Massachusetts Urban Farming Conference

"Cultivating Lands, Nourishing Communities, Building Businesses"

3rd Annual Massachusetts Urban Farming Conference Saturday, March 28, 2015

9:00 am - 5:30 pm

Worcester State University
Worcester, MA



Co-Developed by:

In Partnership with:

Presenting Sponsor:











Greetings Urban Farming Friends!

It is with great joy that we welcome you to the 3rd Annual Massachusetts Urban Farming Conference (UFC)!

Thank you greatly for your support of the UFC which is shaping the future of urban farming in local urban areas in Massachusetts. The UFC recognizes that Massachusetts has the potential to offer an abundance of fresh, local healthy food to its residents. We understand that urban farming is a smart growth strategy that contributes to the Massachusetts food system, sustainable urban environmental management and climate change adaptation.

The UFC presenters - City Growers and the Urban Farming Institute, in partnership with the Massachusetts

Department of Agricultural Resources - invite you to join in today's UFC conversations. The UFC is a multi-sector stakeholder forum designed to share information regarding what is currently happening in Massachusetts. It is our goal to foster solutions, sustainable networks and business relationships. We have planned the UFC to bring together participants representing all aspects of urban farming including, but not limited to, farmers (including roof top, chicken, bees, etc.), land trust managers, municipal leaders, commercial buyers, foundations, investors and others. We have crafted a full agenda comprised of diverse and relevant interactive panels.

We are grateful to have had your support over these last several years to build the UFC into a multi-sector networking forum dedicated to educating all participants. Today, let's discuss how to build upon this foundation to develop successful urban farming enterprises and business networks.

We hope that you enjoy the UFC. Thank you!









Agenda

7:45 am Registration Opens / Vendor Viewing

Location: Sheehan Hall Multi-Purpose Room

9:00 am - 10:00 am Session 1

Panel 1A. Hydroponics and STEM Education

Location: Student Center Foster Room

Learn about the STEM Garden Institute's STEM (Science, Technology, Engineering, Mathematics) curriculum. Their innovation-based learning is designed for K-12 students utilizing the sustainable platform of hydroponic gardening. Attend this panel and gain a detailed understanding of how the STEM Garden Institute's STEM curriculum provides children with entrepreneur, team building and nutrition skills.

Janet Lorden Executive Director, STEM Garden Institute

Michael Barnett Professor of Science Education and Technology, Boston College

Laura Bilazarian Purutyan MA Advanced Pathways Program Specialist, Marlborough High School (Moderator)

Lindsey Cotter-Hayes Deputy Director, Groundwork Lawrence

Panel 1B. Soil Fertility Appropriate for Urban Settings

Location: Student Center Fallon Room

Understanding soil fertility is essential to producing healthy and safe crops. This workshop will provide information on how to take a soil test, interpret the results, and apply the appropriate amount of lime and fertility (organic of conventional) nutrients based on the results. Learn about the appropriate use of compost and other organic soil amendments, including when not to use them. Gain an understanding of what to do when soil has high levels of lead.

Frank Mangan Extension Associate Professor, Stockbridge School of Agriculture, UMass Amherst **Zoraia Barros** Urban Agriculture Specialist, Stockbridge School of Agriculture, UMass Amherst

Panel 1C. Expanding the Field and Feeding Our Communities: The Role Youth Play in Urban Farming

Location: Learning Resource Center #117

From field hand to sales and marketing managers to advocates for food security and food justice, urban youth are growing our local food systems. The expanding field of urban farming is providing youth with training, job skills and meaningful employment supporting our food system and developing a generation of food leaders. Participants in this workshop will hear directly from some of these youth about the roles, needs, and hopes they have for the future of urban farming. In addition, panelists will address the need and challenge of engaging more urban youth in this field. Youth led focus groups will help brainstorm means of providing more opportunities and career pathways for urban youth to be active participants and leaders in our food system.

