne's Harvest Garden learning hands-on about small-scale food production.

Some of the most memorable lessons Towne's Harvest offered me were the practical skills needed to produce food commercially on a small acreage. Before stepping into the field at THG I didn't know the first thing about small scale farming, but by the end of the summer I felt that I had a very solid foundation on which to build my future in food production. In addition to experiencing food production from start to finish, I also conducted a research project about the lifecycle of the annual weed field pennycress in relation to climate change. Not only was this project interesting because of the questions it was trying to answer, but the process of setting up and completing such a research project gave me a deeper understanding of field research and gave me the confidence to do more scientific agroecological research in the future. I had the opportunity to showcase my research at the annual Towne's Harvest President's lunch where I shared my findings with THG stakeholders, faculty, partner farmers, and other students.

Additionally, I completed an independent scholars project co-producing a film about the local food system which gave me a deeper understanding of the challenges our local food system faces and the potential solutions for those challenges. In my view Towne's Harvest has made a positive impact on the local food system by providing a training ground not only for new farmers, but for all of those involved in any aspect of the food system. No matter what someone's job is in the food system, they will be more effective at creating positive change after spending a summer learning the process of producing food for their community, from seed to market.

I was able to complete a senior level hands-on internship on Three Hearts Farm, a 6 acre diversified vegetable farm in Bozeman. During my internship I was involved in all aspects of production and marketing, and by the end of the season I was given the responsibility to manage the field production without assistance from the owner.

Before I graduated, I was hired by the operator of my partner farm and mentor to manage their farm, and I was responsible for managing all aspects of the business; from marketing, to hiring and managing employees, to field production, to accounting. I would have never had this opportunity if it weren't for the partner farm aspect of THG.

Currently I am proud to say that I am managing my own small-scale farming operation, Running Strike Farm. I am leasing 5 acres of land just outside of Bozeman and I will be marketing my produce through a 60 member CSA, three farmer's markets, local grocery stores, and a local food distributor Market Day Foods.

In the coming 2014 season, I hope to bring my THG experience full circle by becoming a partner farm to a new cohort of students. I believe that my education at THG and the opportunities I had at MSU have prepared me to make a positive contribution to the local food system. At Running Strike Farms I am helping to support the creation of a healthful food supply for my community.

Sincerely,



Dylan Strike
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MSU, area groups receive grant to provide fresh vegetables to seniors this summer

April 16, 2012 — MSU News Service

A grant totaling nearly \$200,000 will enable Montana State University, the Gallatin Valley Food Bank and the Human Resource Development Council to provide fresh vegetables and other human services this summer to seniors living in several rural Montana communities.

The Hunger Innovation Grant will be used, in part, for a mobile farm stand. The mobile farm stand will take fresh produce from MSU's Towne's Harvest Garden to seniors ages 50 and older living in rural communities in southwest Montana, according to Carmen Byker, a food and nutrition professor at MSU. The communities to be served will be announced at a later date. Service will begin this summer.

The project is known as Cultivating Accessible, Affordable, Adequate, and Appropriate Nutrition for Seniors, or CAAAANS. It is intended to help increase food security and the well-being of rural seniors, Byker said.

"Having access to healthy food, home-health services and community is important," Byker said. "We expect that many people will benefit from this program."

The project will build on several existing programs of the HRDC, including the Homemaker Program, which provides in-home health checks; the Retired Senior Volunteer Program; and Galavan Bus, which will provide a redesigned bus for transporting the food and transportation for volunteers. In addition, the Gallatin Valley Food Bank will supplement the food provided by Towne's Harvest Garden outside of the growing season.

MSU students will be involved with the project in a variety of ways. Four MSU students will be responsible for marketing, coordinating and researching the mobile farm stand. Other students will help conduct a community needs assessment and develop recipes. Dietetic interns from MSU will provide food safety training and recipes. MSU faculty members will research student learning outcomes related to developing a mobile farm stand, examine intergenerational interactions, explore how social networks help seniors access food in rural areas, and examine social, physical and psychological wellness of seniors.

