ENGAGEMENT THROUGH GARDENING:

BUILDING COMMUNITY THROUGH SUSTAINABLE FOOD

A 2019 Dow Sustainability Masters Fellows Project
Ann Arbor, Michigan

TEAM MEMBERS

EDIBLE PERENNIAL LANDSCAPE:
KATHARINE ASTA
SAVANNAH BOERGER
ZOE FULLEM
KAT SHIFFLER

FOOD ACCESS:
BROOKE CALLAGHAN
DANY ZEMMEL

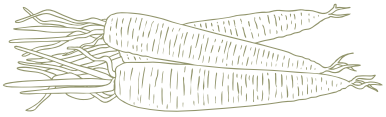
PROJECT ADVISOR
JEREMY MOGHTADER

CAMPUS FARM
MATTHAEI BOTANICAL GARDENS

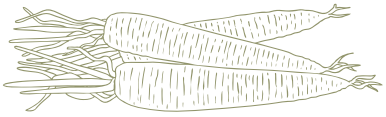
STUDENT LIFE
MAIZE & BLUE CUPBOARD
UNIVERSITY OF MICHIGAN

DOW SUSTAINABILITY FELLOWS
UNIVERSITY OF MICHIGAN
sustainability.umich.edu/dow

TABLE OF CONTENTS



LAND ACKNOWLEDGEMENT



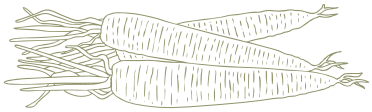
THE UNIVERSITY OF MICHIGAN IS LOCATED ON THE TRADITIONAL TERRITORY OF THE ANISHINAABE PEOPLE.

IN 1817, THE OJIBWE, ODAWA, AND POTAWATOMI NATIONS MADE THE LARGEST SINGLE GIFT TO THE EARLY UNIVERSITY, WHEN THEY CEDED LAND THROUGH THE TREATY AT THE FOOT OF THE RAPIDS SO THAT THEIR CHILDREN COULD BE EDUCATED.

THROUGH THESE WORDS OF ACKNOWLEDGMENT, THEIR CONTEMPORARY AND ANCESTRAL TIES TO THE LAND AND THEIR CONTRIBUTIONS TO THE UNIVERSITY ARE RENEWED AND REAFFIRMED.[1]

1. Dr. David C. Michener, Curator. University of Michigan Matthaei Botanical Gardens & Nichols Arboretum

EXECUTIVE SUMMARY



Fostering healthy, sustainable local food systems is critical to global food system productivity as well as functionality of many other sectors. The Michigan and Great Lakes region present ample opportunities for sustainable food system development. More locally, the Ann Arbor and University of Michigan (U-M) communities have a complex relationship with local food as well as the resources by which to meaningfully contribute and allow these systems to thrive. One main resource, the U-M Campus Farm, in connection with the U-M Matthaei Botanical Gardens, aims to connect U-M students and the community to their food. Food access and ethnobotany were two areas of sustained interest that matched the mission of the Dow Fellowship team. There was existing interest and preliminary thoughts for these projects at the U-M Campus Farm and Matthaei Botanical Garden, however our team identified areas for revitalization and expansion for greater impact. Through engagement with the U-M Campus Farm and community stakeholders throughout the year, we aimed to increase ecological and educational function in the greater Ann Arbor area and address food insecurity in the U-M community.

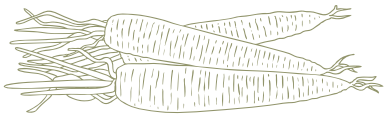
Ethnobotany and Perennial Edible Landscape

This team sought multiple types of participation with the ethnobotanical history of Michigan throughout the course of the project, including literature and oral research, community engagement, and physical garden design and planting. First, the project was contextualized through conducting in-depth information gathering in multiple formats. This research ranged from scientific and folk literature research on sustainable food system and ethnobotany to attending the Great Lakes Intertribal Food Summit to discussing the history and context of the planned edible perennial garden site at the U-M Campus Farm with stakeholders. After garnering critical project insight and context, the team proceeded with community engagement and physical garden planting. As a precursor to the edible perennial landscape, a 3-week seminar speaker series was held at the proposed garden site. This series drew members from the surrounding Ann Arbor community to hear from renowned experts from Tribal Nations on various ethnobotanical topics. These seminars provided ongoing relationship bridging with indigenous communities and a diverse space for community members to learn about and provide feedback on the edible perennial garden plan. Concurrently, our team began to develop a native (pre-European) plant database informed by textual research and stakeholder input, to serve as a community reference for our garden project and beyond. After gathering experiential and historical information and input from the involved parties, we developed a vision plan for the garden site. From September to November 2019, multiple garden planting days were hosted to physically install the beginnings of this vision. The workdays engaged individual community volunteers and multiple student groups. The culmination of the Dow Sustainability Fellows project year has resulted in a planted garden, to be expanded upon with additional plants and educational materials during the next growing season through continued involvement of our team and other stakeholders. The project has engaged a diverse array of community members in this short, early term, but the impact is expected to continue long beyond this year, not only physically through a perennial garden landscape, but through sustained relationships with local food system partners and members of Tribal Nations.

EXECUTIVE SUMMARY

Addressing Student Food Insecurity

Food insecurity, or the inability to afford enough food for a healthy and active life, is a growing public health concern, affecting the present and future physical and mental health of children and adults. In 2016, 12% of American households experienced food insecurity.[2] While results from recent studies assessing food insecurity among U.S. college campuses vary, the emerging trend is the rate of food insecurity is higher among college students than the national average.[2] A 2018 survey found that at U-M, 32% of students have experienced food insecurity.[3] College students face many challenges to accessing food, including a lack of grocery stores near campus, convenient and reliable transportation, affordable food items, cooking facilities, and cooking skills. Students who are of minority backgrounds experience even higher rates of food insecurity, which can have detrimental effects on both short- and long-term health and academic success.[2] Our team addressed food insecurity among U-M students with many goals in mind but were primarily driven by the mission of the U-M Campus Farm, which is to grow food for students and by students. We therefore created the Maize and Blue Cupboard Donation Garden at the Ginsberg Center in order to provide locally-grown produce to the Maize and Blue Cupboard, U-M's food pantry. The Garden also serves to increase student engagement in food systems through gardening workdays and cooking classes. The team spent the winter and spring acquiring background information, identifying and meeting with partners, and coordinating roles and responsibilities among partners for summer and fall programming. Garden workdays took place over the summer, and cooking and nutrition classes occurred this fall. Participant feedback was positive, finding the programming beneficial, but expressed the need for continued and expanded opportunities for engagement. In addition to programming, our team researched alternative methods of addressing food access, which included two visits to mobile markets in the Midwest. As the Garden and the Cupboard continue to grow in the years to come, we recommend continued collaboration among partners, expansion of the physical space and programming, and openness to implementing alternate models to improve food access in order to better serve U-M's food insecure students.



Throughout the Dow Sustainability Masters Fellowship year, these project foci have directly addressed two U-M Campus Farm activities of critical interest, and in conjunction with one another have broadly influenced the surrounding Ann Arbor food system. The final team deliverables will not only include physical garden spaces and research summaries, but also plans for continued sustainable management and relationship building within the context of the two gardens. Future student teams, including Dow Sustainability Fellows Teams, are well-placed to leverage and build upon this foundational work.

2. Meza A, Altman E, Martinez S, Leung CW. "It's a Feeling That One Is Not Worth Food": A Qualitative Study Exploring the Psychosocial Experience and Academic Consequences of Food Insecurity Among College Students. J Acad Nutr Diet. 2018;119(10):1713-1721.e1. doi:10.1016/j.jand.2018.09.006
3. Leung CW. Preliminary findings from student survey. University of Michigan School of Public Health, Department of Nutritional Sciences. 2018.