Vincent Nunez Groundwork Lawrence
Jairo Hernandez Groundwork Lawrence
Lipasha Pradhan Groundwork Somerville
Hajera "Tanya" Tania Groundwork Somerville
Weijie "Tony" Xie Groundwork Somerville
Tyler Martin Project Leader, Gardening the Community, Springfield
Ralph Weah YouthGROW, Somerville
Chad McClain YouthGROW, Somerville
Keely Curliss The Food Project, Boston

Panel 1D. Land in the City: Access and Development

Location: Learning Resource Center #121

Urban farmers recognize that land security is key to food security and is necessary for infrastructure investment, crop growth and soil health. However, land acquisition, development and tenure is a complex process that requires a specific set of tools and skills. Urban land development - for any purpose - crosses numerous regulatory administrations and connects to private interests. This discussion will range from the details of the land development process, to policies and programs (such as, Incentive Zones and Right-to-Farm Ordinances that reduce costs and raise incentives for urban farms,) to using mapping and open data to make transparent existing pathways to land access, and how to organize advocacy for policy change. Our panelists will discuss the growing expertise on land policies, methods, tools and development partnerships that are increasing the quantity and quality of land available for urban farms. Learn about regulatory support and experiences from other US cities.

Barbara Knecht Board Member, The Urban Farming Institute (Moderator)
Chris LaPointe Senior Project Manager, Trust for Public Land
Jennifer Rushlow Staff Attorney/Director of Farm & Food Initiative, Conservation Law Foundation
Amy Laura Cahn Public Interest Law Center of Philadelphia

Panel 1E. Farms First: How Urban Agriculture Can Help Address Food Insecurity

Location: Learning Resource Center #114

Food banks serve an important role in the social safety net, especially in emergency situations. Urban farms and community gardens can play a huge part in creating long-term sustainable solutions for the numerous communities across Massachusetts that suffer from food insecurity. To contribute to the end of hunger in Massachusetts, Project Bread has partnered with Gardening the Community in Springfield. They provide youth development, farmer training and workforce development. Learn how urban farms can respond to daunting social and health disparities, promote food justice, food security, and a sense of pride in traditionally underserved communities.

Scott Richardson Director of research, strategic initiatives, and development, Project Bread

10:10 am - 11:45 am Welcome Remarks / Keynote Panel

Location: Sullivan Academic Center Auditorium

Our keynote panel brings different perspectives for this timely conversation on the growing awareness of urban farming's growth and the possible implications on rural and peri-urban enterprises. The focus on shared goals and perceived conflicts, along with food security and everyone's role will be discussed. What are the current realties and commonalities of farming? How do we leverage our strengths? The discussion starts here and is sure to be enlightening and productive.

Speakers:

Patricia Spence Executive Director, Urban Farming Institute

Dr. Maureen Power Executive Director/Professor, Urban Studies Faculty, Worcester State University

Commissioner John Lebeaux MA Department of Agricultural Resources

Keynote Panel: Building Bridges: Where Urban and Rural Farming Meet

Jennifer Hashley Director, New Entry Sustainable Farming Project
Glynn Lloyd Co-Founder, City Growers
Dr. Rich Bonanno President, Massachusetts Farm Bureau Federation, Inc.
Derek Christianson Farmer, Brix Bounty Farm
Kim Denney Farmer, Chestnut Farms

11:45 am - 12:55 pm Networking Lunch / Vendor Viewing

Sheehan Hall Multi-Purpose Room/Cafeteria

1:00 pm - 2:00 pm Session 2

Panel 2A. Growing Ethnic Crops for Ethnic and Traditional Markets

Location: Student Center Foster Room

Immigrant populations continue to grow in Massachusetts. This growth represents many opportunities for urban farmers and markets. Urban farmers need information on how to grow crops popular among these immigrant groups, which includes seed sources, fertility, pest management, post-harvest and packing requirements. This workshop will provide a systematic approach on how to choose specific crops to produce according to market demand and how to grow, market and sell them profitably.