Local community members who are interested in the project, as well as local businesses and organizations, are invited to serve on a planning council. The council will help determine logistics of the mobile farm stand. It will also explore ways to sustain the project beyond the life of the grant. To learn more, contact Lori Christenson of the Gallatin Valley Food Bank at lori@gallatinvalleyfoodbank.org or Byker at carmen.byker@montana.edu.

The grant, from the AARP Foundation, is one of 10 grants totaling \$3.7 million that the foundation awarded last fall. According to AARP Foundation, the organization "is working to win back opportunity for struggling Americans 50 by being a force for change on the most serious issues they face today: housing, hunger, income and isolation. By coordinating responses to these issues on all four fronts at once, and supporting them with vigorous legal advocacy, the Foundation serves the unique needs of those 50 while working with local organizations nationwide to reach more people, work more efficiently and make resources go further. AARP Foundation is the charitable affiliate of AARP. Learn more at aarpfoundation.org."

Contact: Deb Redburn, (406) 994-6890 or dredburn@montana.edu, or Carmen Byker, (406) 994-1952 or carmen.byker@montana.edu

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Recommend Tweet +1 Share



Fresh vegetables from MSU's Towne's Harvest Garden will be delivered this summer to seniors living in several rural Montana communities. MSU photo by Kelly Gorkam. High-Res Available

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Community Food Truck crew members Tim Reusch, 24, Erin Nyberg, 28, Marcy Gaston, 37, and Aly Russell, 21, from left, sell produce to the elderly at the Gallatin Gateway Community Center.

FRESH GREENS

Community Food Truck expands stops for second season

By WHITNEY BERMES
Chronicle Staff Writer

Shortly after parking the Community Food Truck in a gravel lot in Gallatin Gateway on Tuesday, customers trickled in.

One woman had read about the truck on a flyer. Another man had driven by, seen the produce stand and turned around to check out what was for sale.

It wasn't the busiest of days, but then again, it was the first time the Community Food Truck had made a stop in Gallatin Gateway.

In its second summer, the Community Food Truck is a collaboration of Montana State University's Towne's Harvest Garden, the Gallatin Valley Food Bank and the Human Resource Development Council.

The goal of the Community Food Truck is to sell fresh, local produce — grown at Towne's Harvest Gardens — to older adults for affordable prices.

Last summer, its first season in operation, the truck visited Bozeman, Belgrade and Three Forks. This year, the truck added Gallatin Gateway to its route.

"We saw a need," said Marcy Gaston, food truck coordinator. "It's a small, little community further away from town."

And with steady turnouts at stops last

year, Gaston said she thinks Gallatin Gateway will be no different.

"We were hoping to capitalize on that," Gaston said.

On Tuesday, the selection included beets, bunches of green onions, arugula, kale, chard, heads of lettuce, radishes, basil and spinach. As the summer goes on, the produce list will change.

Money raised from sales at the truck goes back into the operation of both the program as well as to Towne's Harvest Gardens.

So why seniors? Lori Christenson, program manager of the Gallatin Valley Food Bank, said the organization has seen a sharp rise in the number of older adults requesting food assistance over the past few years. And the number of older adults having to choose between paying for food or medical expenses will continue to rise, she said.

"Tastes mature, and medication, fixed income, and isolation can lessen the joy in eating, which over time can diminish seniors' independence," Christenson said. "We see the Community Food Truck as a creative way to keep older adults living health and independent in their own communities."

However, while aimed at providing reasonably priced produce to senior citizens, anyone is welcome to buy vegetables from the stand.

For organic produce, it's really, really affordable," Gaston said.

Aly Russell, an MSU student studying sustainable food and bioenergy systems, is



Customer Meredith Mack, left, buys produce at the Community Food Truck at the Gallatin Gateway Community Center on Tuesday afternoon.



Nyberg, left, and Reusch sell garlic scapes at the Gallatin Gateway Community Center.

working at Towne Harvest Gardens for the summer, helping grow and package food.

"This is important for us to get it out to the community," Russell said. "To see people excited about buying it is a really cool experience."

Whitney Bermes can be reached at wbermes@dailychronicle.com or 582-2648. Follow her on Twitter at @wbermes.