INTRODUCTION

Broad + Local Context

The concept of sustainable food is a multifaceted challenge which impacts all sectors. The goal of attaining sustainable food systems is complex, requiring the capacity and collaboration of individuals, organizations, and entire industries. The global challenge of sustainable food systems is uniquely positioned as one which is not conditional or abstract, but rather is central to daily life for every person on earth. Building a sustainable global food system is reliant on revitalizing food systems at the local scale. Local food systems, which may look visually different across borders and regions, are all influenced by the same key factors, including environmental health and stability, cultural food importance and food history, food security, and economic impacts. Not only are these factors ubiquitous at all levels of food systems, but they are deeply interconnected—creating an appropriate stage for interdisciplinary collaboration. Here in Michigan and the Great Lakes region, we are witnessing a changing food landscape, literally and figuratively, impacted by climate change, growing food insecurity despite ample food availability, and an evolving engagement with the indigenous history of the region. Even more specifically, U-M is uniquely positioned as an influential actor within the local food system. The University encompasses a massive number of students, faculty, and staff, driving a need for sustainable and thoughtful food production. It is also uniquely positioned with robust and diverse resources to positively contribute to equitable reform of these systems.

Project Background

The Ann Arbor and University of Michigan communities have a long, complex relationship with local food systems. From historical exploitation of native lands to the modern food security concerns of students, there are ample opportunities to improve the relationship between food and communities in this area. The U-M Campus Farm was established in 2012 as an outcropping of the Matthaei Botanical Gardens to connect U-M students to their food. Today, U-M Campus Farm is firmly established as a hub for sustainable food system development. However, with only one full-time staff member, Jeremy Moghtader, and a rotating crew of student leaders, the undertaking of long-term, visionary projects is challenging - particularly those that engage with external partners. Our Dow team members became aware of several such projects through collaborative brainstorming with the U-M Campus Farm, and in an effort to make best use of resources and maximize impact for areas of stakeholder interest, our members partitioned into sub-teams to address two prevailing interest areas: edible perennial landscaping and food insecurity. Both of these impact areas had been initiated in past years by the U-M community.

In 2019, the Maize and Blue Cupboard was established to help alleviate student food insecurity on the U-M campus. In 2017, the Heritage Seeds for Sustainable Lifeways project arose from the Graham Sustainability Institute's Emerging Opportunities Program to open the door for conversation and work around ethnobotany in Michigan. To build upon and expand these existing efforts, our Dow Sustainability Fellows team has engaged with the U-M Campus Farm throughout the year, aiming to increase ecological and educational function in the greater Ann Arbor area and address food insecurity in the U-M community.

EDIBLE PERENNIAL LANDSCAPE: METHODS

Information Gathering

Background information was gathered throughout the course of the project through text resources and scientific literature around the topic of indigenous agriculture, history of indigenous people in the Great Lakes, ethnobotany, edible perennial plants, forest gardens, seed saving, and sustainable food systems (Appendix 1). Some of these references were suggested by community members and stakeholders. As part of stakeholder engagement, team members attended the Great Lakes Intertribal Food Summit, a four-day event for Tribal Nation community knowledge sharing and connection. Our team attended with the intention to engage with indigenous food experts and learn about the cultural context of plants important to the region. During the summit the team met with community members from Southeast Michigan to discuss an appropriate approach to the design of an edible perennial landscape inspired by Great Lakes Tribal Nation communities. There is a complicated history between U-M and Tribal Nations, however there is burgeoning path to healing led by several departments and entities at U-M. We partnered closely with the Matthaei Botanical Gardens' team that has worked with Tribal Nations representatives for years around seed rematriation for guidance, cultural sensitivity, and prime contacts.

Garden Site Walkthrough

Project advisor Jeremy Moghtader giving a tour of the proposed edible perennial landscape site. Photo credit: Kat Shiffler.

On March 29th, 2019 the team held a site walkthrough of the Strawbale site at the Campus Farm with our client Jeremy Moghtader and our community consultant Shiloh Maples. This was a key turning point for making the project, as our stakeholders were able to see the physical site and the team started to visualize how the edible perennial landscape could be implemented. The activities included a quiet walkthrough and sketches of what was noticed about the site, and then a deeper discussion of how to proceed and the first mentions of specific species we might include in the design (Appendix 2).

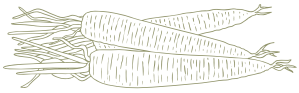
External Site Visits

Based on recommendations from community consultants and our clients at the Matthei Botanical Gardens, members of the sub-team visited 3 sites (Appendix 3). The Mission Garden Project in Tucson, Arizona has gained significant recognition as a living agricultural museum, with spaces dedicated to several of the present and past Native peoples and a re-creation of their traditional gardens. The National Museum of the American Indian, a Smithsonian Institution in Washington D.C, fosters a richer shared human experience through a more informed understanding of Native peoples. Additionally, the museum houses the Mitsitam Native Foods Cafe, one of the few restaurants in the nation devoted to indigenous cuisines. The Royal Botanical Gardens in Ontario, Canada hosts a new Indigenous Trail, which highlights plants used by the Anishinaabe people, created through a collaboration with the Mississaugas of the New Credit First Nation. These site visits provided invaluable context and inspiration for the project.

EDIBLE PERENNIAL LANDSCAPE: METHODS

Summer Speaker Series

Ethnobotany is the study of a region's plants and their practical uses through the traditional knowledge of local culture and people. A summer speaker series convened three experts across Wednesday evenings in July 2019 (Appendix 4). The series series on ethnobotanical topics was created as both a way to educate the public and to elicit foundational input for the design of the edible perennial landscape (Appendix 5) . To recognize the source of ethnobotanical knowledge, it was a priority for our team to partner with individuals that identify as members of a Tribal Nation for all aspects of the seminar series. Dr. Scott Herron (Ferris State University) presented 'Ethnobotanizing Your Garden: Inspired Design from Indigenous Plants and Worldviews,' in which he incorporated his specialist knowledge of the Great Lakes region with a focus on the Anishinaabek culture into sustainable home garden design. Dr. Martin Reinhardt (Northern Michigan University) and Tina Moses (Manager for Reinhardt & Associates/ Waawiyeyaa) presented 'Indigenous Foods Research in the Great Lakes Region,' with a focus on the Decolonizing Diet Project that investigated the relationship between humans and Indigenous foods of the Great Lakes Region from 2010-2014. Shiloh Maples presented 'Recovering Space for Ancestral Foodways', in which she discussed the importance of revitalizing traditional foodways and embracing traditional foods in modern life. Designing sustainable food ways with an emphasis on sourcing food with intention and rooted in culture is an overarching focus of this project. From connections made at the Great Lakes Intertribal Food Summit, the team met a Detroit-based entrepreneur who provided meals for the series focused on plants important to the Great Lakes Region and indigenous cuisine.



"We all have some connection in our lineage to working and engaging meaningfully with the land."
"I'm fascinated by the way of life & world perspective, I would love to learn more about daily life & values for local indigenous people"

- Reflections from speaker series attendees

Dow Masters Fellows with speaker Shiloh Maples.
Photo credit: Liz Tylander.

Introducing series speakers inside the Strawbale structure.
Photo credit: Kat Shiffler.

EDIBLE PERENNIAL LANDSCAPE: RESULTS

The principal result of our team's collaboration with the U-M Campus Farm is the design and installation of physical plantings of edible, perennial trees, shrubs and herbaceous perennials at the Strawbale site. The design is derived from this summer's public seminar on indigenous ethnobotany, individual plant research and visits to examples of public edible perennial landscapes in the region. The plant research resulted in the development of an extensive database of edible, native plants from pre-European contact landscape. In this plant list we compiled information on growing conditions, nurseries where the plants are grown, available varieties, historic and current edible and/or medicinal uses, and information on the origin of primary source information. Specifically, we coordinated the installation of 20 species of trees and shrubs and seven herbaceous perennials this Fall over the course of three public planting days (Appendix 9). The new plantings—and future proposed plantings—address cultural and institutional connectivity through a public process of design. Along with the new plantings, the team developed a planning document landscape outlining plants more appropriately planted in the Spring season and recommendations for educational signage and continued community engagement.

Photo	Common Name	Botanical Name	Propagation
	Allegheny serviceberry, Smooth Juneberry	Amelanchier laevis	Easily grown in average, medium, well-drained soil in full sun to part shade. Tolerant of a somewhat wide range of soils, but prefers moist, well-drained loams.
	American Black Elderberry	Sambucus canadensis, Sambucus nigra L. ssp. canadensis	Grow in medium to wet, well-drained soils in full sun to part shade. Tolerates a wide range of soils, but prefers moist, humusy ones. Spreads by root suckers to form colonies. Prune suckers as they appear unless naturalizing. A large number of late winter pruning options include (a) pruning out dead or weakened stems, (b) shortening one year stems or (c) cutting back to the ground to rejuvenate. Some horticulturists recommend a hard spring pruning for maintaining best foliage and habit. Cross pollination by a different variety is key to its growing and bearing success.
	American Hazelnut	Corylus americana	Easily grown in average, medium, well-drained soil in full sun to part shade. Prompt removal of root suckers will help maintain plant appearance, and, if desired, help prevent thicket formation.