Frank Mangan Extension Associate Professor, Stockbridge School of Agriculture, UMass Amherst **Zoraia Barros** Urban Agriculture Specialist, Stockbridge School of Agriculture, UMass Amherst

Panel 2B. A Practical Introduction to Aquaponics

Location: Learning Resource Center #121

Aquaponics is the marriage of hydroponics and re-circulating aquaculture systems (RASs). Hydroponics grows plants in a soil-less medium. RASs grow fish in an enclosed environment. In aquaponics, plants remove and use wastes produced by fish as essential nutrients. In this process water quality is maintained suitable for healthy fish growth. The concept and approach is inherently sustainable with minimal environmental impact. The challenge is to move quantitatively from a general concept to a viable business in an urban setting. Learn about system design, management practices, permit acquisition, cooperative formation, product marketing and training.

Dr. Joseph Buttner Professor, Salem State University James Carnazza President, Full Circle Earth Eliza Kessler Student, Salem State University Camron Abidid Co-PI, Salem State University Lynn Embrick Web Facilitator, Salem State University

Panel 2C. Decision Making for Commercially Viable Businesses

Location: Learning Resource Center #114

Join The Carrot Project and New Entry for a round table discussion with local farm clients about the decisions they made while growing a viable business. Topics will include, business structure, balancing mission and profit, what is different about writing a business plan and running a business, what you need to think about for future financing including debt financing and how to meet mission statements.

Dorothy Suput Executive Director and Founder, The Carrot Project **Jennifer Hashley** Director, New Entry Sustainable Farming Project

Panel 2D. Urban Farming Training Workshop

Location: Learning Resource Center #117

This valuable workshop is designed for everyone considering and/or pursuing urban farming. Learn about the realities and challenges of the urban farmer worker. Our panelists will share their collective experience to present the necessary steps and important lessons regarding growing produce for market in an urban environment. This workshop is intended to provide an introduction for individuals or collectives interested in setting up an urban farming operation in their neighborhood or city. Topics include: access to land, agricultural training, soil health and remediation in urban areas, utilities and infrastructure (irrigation, storage, refrigeration, facilities), crop planning and deciding what to grow, techniques and methods for intensive market growing on small plots of land, marketing strategies, distribution networks and challenges, community relationships, managing labor and volunteers.

Bobby Walker Instructor, Urban Farming Institute
Tristam Keefe Farm Manager, City Growers LLC
Sierra Morton Trainee Graduate, Urban Farming Institute
Siedric White Trainee Graduate, Urban Farming Institute

Panel 2E Reversing Global Warming with Urban and Suburban Carbon Farming

Location: Student Center Fallon Room

Come to this pertinent panel and learn how you can reverse global warming while growing healthy food. This panel explores regenerative farming in cities, towns and suburbs to expand local food abundance and to address the pending climate disaster. Plants capture massive amounts of carbon and working with the amazing life in the soils - microbes, fungi, insects, worms, birds and animals - bury it deep in the ground where it's no longer in the atmosphere heating the planet. Carbon farming can be conducted in your own back yard, on brownfields and abandoned lots, on the grassy strip on the sidewalk - possibilities abound!

Adam Sacks Executive Director, Biodiversity for a Livable Climate **Jim Laurie** Restoration Ecologist, Biodiversity for a Livable Climate

2:05 pm - 3:05 pm Session 3

Panel 3A. Extending the Season

Location: Student Center Fallon Room

The Food Project's Boston site has been experimenting with outdoor field season extension to compliment their winter greenhouse production over the past 3 years. Their experience has been that urban farms are particularly well suited to season extension - both due to the heat effect of the city, the close proximity to markets and ease of washing facilities. This panel will bring together farmers using season extension techniques including variety selection, low and high tunnels and will look at both late fall/winter extension as well as early spring production.

Kesiah Bascom Boston Field Manager, The Food Project

Panel 3B. Innovations in Food Production

Location: Learning Resource Center #117

Hear from entrepreneurs on the leading edge of urban food production and learn about their vision in supporting their local food system. What are the challenges they face as new enterprises? How are their models helping communities build more resilient and sustainable networks of food production? You will learn about freight farms, rooftop farming and hydroponics, and how they are impacting your city.