Snapshots of core edible garden plan and plant database (full versions: Appendices 7 and 8).

EDIBLE PERENNIAL LANDSCAPE: IMPACT+ RECOMMENDATIONS

We anticipate the impact of our project to be felt over the short- and long-term, for our direct client and larger group of stakeholders. The project deliverables of the plant database, future recommendations outline, and the physical garden at the Strawbale, serve to engage public visitors from the local community at the Botanical Gardens and Campus Farm, demonstrate the potential of the Strawbale structure and continue the ongoing connection and healing of U-M to tribes and traditional edible landscapes. From the beginning of this project, the Campus Farm conveyed the importance of increasing connectivity to the neighboring Matthaei Botanical Gardens and engaging community visitors to learn about the Campus Farm and the adjacent Strawbale site. Through the planting of edible, perennial shrubs and trees we expect to deepen the connections of these three distinct areas on the property, through the physical addition of plants in previously bare areas, as well as the link between ethnobotany and sustainable food production.

Key Recommendations

Our main recommendations for project continuation are that currently involved parties or future teams continue garden expansion, add educational signage, and facilitate community engagement with the site in its role as a living land acknowledgement.

EDIBLE PERENNIAL LANDSCAPE: IMPACT

The implementation of the edible, perennial landscape also serves to highlight the Strawbale structure that was previously built. Hosting the Summer Speaker Series as part of this project attracted community members to learn more about the Strawbale structure, and may create more interest in future related sustainability activities. It may also direct the future landscape and pairing of sustainable structure exploration with utilized, sustainable plantings. The connections created and/or deepened with Native communities in Michigan, our other stakeholders, and the larger Ann Arbor community are ones that we hope will have a lasting impact. The important discussions we were able to engage in at the Indigenous Food Summit, with UM faculty, and with Native scholars and community members, shaped our understandings of what the garden might include, and the significance of the plants and the people who cultivate them. We hope that by acknowledging the complicated history between the Tribal communities and the University at the seminar series, promoting the significance of ethnobotany, recognizing the source of botanical knowledge, creating a garden inspired by indigenous teachings, and exposing the public to Native experts in these fields of study, these discussions will continue.

It is our intention that the information we have gathered, and the relationships we have made will continue to grow with the University of Michigan, and that the edible perennial landscape can help foster these relationships in the future.

STUDENT FOOD ACCESS: METHODS

MBC Donation Garden Workdays

The past year has been spent focusing efforts on various projects related to addressing food access. The team has been primarily working on the Maize and Blue Cupboard Donation Garden with a variety of partners at U-M in order to increase student engagement with the Garden and awareness of its primary purpose: providing food to the Maize and Blue Cupboard (MBC), U-M's own food pantry, in order to serve food insecure students (Appendix 10). Planning and hosting workdays at the Garden has been a collaborative effort among partners, including the MBC, the Student Hunger Initiative undergraduate organization, the Ginsberg Center, the Campus Farm. and the U-M Sustainable Food Program. Routine workdays occurred from the spring through the fall and two larger workdays took place in August. Students who could not participate expressed interest in future opportunities (Appendices 11-13).

Campus Farm Intern Natalie Coltman (right) leading a summer workday at the MBC Donation Garden. Photo credit: Dany Zemmel

STUDENT FOOD ACCESS: METHODS

Cooking Classes

As the seasons changed, we shifted our focus from workdays to cooking classes. All produce used in the classes was acquired from local sources, either the MBC or the Campus Farm. The classes educated students on nutrition and sustainable food systems, and also aimed to strengthen their skills and confidence in cooking and incorporating local foods into their diets (Appendices 14-17). The team has also worked to design a MBC Donation Garden sign to install in order to officially establish the garden and inform visitors of its new purpose. The project will be wrapped up by delivering a guide for community gardening and cooking events to MBC staff, the Student Hunger Initiative organization, and the School of Public Health's Nutritional Sciences Student Association to support these groups as they will collaborate to ensure future Garden engagement.

Mobile Market Research

Additionally, the team researched mobile grocery stores as an option for future additional programming for areas lacking brick and mortar grocery stores. We spoke with students and consultants from U-M's Ross School of Business, reviewed a variety of online resources, and communicated with successful mobile market projects in order to gather information on logistics and funding. This summer, the team visited the St. Louis Metro Market and the Lansing Mobile Farmers Market to learn about their non-profit operational models (Appendix 18). This work was initated in order to develop a resource guide to share with our partners to help inform future mobile market endeavors at U-M and possibly the greater Ann Arbor area.

STUDENT FOOD ACCESS: RESULTS

MBC Donation Garden

This project created a long-term resource for students facing food insecurity and a tool for educators from various disciplines to facilitate hands-on learning in public health, the environment, sustainability, and social justice. Through many meetings with partners, we established roles to ensure long-term facilitation of the Garden and community programming. The Campus Farm has played a key role in revitalizing the Garden over recent years, including countless hours of labor, farming equipment, and facilitation of weekly summer community workdays. We expect that the summer intern position housed through the Campus Farm will transform in the future and recommend a new position be created under another university unit in order to coordinate garden-related programming. We also recommend the establishment of another growing space for the MBC at the Campus Farm. There is land available for this expansion and this would significantly increase the amount of fresh produce capacity for the program. Since the current Campus Farm staff does not have the capacity to oversee this space, there will need to be another position created and funded by the University. We suggest this position be housed under the U-M Sustainable Food Program and the MBC. Having another space at the Campus Farm dedicated to the MBC would increase awareness of student food insecurity in the greater Ann Arbor community, as many university and community organizations interact with the space. Additionally, we suggest the construction of a hoop house in this space to increase the growing season of produce to be donated to the MBC. The current hoop houses at the Campus Farm allow for the year-round growth of produce for U-M dining halls. We believe that the establishment of this space would closely align with the Campus Farm's goal to provide opportunities for all students to have access to fresh and sustainably-sourced produce. Considering the limited growing season for produce in Michigan, suppliers of fresh produce to the MBC during winter months is limited. Therefore, we believe the establishment of a hoop house for the MBC would address this issue in a sustainable way by minimizing the sourcing of produce grown in warmer climates that are more costly and have a greater transportation and carbon footprint.

STUDENT FOOD ACCESS: RESULTS

Garden-Related Programming

In addition to the establishment of the Garden, our project successfully launched a series of garden workdays and cooking classes for students to participate in. From student evaluations, we were able to gather valuable feedback to be taken into consideration for future courses. A majority of students had no or very little gardening experience, minimal cooking experience, and no cooking or nutrition class instruction. Most students agreed that the cooking class had improved their: 1. general cooking skills, 2. understanding of the components of a healthy, balanced meal, 3. confidence in preparing a healthy, balanced meal, and 4. ability to access ingredients to prepare healthy meals consistently (Figure 1). In addition, we also gained a better understanding of how students were currently accessing fresh produce. There was a wide spectrum of access points, including utilizing the dining halls; walking, biking, taking the bus, or driving; and lacking a vehicle or the ability to receive a ride to the grocery store (Figure 2). Students also responded saying they accessed produce from various locations including the grocery store, convenience store, farmers' markets, food pantry, gardens, and food cooperatives (Figure 3).

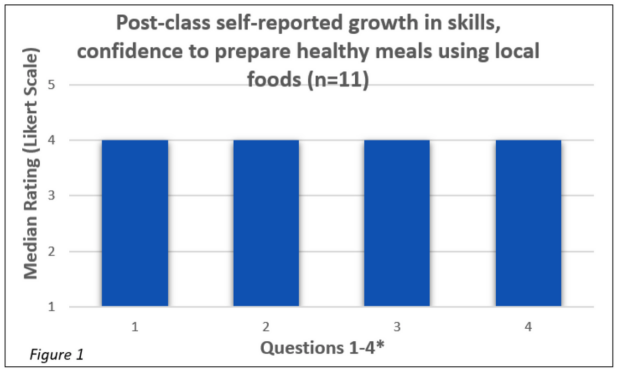


Figure 1

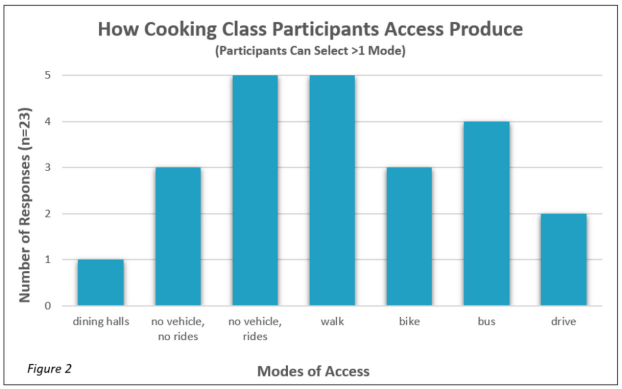


Figure 2

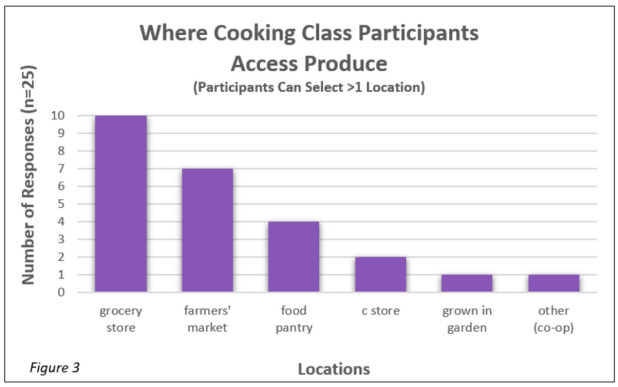


Figure 3

*See Cooking Class Evaluation (Appendix 17)

Lastly, when asked for feedback on future programming related to gardening, cooking, and nutrition, the following responses captured common themes and ideas:

- "Additional classes like this one! I would also be interested in a "create your own compost" class, where we could set up a small use-at-home compost. Also, gardening classes would be fun (indoor herbs or greens)."
- "I like this format where we get to see how it manifests on our plates."
- "When your real kitchen is done I think it would be cool to go 'shopping' at the cupboard before starting to cook."
- "Home gardening/gardening in a limited space. Access to gardening"

STUDENT FOOD ACCESS: RESULTS

Garden-Related Programming

Although the Maize and Blue Cupboard had originally planned on hosting cooking classes, their kitchen space was not renovated in time. Emphasizing student feedback, we suggest the MBC hire a few staff members with cooking and nutrition education experience to facilitate periodic cooking classes. We also recommend collaboration with the U-M School of Public Health, so that Nutritional Science graduate students can gain experience leading hands-on courses and so they can also provide consistent and low-cost labor to the Cupboard in order to support this programming.

Suggested Mobile Market Programming

In addition to the current gardening and cooking opportunities, our mobile market research findings suggest that U-M should consider investing in some form of mobile grocery store for students struggling to access fresh produce. We believe that this would greatly increase the consumption of locally-grown and nutritious produce among students. We suggest a mobile market model supplied with produce from the Campus Farm that makes stops throughout central and north campus locations. Former proposals to the university were unable to successfully secure funding for a mobile market. Considering most mobile markets run on a non-profit model, we suggest partnering with a few community organizations.

A few options for community partners include Growing Hope, Food Gatherers, and Argus Farm Stop. Partnering with the Washtenaw County Health Department could also be an option as there are opportunities to secure funding through grants and also build off existing programming with the Washtenaw County Food Policy Council. From our research, it is clear that a full-time staff member is needed in order to successfully operate a mobile market. Many models utilize Food Corps and Americorps service members in order to stay financially stable. Many communities have successfully increased access to produce through this model and we highly suggest that universities consider this as a feasible option.

STUDENT FOOD ACCESS: IMPACT+ RECOMMENDATIONS

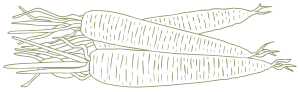
This project will have a direct impact in the U-M community by providing nutritious produce to food insecure students, promoting sustainable agriculture, and improving knowledge of how to grow and cook one's own food. The central location of the Maize and Blue Cupboard Donation Garden will spread awareness of the issue of student food insecurity and create a platform for the community to help address this issue. The hands-on gardening and cooking opportunities will not only provide students with a new skill set but an opportunity to come together as a community.

Key Recommendations

Considering the complexity of food systems and the issue of food insecurity, there needs to be collaboration among partners and willingness from the university to explore and support new opportunities in order to improve health outcomes and foster equity in achieving academic success. Our main recommendations are to continue garden expansion and programming, increase capacity by hiring another full time MBC staff member, and expanding MBC scope by starting a mobile market program.

ACKNOWLEDGEMENTS

This work was supported by The Dow Chemical Company Foundation, through the Dow Sustainability Fellows Program at the University of Michigan.



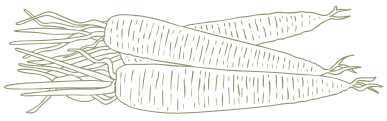
Our team would also like to express gratitude to the many parties who made this project possible:

Jeremy Moghtader | Project Advisor
Elizabeth LaPorte | Dow Fellows Program Project Consultant
Margaret Wooldridge | Dow Sustainability Fellows Program Director
U-M Campus Farm | Project Client
Matthaei Botanical Gardens | Project Partner
U-M Maize and Blue Cupboard | Project Partner
U-M Sustainable Food Program | Project Partner
Student Hunger Initiative | Project Partner
U-M Ginsberg Center | Project Partner
Dr. David Michener | Matthaei Collaborator
Bob Grese | Matthaei Collaborator
Kim Fitzgerald | Maize and Blue Cupboard Collaborator
Shiloh Maples | Community Partner and Speaker Series Presenter
Tina Moses | Speaker Series Presenter
Dr. Martin Reinhardt | Speaker Series Presenter
Dr. Scott Herron | Speaker Series Presenter
Kirsten Kirby (K'ATSK'U) | Catering
Permaculture Design Team Volunteers
Community Volunteers

APPENDICES

Appendix 1. Excerpt of plant list as part of the Decolonizing Diet Project, which was used to inform edible perennial landscape. Courtesy: Dr. Martin Reinhardt and Tina Moses, Decolonizing Diet Project, NMU.

Decolonizing Diet Project			**Seed Requested From**	
Plants			**NA=National Arboretum**	
Last Updated: July 11, 2012			**NPGS=National Plant Germplasm Sys**	
Scientific Name	**Common Name**	**Anishinaabe Name**		**USDA Palatable**
Acer barbatum	Southern Sugar Maple			Yes
Acer negundo L.	Boxelder	adjagobimuk		Yes
Acer nigrum Michx. f.	Black Maple			Yes
Acer rubrum L.	Red Maple	zhiishiigimiiwanzh,-iig		Yes
Acer saccharinum L.	Silver Maple	zhiishiigimiiwanzh,-iig		Yes
Acer saccharum Marsh.	Sugar Maple	ininaatig,-oog		Yes
Allium canadense L.	Meadow Garlic		*NPGS*	Not Shown
Allium cernuum Roth	Nodding Onion	zhi/agaagawanzh,-iig	*NPGS*	Not Shown
Allium tricoccum Ait.	Wild Leek	bagwaji-zhi/agaagawinzh,-iig		Not Shown
Amelanchier canadensis (L.) Medi	Canadian Serviceberry/Juneberry		*NPGS*	Yes
Amelanchier laevis Wieg.	Allegheny Serviceberry/Juneberry		*NPGS*	No
Amelanchier stolonifera Wieg.	Running Serviceberry/Juneberry			Not Shown
Amelanchier arborea (Michx. f.) F	Common Serviceberry/Juneberry		*NPGS*	Yes
Amphicarpaea bracteata (L.) Ferr	American Hogpeanut	bagwaji-miskodiisimin		Not Shown
Andromeda polifolia var. *glaucop*	Bog Rosemary	binemikci		Not Shown
Apios americana Medik.	Groundnut	opin		Yes
Aralia racemosa L.	American Spikenard	(gi)chi-okaadaak		Not Shown
Arctostaphylos uva-ursi (L.) Spren	Kinnikinnick, Bearberry		*NPGS*	No
Arisaema triphyllum (L.) Schott	Jack in the Pulpit	zhaashaagomin		No
Asarum canadense L.	Canadian Wildginger			Not Shown
Asclepias syriaca L.	Common Milkweed	ininiwa/inzh	*NPGS*	Not Shown
Asimina triloba (L.) Dunal	Pawpaw			Yes
Aster sp. (see Plants_Asters sheet f	Asters - see Plants_Asters sheet			



Full Master Plant List and Grocery List available at:

https://share.nmu.edu/moodle/course/view.php?id=33

APPENDICES

Appendix 2. Early conceptualzing of the edible perennial garden at the U-M Campus Farm.