Kimi Ceridon Culinary Scholar and Food Consultant (Moderator)

Brendan Shea Owner/Senior Project Supervisor, Recover Green Roofs

Brad McNamara Co-Founder, Freight Farms

Michael Barnett Professor of Science Education and Technology, Boston College

Panel 3C. Food Hubs and Urban Food Systems

Location: Student Center Foster Room

Join the conversation focused on how urban communities are expanding the vision of Food Hubs. Traditional food hubs support and promote regional food production and procurement, increasing the vitality of food businesses in the region. For urban growers working to build and strengthen their local food system, increased production and access to markets is absolutely essential for economic growth. The discussion will center on policy, food access and supporting these enterprises with innovation.

Liz Sheehan Castro Project Manager for Hunger-Free and Healthy

April Anderson Lamoureux President at Anderson Strategic Advisors, LLC

Dan Ross Social Entrepreneur and Consultant, DAISA Emterprises LLC (Moderator)

Jennifer Hashley Director, New Entry Sustainable Farming Project

Cynthia Espinosa Marreroc Food Scholar/Activist and Steering Committee, Holyoke Community Market Project

Panel 3D. Secrets of Soil Nutrition - Trace Minerals in Urban Agriculture

Location: Learning Resource Center #121

Trace mineral availability in soils may determine the success or failure of optimum plant growth and in building a strong immune system. Learn from experienced and successful vegetable growers as they share their experience in how to ensure adequate availability throughout the growing season. This panel will address organically approved sources, the role of biology and economical application methods. Gain an understanding of trace minerals and plant metabolism, as well as the ideal levels in soils and plants, and the best applications methods across varying scales and scopes of production. This panel includes reflections from the first year of a partnership between Gardening the Community, Project Bread and NOFA-Mass which will focus on improving soil fertility and agricultural production in Springfield.

Derek Christianson Farmer, Soil Fertility Consultant, & Community Educator, Brix Bounty Farm **Scott Richardson** Director of Strategic Initiatives, Project Bread **Talib Touissaint Paskins** Program Coordinator, Gardening the Community

Panel 3E. Massachusetts Honey Bee Colony Decline and Impacts to Our Food Production: The Science and Next Steps for Restoring Populations

Location: Learning Resource Center #114

This timely panel pertains to the ongoing Harvard University and Worcester County Beekeepers Association studies located in central Massachusetts since March 2010. This report shaped the proposed Massachusetts State Legislation pertaining to neonics (pesticide) use in Massachusetts anticipated to be voted on in the 2015 legislation. Learn about the Massachusetts honey bee colony collapse disorder (CCD) and the results of the report including criticisms. What does CCD mean to urban and conventional farming in Massachusetts? How is the MA Food production impacted? What are the next steps to reverse the continuing trend of honey bee losses in Massachusetts?

Chensheng Lu Associate Professor, Environmental Exposure Biology, Harvard University **Ken Warchol** Bee School Director/Program Chair, Worcester County Beekeepers Association **Dr. Richard Callahan** Entomologist

3:10 pm - 4:10 pm Session 4

Panel 4A. Sustaining and Growing Urban Farm Enterprises

Location: Learning Resource Center #117

Urban farming is growing by leaps and bounds in an array of ways – on the ground, on roofs, in containers, utilizing aquaponics and more. Some urban farms are for profit and some are non-profits. And, urban farmers come from all walks of life. Beyond a love for fresh food, urban farmers bring a passion and a commitment to making the world a better place. How do we sustain and grow these enterprises? What are the current funding models and best practices? What more do we need in place to make urban farming a viable livelihood now and into the future?