Edible perennial garden team site visit, March 29th, 2019. Photo credit: Kat Shiffler.

Initial rough sketch of edible perennial landscape design. Courtesy: Kat Shiffler.

APPENDICES

Appendix 3. Photographs from external site visits related to edible perennial landscaping.

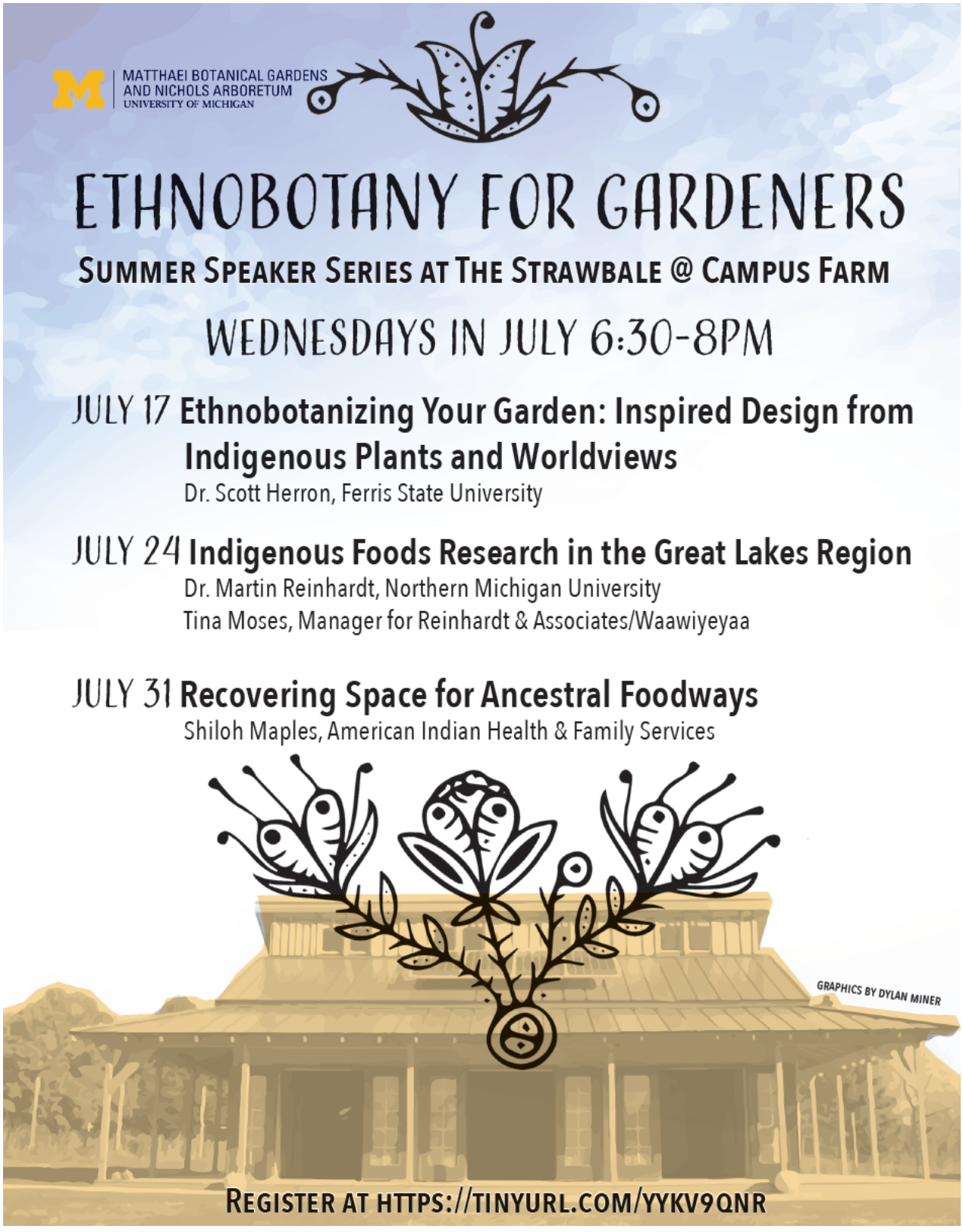
Examples of Anishinaabe influences. Royal Botanical Gardens, Ontario, CA. Photo credit: Kat Shiffler.

Native-influeced garden design. Mission Garden, Tuscon, AZ. Photo credit: Zoe Fullem.

Example of indigenous food offerings at Mitsitam Native Foods Cafe. National Museum of the American Indian, Washington, D.C. Photo credit: Katharine Asta.

APPENDICES

Appendix 4. Summer speaker series flyer.



APPENDICES

Appendix 5. Audience feedback from summer speaker series.

Audience Responses from Scott's Talk (7/17)

Plant Ideas

- "Wild Ginger under Black Walnut"
- "Mushrooms in Stumps"
- "Ginger sweet grass and troutlily salad!"
- "Pearly Everlasting"
- "Sweetgrass, Wild Ginger"
- "Sweet grass in raingarden"

Big-picture Garden Ideas

- "Medicine Symbols"
- "Mix of Native!"
- "Leave the weeds... just make sure the plant has enough to prosper"
- "Plants that are here and their uses"
- "Mix of "native" and introduced"

Inspiration

- "Where I come from"
- "What's Native?"
- "Migration, food, spirit, mixtures"

Audience Responses from Shiloh's Talk (7/31/2019)

Gratitude

- "We all have some connection in our lineage to working and engaging meaningfully with the land. Tonight helped me feel that and be inspired to explore that more in my geneology rather than dismissing it, thinking that its something I dont have access to."
- "I'm fascinated by the way of life & world perspective, I would love to learn more about daily life & values for local indigenous people, thank you for sharing"
- "Thank you. Keep learning & sharing"
- "Knowledge, sharing, events"

Plant Ideas

- "Lunar cycles & timing of planting/garden work"
- "Paw Paw trees, Sassafras trees, Serviceberry trees"
- "I feel like a lot of people would really enjoy trying Paw Paw if it is possible to grow in this farm space!"
- "Lamb's quarter, pigwee, and mugnuz (?) (often considered weeds here on the Campus Farm but make lovely salad!)"

Big-picture Garden Ideas

- "Could there be a mini/community library of books about foods, histories, etc?"
- "Perhaps organize plants in seasonal beds, rather than the more familiar Western thematic organization by uses"
- "Language for interpreting garden at MBG needed"
- "Moon cycle planting"

Inspiration

- "Know how to use nettles as a survival food"
- "Inspired to explore my own culture more deeply, learn the names of the months in our lunar calendar. Inspired to put more effort into mentorship and sharing knowledge"
- "Lunar cycle gardening! Inspired to start learning about/drawing wild plants"
- "Time-natural rhythm work"

APPENDICES

Appendix 6. Photographs from Ethobotany for Gardeners: Summer Speaker Series.

Presenters Tina Moses and Dr. Reinhardt, Kat Shiffler, and Jeremy Moghtader, team advisor. Photo credit: Elizabeth LaPorte.

Strawbale structure with seminar attendees. Photo credit: Liz Tylander.

Indigenous foods catered to the speaker series by Kirsten Kirby (K'ATSK'U) (Contact: kirby.kirsten@yahoo.com). Photo credit: Kat Shiffler.

Presenter and project stakeholder Shiloh Maples with "Recovering Spaces for Ancestral Foodways". Photo credit: Kat Shiffler.

Sharing and teaching about sweetgrass traditions. Photo credit: Kat Shiffler.

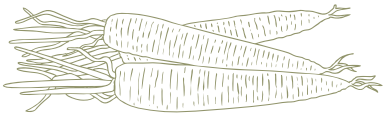
APPENDICES

Appendix 7. Full version of edible perennial landscape plan.

APPENDICES

Appendix 8. Example of plant database layout, and link to full database.

Photo	Plant Type	Common Name	Botanical Name	Propagation	Nativity
	Herbaceous Perennial	Nodding Onion	Allium cernuum	easily grown in average, dry to medium, well-drained soil in full sun to light shade. Best in sandy loams. Plants will naturalize by self-seeding and bulb offsets in optimum growing conditions. Seed should be planted in Spring. Bulbs/transplants should be planted in **fall**.	2
	Herbaceous Perennial	Prairie Smoke	Geum triflorum	Difficult to start from seed; slow to germinate. Can plant in Spring or **fall**	2
	Herbaceous Perennial	Prairie Turnip, Indian Breadroot	Pediomelum esculentum	The plant is best harvested as the tops die down at the end of the growing season. This plant's native range begins in Wisconsin through the Great Plains. It was widely used by Native Americans from the Plains.	1
	Herbaceous Perennial	Sawtooth Sunflower	Helianthus grosseserratus M. Martens	Because it is a perennial, sawtooth sunflower can be propagated via cuttings in the **spring**. Take cuttings from vigorous side shoots with mature leaes and no buds or flowers. Pot in sterile medium and keep in a warm, lightly shaded place and maintain moisture.	2



Full plant database available at:

https://docs.google.com/spreadsheets/d/10sB7EMdFQUzqEcx-vHGKYZ2KFYmJwvQ6mcphr1TKyHA/edit?usp=sharing

APPENDICES

Appendix 9. Photographs of team members and volunteers putting fall plants in the ground at the edible perennial garden workdays at the Strawbale structure site in September and November, 2019. Photo credit: Katharine Asta, Kat Shiffler.

APPENDICES

Appendix 10. References providing context on the capacity and scope of the MBC.

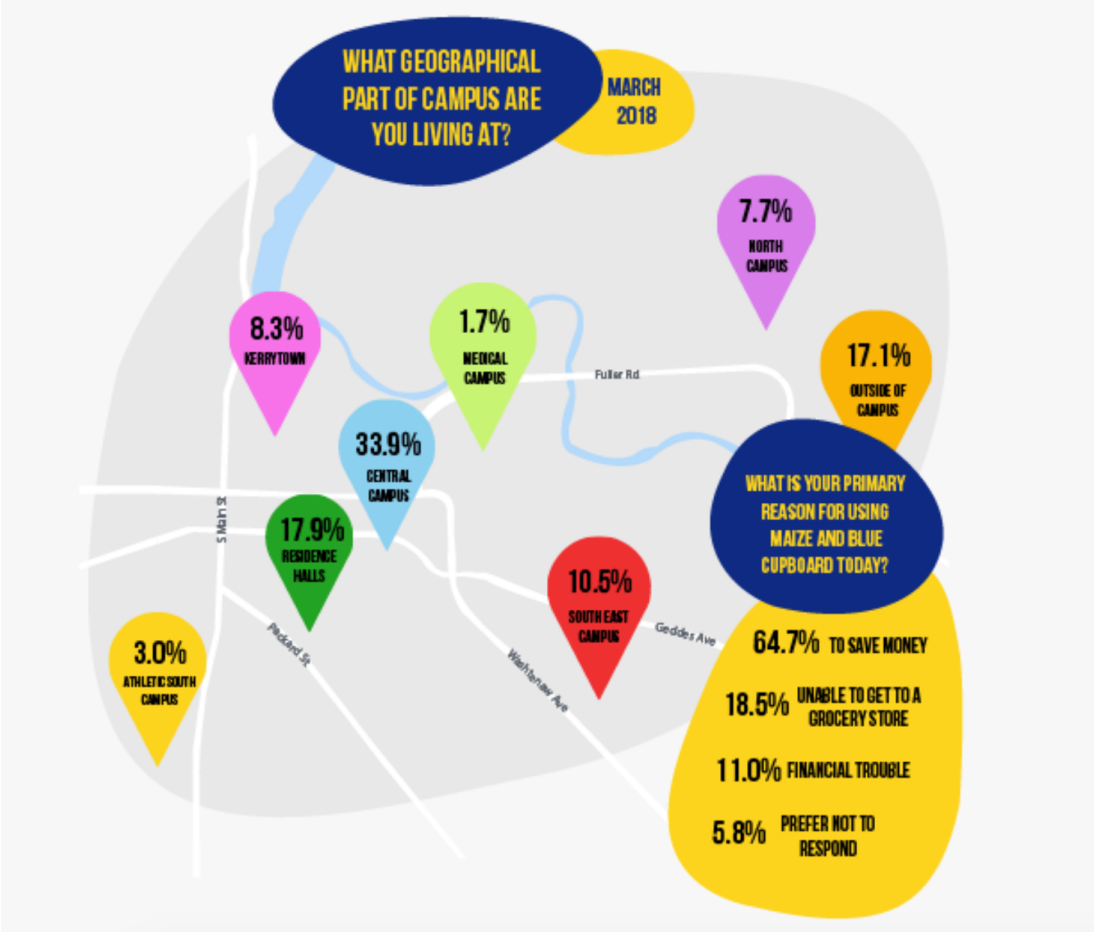


Diagram depicting geographic distribution of students and their stated reasons for utilizing the Maize and Blue Cupboard. Graphic courtesy: Vivian Harber, Michigan Daily.

Items available to U-M students at the MBC. Photo Credit: Dany Zemmel.

APPENDICES

Appendix 11. Flyer advertising donation garden workday.

VOLUNTEER AT THE MAIZE & BLUE CUPBOARD DONATION GARDEN!

Community Workdays
Tuesday, July 23rd from 5:30-7:30 pm
Tuesday, August 6th from 5:30-7:30 pm

Location:
Outside the Ginsberg Center (1024 Hill St)
No experience necessary, all tools provided!

To Sign Up:
https://tinyurl.com/yyauak7b

SUPPORTED BY THE CAMPUS FARM

FREE DINNER PROVIDED!

APPENDICES

Appendix 12. Photographs from MBC Donation Garden workday. Photo credit: Dany Zemmel.

Produce harvested at summer workday ready to be donated to MBC.

Students assisting with harvesting kholrabi, tomatoes, and kale.

Community workday introductory activities.

APPENDICES

Appendix 13. Herb seed packet giveaways to promote Garden workdays. Photo credit: Dany Zemmel.

APPENDICES

Appendix 14. Flyer advertising team-hosted cooking classes.

Cooking from the Garden

Want to gain learn how to incorporate local produce into your diet or strengthen your cooking skills? How about both? Then come to one of our cooking and nutrition classes--no prior experience necessary!

Location: Meet us at the kitchen at South Quad for a cooking and nutrition class. **(*Note: The starting location has changed. The classes will begin and end at South Quad in the kitchen downstairs.)**

Dates: Mon., Nov. 4th from 5-7pm and Thurs., Nov. 14th from 5:30-7:30pm

Register Here: https://tinyurl.com/cookmaize

OR

Register Here: Scan Me!

*****Password Needed: MBCcooking**

Partners: UM Maize & Blue Cupboard, UM Campus Farm, UM Ginsberg Center, UM Sustainable Food Program, UM Maize & Blue Cupboard Leadership, Dow Sustainability Masters Fellowship

APPENDICES

Appendix 15. Images of local food used for cooking classess and students participating in cooking classes. Photo credit: Dany Zemmel.

APPENDICES

Appendix 16. Recipes from cooking class events celebrating local foods.