Ruth Goldman Consulting Program Officer, Merck Family Fund (Moderator)
Jessie Banhazl Founder and Urban Grower, Green City Growers
Brad McNamara Founder, Freight Farms
Lydia Sisson Co-Director, Mill City Grows
Tristam Keefe Farm Manager, City Growers LLC

Panel 4B. Designing Cities and Urban Food Production

Location: Student Center Fallon Room

As urban spaces are being transformed by food enterprises, what are the implications on neighborhoods? How do you design food production in the city? This discussion will focus on how proper planning can enable the production of food and help revitalize communities. Our presenter will explore the role that creative design professionals have in relation to the food system of cities and the impact that urban agricultural issues are having on the design of urban spaces. This panel will focus on how the increasing interest in growing food within the city, supplying food locally and food security are impacting urban designership and the development of scalable solutions.

Panel 4C. Gentrification in the Food System

Location: Learning Resource Center #121

This panel will discuss how the rapid growth of the food justice movement and "foodie" culture has often excluded communities of color, youth, and the low-income people. Learn about the many ways we can work to reverse this trend. This discussion will include story-sharing from youth in the YouthGROW program, as well as sharing strategies for dismantling racism and creating inclusive spaces.

Casey Burns Food Justice Program Director
Liz Sheehan Castro Project Manager for Hunger-Free and Healthy
Ibrahim Ali Program and Youth Director, Garden the Community
A. Bayoan Rosello-Cornier Community Organizer and Planner, Dudley Street Neighborhood Initiative

Panel 4D. Legal Resources for Urban Farming

Location: Student Center Foster Room

Inquire about and/or discuss your specific legal concerns pertaining to urban farming. Gain an understanding of urban farming regulatory issues.

Jenny Rushlow Staff Attorney/Director of Farm & Food Initiative, Conservation Law Foundation

Panel 4E. Fungi's Place In Farming: It's More Than Just Mushrooms

Location: Learning Resource Center #114

Learn about the great relationship between fungus (mushrooms) and farming. Did you know that fungus can contribute to soil retention? Learn from mushroom experts about how to use fungus to maximize your farming production. This panel will discuss how fungus can be utilized to kick start composting materials, control water runoff and more? Gain an understanding of how low tech mushroom cultivation on urban and traditional farms can serve your farming needs.

Todd Leftwith Mycologist, Rhode Island Mushroom Company **Mike Hallock** Co-Founder, Rhode Island Mushroom Company

4:15 pm - 5:15 pm Closing Remarks

Location: Sullivan Academic Center Auditorium

Speaker:

Greg Maslowe Farmer Manager, Newton Community Farm

What's the Point of Urban Farming? A Conversation About What "Success" Means
Can urban farms growing on small plots actually be profitable? While profitability can be an elusive goal for any farm, those operating on small scales and in urban environments face even more challenges: limited land; potentially contaminated soil; access to water; and, noise ordinances. But while profitability may be the bottom line for private farms, many urban farms are run by mission driven organizations. This can change the meaning of what it means to be "successful". What is the goal of your farm? Profitability? Job training? Providing access to fresh produce in a food desert? Changing the physical landscape of an urban environment? All of the above? In our conversation we'll explore the question of how we judge what makes an urban farm successful, while trying to never let the issue of profitability get too far out of sight.

Closing Remarks:

Glynn Lloyd Co-Founder, City Growers

Biographies

Camron Adibi has multiple years of experience and training in the fields of environmental restoration, sustainable design and ecological water purification using a systems approach. He has been involved with several start-up projects including the design and construction of a recirculating saltwater system to hold wild cod.

Ibrahim Ali is the Program and Youth Director for GTC. He comes into this work with a extensive background in youth development and has been involved with various aspects of food justice (through GTC) since returning to Springfield from NYC.

April Anderson Lamoureux is President of Anderson Strategic Advisors, LLC, an economic development consulting firm working with governments and businesses. Prior to starting her firm in 2013, April served as Governor Patrick's Assistant Secretary for Economic Development and previously as Chief of Staff for business development under Governor Romney. Her firm is currently working on a variety of economic development projects from Central Mass to the South Shore.