KALE SALAD

WITH BEETS AND LEEKS

SERVES 8 PEOPLE, 1 CUP PER SERVING

INGREDIENTS

- 4-5 big handful of kale (or any other greens)
- 1 medium beet
- 2-3 leeks
- 1 kohlrabi
- 1 handful cherry tomatoes
- 1 cup green lentils
- 1-2 tablespoons oil (canola, vegetable, or olive)
- 1/4 teaspoon each salt and pepper
- 2 cups water (or vegetable stock)

Peanut Butter Dressing

- 1/3 cup peanut butter (or tahini)
- 1/3 cup water
- 1/4 cup lemon (juiced)
- 2 cloves garlic mined
- 1/2 teaspoon cumin
- 1/4 teaspoon salt

NUTRITION INFORMATION

Nutrition Facts

Serving size: 1 cup
Servings: 8

Amount per serving	
Calories	**212**
	% Daily Value*
Total Fat 7.8g	**10%**
Saturated Fat 1.3g	**7%**
Cholesterol 0mg	**0%**
Sodium 233mg	**10%**
Total Carbohydrate 27.5g	**10%**
Dietary Fiber 10.2g	**36%**
Total Sugars 4.5g	
Protein 11.1g	
Vitamin D 0mcg	0%
Calcium 83mg	6%
Iron 4mg	24%
Potassium 664mg	14%

*The % Daily Value (DV) tells you how much a nutrient in a food serving contributes to a daily diet. 2,000 calorie a day is used for general nutrition advice.

Recipe analyzed by verywell

MATERIALS AND CHEF'S NOTES

1. Preheat oven to 400 degrees F (204 C) and lightly grease a baking sheet.
2. Once thoroughly rinsed, add lentils and water (or stock) to a small saucepan and bring to a boil. Then reduce heat and simmer for 20-30 minutes uncovered or until all liquid is absorbed. Set aside.
3. Add chopped leeks and beets to the baking sheet, drizzle with oil and season with salt and pepper. Toss to coat.
4. Bake for 15-20 minutes or until fragrant and lightly browned. Set aside.
5. While veggies and lentils are cooking, prepare dressing by adding all ingredients to a mixing bowl and whisking to combine. Taste and adjust seasonings as needed.
6. If using kale, add to large mixing bowl with a bit of oil and massage with hands to soften. For all other greens, skip this step.
7. Add greens, beets, leeks, tomatoes, kohlrabi, and lentils to a large mixing bowl, add dressing and toss to coat.
8. For additional protein / crunch, add your favorite nut or seed (such as lightly salted sunflower seeds or roasted pecans).Leftovers keep for up to a few days.

APPENDICES

Appendix 16. Recipes from cooking class events celebrating local foods.

BEET HUMMUS
WITH PEANUT BUTTER

SERVES 8 PEOPLE, 1/4 CUP PER SERVING

INGREDIENTS

- 1 beet (roasted)
- 1 15-oz can chickpeas (drained and rinsed)
- 1 large lemon (zested)
- 1/2 large lemon (juiced)
- 2 cloves garlic (minced)
- 2 tablespoons peanut butter (or tahini)
- 1/4 cup oil (canola, vegetable, or olive)
- 1 healthy pinch of salt and pepper

MATERIALS

- Can opener
- Colander
- Cutting board
- Measuring cups
- Measuring spoons
- Sharp knife
- Small bowl
- Blender or food processor

NUTRITION INFORMATION

Nutrition Facts
Serving size: 1/4 cup
Servings: 8

Amount per serving

Calories	**234**
	% Daily Value*
Total Fat 11.4g	**15%**
Saturated Fat 1.4g	**7%**
Cholesterol 0mg	**0%**
Sodium 117mg	**5%**
Total Carbohydrate 25.6g	**9%**
Dietary Fiber 7.2g	**26%**
Total Sugars 6g	
Protein 8.7g	
Vitamin D 0mcg	0%
Calcium 45mg	3%
Iron 3mg	16%
Potassium 432mg	9%

*The % Daily Value (DV) tells you how much a nutrient in a food serving contributes to a daily diet. 2,000 calorie a day is used for general nutrition advice.

Recipe analyzed by verywell

MATERIALS AND CHEF'S NOTES

1. Preheat oven to 375 degrees F (190 C), remove the stem and most of the root from your beets, and scrub and wash them underwater until clean.
2. Wrap beet(s) in foil, drizzle on a bit of oil, wrap tightly, and roast for one hour or until a knife inserted falls out without resistance. They should be tender.
3. Once your beet is cooled and peeled, quarter it and place it in your food processor. Blend until only small bits remain.
4. Add remaining ingredients except for olive oil and blend until smooth.
5. Drizzle in olive oil as the hummus is mixing.
6. Taste and adjust seasonings as needed, adding more salt, lemon juice, or oil if needed. If it's too thick, add a bit of water.
7. Will keep in the fridge for up to a week.

APPENDICES

Appendix 16. Recipes from cooking class events celebrating local foods.

ROASTED SQUASH
WITH APPLES AND CRANBERRIES

SERVES 8 PEOPLE, 1/2 CUP PER SERVING

INGREDIENTS

- ¼ cup canola oil
- 1 large butternut squash (cut into ½ inch cubes) or any other squash you have
- 1 apple (cubed)
- ½ cup dried cranberries
- ¼ teaspoon cinnamon
- ¼ teaspoon nutmeg
- 1 tablespoons firmly packed brown sugar

MATERIALS

- Sharp knife
- Cutting board
- Measuring cups
- Measuring spoons
- Large mixing bowl
- Baking sheet/dish
- Spoon
- Tin foil

NUTRITION INFORMATION

Nutrition Facts

Serving size: 1/4 cup

Servings: 8

Amount per serving

Calories	**114**
	% Daily Value*
Total Fat 7g	**9%**
Saturated Fat 0.5g	**3%**
Cholesterol 0mg	**0%**
Sodium 4mg	**0%**
Total Carbohydrate 13.7g	**5%**
Dietary Fiber 3.5g	**12%**
Total Sugars 5.8g	
Protein 0.8g	
Vitamin D 0mcg	0%
Calcium 6mg	0%
Iron 3mg	16%
Potassium 262mg	6%

**The % Daily Value (DV) tells you how much a nutrient in a food serving contributes to a daily diet. 2,000 calorie a day is used for general nutrition advice.*

Recipe analyzed by verywell

MATERIALS AND CHEF'S NOTES

1. Preheat oven to 425F.
2. Combine all ingredients in a 1 quart baking dish. Cover and bake for 30 minutes. Remove cover and back an additional 15 minutes or until squash is tender.

APPENDICES

Appendix 16. Recipes from cooking class events celebrating local foods.

BLACK BEAN BROWNIES

WITH CHOCOLATE CHIPS

SERVES 16 PEOPLE, 1 BROWNIE PER SERVING

INGREDIENTS

- Nonstick cooking spray
- 1 can black beans (drained)
- 3 large eggs
- 3 tablespoons canola oil
- 1 teaspoon vanilla extract
- ½ cup brown sugar
- ⅓ cup cocoa powder
- ½ cup chocolate chips

MATERIALS

- Measuring cups
- Can opener
- Measuring spoons
- Colander
- Rubber spatula
- Fork
- 9-inch square baking pan

NUTRITION INFORMATION

Nutrition Facts

Serving Size 1 brownie
Servings Per Recipe 16

Amount Per Serving

Calories 90	Calories from Fat 35
	% Daily Value*
Total Fat 4g	5%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 35mg	12%
Sodium 15mg	1%
Total Carbohydrate 12g	4%
Dietary Fiber 2g	7%
Sugars 7g	
Protein 3g	

Vitamin A 0% • Vitamin C 0%
Calcium 2% • Iron 6%

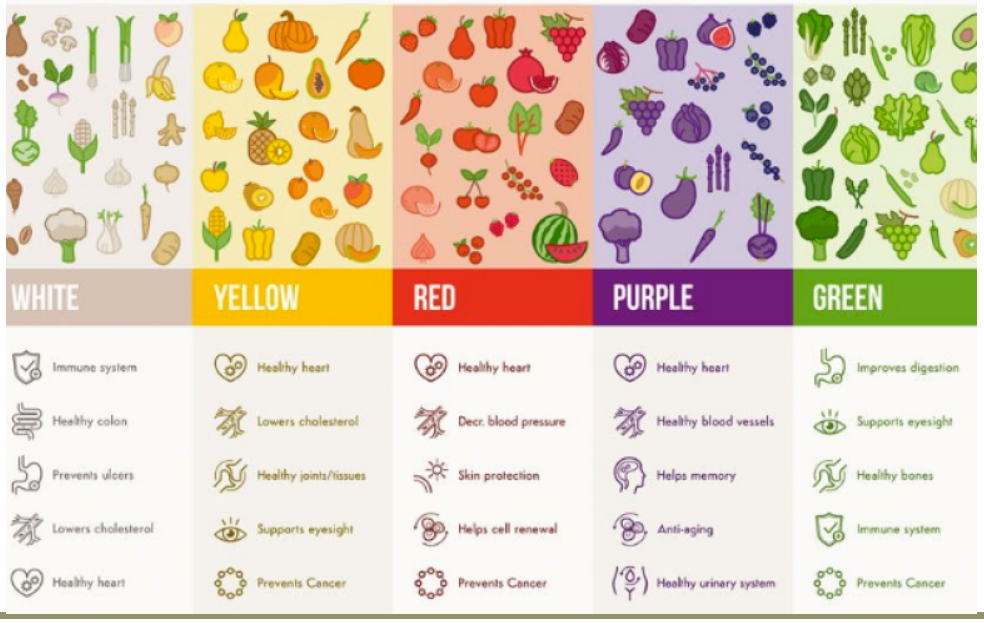
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

MATERIALS AND CHEF'S NOTES

1. Preheat oven to 350 degrees F (190 C). Coat a 9-inch baking pan with nonstick cooking spray.
2. In a colander, drain and rinse beans.
3. In a large bowl, whisk eggs, oil and vanilla with a fork. Add beans and mash with fork until beans are barely visible (this can take 5 or more minutes of mashing). Stir sugar and cocoa, and blend with a rubber spatula until mixed. Stir in chips or nuts if using.
4. Pour the batter into the baking pan. Bake until a knife inserted in the center of the brownies comes out clean, 25 to 30 minutes. Let cool completely before cutting into 16 squares.

APPENDICES

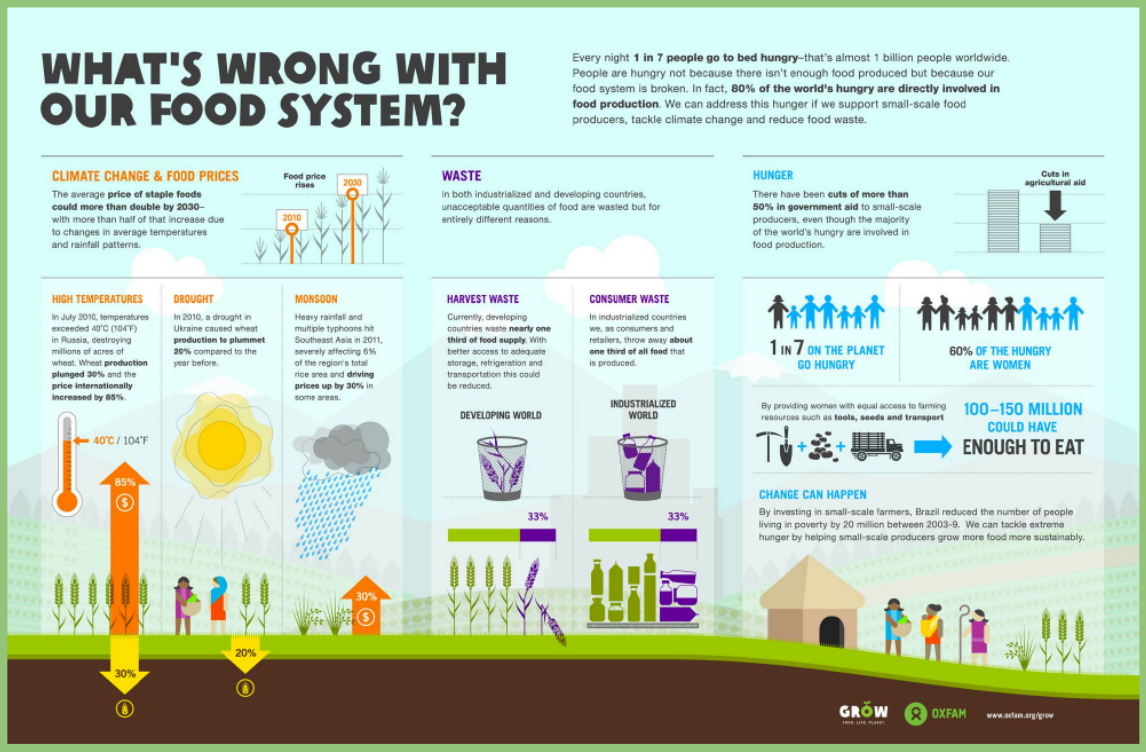
Appendix 17. Educational fact sheet used during cooking class demonstrations. Credit: Sun Shin.



APPENDICES

Appendix 17. Educational fact sheet used during cooking class demonstrations. Graphic credit: Oxfam. Poster Design: Brooke Callaghan.

Sustainable Food Systems



What can you do?

- Eat local
- Encourage cooking
- Eat seasonal produce
- Waste less
- Support Fair Trade
- Consider food's true cost; environmental and social impacts
- Buy organic
- Consider eating less meat
- Grow a garden

U-M Sustainable Food System Member Groups

- Feel Good
- Food Industry Student Assoc.
- Food Recovery Network
- Friends of the Campus Farm
- Maize and Blue Cupboard
- Michigan Animal Respect Society
- Michigan Aquaponics
- Student Advocates for Nutrition
- UM Permaculture Design Team
- UMBees

APPENDICES

Appendix 18. Cooking class attendee evaluation.

Cooking from the Garden
Event Evaluation

This evaluation is anonymous and will help us deliver improved programming in the future.
We appreciate you taking the time to fill this out!

Age:_____

Student status (select as many as are appropriate):

- ❑ Full-time, in person
- ❑ Part-time, in person
- ❑ Online
- ❑ Freshman
- ❑ Sophomore
- ❑ Junior
- ❑ Senior
- ❑ Graduate Student, Year _____
- ❑ PhD Student, Year _____
- ❑ Other:_____

Prior gardening experience (select 1 option):

- ❑ I have no experience working in a garden.
- ❑ I have limited experience working in a garden.
- ❑ I have moderate experience gardening.
- ❑ I have extensive experience gardening.

Access to fresh produce (select as many as are appropriate):

- ❑ I eat the majority of my meals in the dining halls.
- ❑ I do not have a vehicle and do not know others who can give me a ride.
- ❑ I do not have a vehicle but do know others who give me rides.
- ❑ I often walk.
- ❑ I often ride a bicycle.
- ❑ I often take the bus.
- ❑ I often drive myself.

When I do acquire produce, I do so at these locations (select as many as are appropriate):

- ❑ Grocery store (e.g., Kroger, Meijer, Whole Foods, Sav-a-lot, etc.)
- ❑ Convenience store (e.g., Walgreens, 7-11, etc.)
- ❑ Farmers' market
- ❑ Food pantry (e.g., Maize and Blue Cupboard)
- ❑ Grown in my own garden
- ❑ Other:_____

Prior cooking experience (select 1 option):

- ❑ I have no experience assisting or observing cooking.
- ❑ I have limited experience assisting or observing cooking.
- ❑ I have experience observing, but not assisting, others cooking.
- ❑ I have moderate experience cooking.
- ❑ I have extensive experience cooking.

APPENDICES

Appendix 18. Cooking class attendee evaluation.

Cooking classes (select 1 option):

- ❑ I have attended a cooking or nutritional class before.
- ❑ I have not attended a cooking or nutritional class before.

For each statement below, mark "X" to select 1 option only:

This class has improved my...	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. general cooking skills.					
2. understanding of the components of a healthy, balanced meal.					
3. confidence in preparing a healthy, balanced meal.					
4. ability to access ingredients to prepare healthy meals consistently.					

For each statement below, mark "X" to select 1 option only:

The presenters today did an effective job...	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
5. demonstrating cooking skills.					
6. explaining the components of a healthy, balanced meal.					
7. explaining the nutritional importance of eating a healthy, balanced diet.					
8. describing sustainable food systems.					

What type of programming related to gardening/cooking/nutrition would you like to see in the future?

_____

_____

_____

_____

_____

Any additional comments?

_____

_____

_____

APPENDICES

Appendix 19. Photographs from mobile market site visits. Photo credit: Dany Zemmel.

St. Louis Metro Market mobile market bus.

Lansing Mobile Farmers Market bus.