Jessie Banhazl is the CEO and Founder of Green City Growers. A Boston-area native, Jessie pursued a career in reality television production after graduating from Smith College in Western MA. Disillusioned with the entertainment industry, she moved back to Boston to run GCG, re-awakening her passion for food, farming, and sustainability.

Professor Michael Barnett is a professor of science education and technology in the Lynch School of Education at Boston College and a CASE/Carnegie Foundation for the Advancement of Teaching Professor of Year for the state of Massachusetts. Dr. Barnett is currently the leader editor for two forthcoming books on how Urban Agriculture programs can be utilized to improve youth learning of science.

Zoraia Barros is an Urban Agriculture International Specialist at UMass Amherst. She has been working professionally in agriculture since 2003. She has worked at UMass since 2008 focusing on projects related to immigrant groups in the New England and New York area. The fluency of Portuguese and Spanish has helped her in reaching out to ethnic communities, providing culturally appropriated vegetables and recipes to keep their culture alive. You can reach her at zbarros@umass.edu

Kesiah Bascom serves as the Assistant Farm Manager at The Food Project. She was raised in a small town in NH, where she learned to garden and spread manure at a very young age. Her original plan in life was to work in adoption and foster care, but discovered The Food Project out of college which launched Kesiah on a trajectory of farm work and youth development.

Dr. Richard Bonanno lives in Methuen, MA and owns Pleasant Valley Gardens where he raises potted flowering plants, bedding plants, vegetable transplants, and 50 acres of fresh market vegetables. Rich Currently serves as President of the Massachusetts Farm Bureau Federation and has held that position since December 2009. Rich is also a half-time Extension Educator with the University of Massachusetts Extension Service.

Casey Burns serves as the Food Justice Program Director. She has MA from Clark University in Environmental Science in Policy. She is the Food Justice Program Director of the Regional Environmental Council in Worcester, MA where she has worked for the past 10 years building community and school gardens, mobile and neighborhood farmers markets and youth leadership development and employment programs.

Dr. Joe Buttner is the lead PI on the MA Department of Agricultural Resources funded project to Develop a North Shore Aquaponics Cooperative and Training Program. He is a life member of the American Fisheries Society, Charter Member of the East Coast Shellfish Growers Association, a Trustee for the Massachusetts Aquaculture Association and a AFS Certified Fisheries Scientist. His research and extension efforts target freshwater and marine organisms, finfish and shellfish, open, semi-closed and closed systems.

Cassandria Campbell is the Co-Founder of Fresh Food Generation, a food truck and catering business providing healthy, local food to Boston's lower-income neighborhoods. Cassandria became a food justice advocate as a teenager working at The Food Project- a national model for youth development and sustainable agriculture.

James Carnazza serves as the President of Full Circle Earth. He graduated in 2009 with a BSc. in Sociology and became an Accredited Organic Land Care Professional through NOFA in 2010. In 2013, he completed a summer course Topics in Aquaculture through Salem State with Dr. Joe Buttner. Currently he is employed with EMARC working as the Curriculum Specialist for the School to Work Program (Supports students with developmental disabilities in vocational and life skills development).

Rich Cavanaugh. After more than two decades of practicing law in courtrooms and boardrooms, Richard Cavanaugh traded in his wingtips for work boots when he and his wife, Anne, participated in a year-long educational and work program at The Farm School in Orange, Massachusetts. After completing the program, Richard founded Common Grow, LLC, a niche law firm that works with farmers and other landholders, home buyers, government, and nonprofit agencies to identify, preserve, and/or reclaim farmland.

Keely Curliss works at the The Food Project. Keely is a graduate of Cambridge Rindge and Latin high school, alumni of City Year and The Food Project's youth programs. During her four years in high school Keely worked in various leadership roles within The Food Project's (TFP) programs and farming operations, first learning and then teaching about a range of topics such as the influences of race, class and the economy on community and food access in both urban and rural settings

Adrian Dahlin is the Director of Admissions and Marketing at the Conway School, which offers a 10-month Master of Science in Ecological Design. Before coming to Conway he started a business called Rising Green that helped connect recent college graduates with jobs in sustainability. He wears many hats in his local community in Holyoke, MA including board member of a startup food co-op called Holyoke Community Market.

Kim Denney is a Farmer a Chestnut Farms. As a child Kim loved the Little House on the Prairie books and read them all repeatedly. She dreamed of living Laura's life and credits the hours spent reading with driving her dream of farming. In addition, she grew up with a family that appreciated and valued open space. Her father would often tell her "they don't make any more land". He was instrumental in founding the Bolton Land Trust and today the Tom Denney Nature Camp honors his commitment to environmental stewardship each summer.

Lynn Embick-Morris is an educator with the Salem Public School District and a freelance writer. She has a background in biology and education, and worked for two years on an NSF funded project entitled The Atlantic Partnership, which strove to improve the delivery of science to Spanish-speaking students.

Ruth Goldman of Ruth Goldman Consulting has over 20 years of experience in environmental issues, youth development and experiential education, both in philanthropic and non-profit worlds. She recently started a consulting practice to work with foundation and philanthropic networks to build capacity for change on critical urban environmental issues including food systems, green infrastructure, sustainable communities and the role of urban youth in the emerging green economy.

Jennifer Hashley serves as the Director of the New Entry Sustainable Farming Project (http://www.nesfp.org), a beginning farmer training program that assists limited-resource individuals to begin small-scale commercial agriculture in Massachusetts as a way to preserve farmland and to expand consumer access to locally-grown foods. Jennifer is also a vegetable and livestock farmer and raises chickens, eggs, pork, sheep, rabbit, and specialty vegetables in Concord/Sudbury, MA.

Jairo Hernandez works with Groundwork Lawrence. Jairo is a 17-year old junior at Lawrence High School. He joined Green Team in fall of 2013 and was able to join GWUSA in Yellowstone this past summer where he completed trail work with tremendous strength and a great attitude. Jairo hopes to attend college for environmental science and is known on Green Team for his perceptive view of the world and great communication skills.

Crystal Johnson is the Founder/Principal of Integrative Sustainability and Environmental Solutions (ISES) and co-develops the annual MA Urban Farming Conference. She leverages her over 20-years of experience in management, policy, assessment and planning of energy, water, natural resources and sustainability to serve as a Senior Environmental Planner and Energy Strategist. Her experience and expertise include climate (change) adaptation planning and developing multi-sector partnerships. She focuses on addressing energy, water and food systems as key issues of climate change.

Tristram Keefe is and Urban Farmer and Cook from Boston, Mass. He is currently the Farm Manager at City Growers LLC, cultivating on four farm plots in Dorchester and Roxbury. In 2013 he participated in the Urban Farming Institute of Boston's inaugural apprenticeship program along with eight other farmers in training. Tristram has worked at a number of restaurants in the Boston area, most recently at Mei Mei Restaurant and Fresh Food Generation--a food truck and caterer dedicated to serving healthy, affordable prepared food in Boston's low-income neighborhoods.

Eliza Kessler is a student at Salem State University working towards a BS in Aquaculture. She is a student worker at Salem State's Cat Cove Marine Laboratory where she maintains marine and freshwater organisms including finfish and shellfish. With a strong concern for the environment, she recognizes our need for a sustainable food source and believes aquaculture will play a role in its solution.

Barbara Knecht, R.A. has been developing land for public benefit in cities for more than thirty years. She has worked in the public and not for profit sectors as well as in academic settings. Through her work, she has researched and observed urban farms across the country and across the world. Working with UFI brings

together her experience developing urban land with a love of all things edible. Ms. Knecht holds degrees in architecture from UC Berkeley and Columbia University, and she was a Loeb Fellow in advanced environmental studies at Harvard University.

Chris LaPointe is a Senior Project Manager with The Trust for Public Land. He works with communities, land trusts, and public agencies across Massachusetts on complex land protection projects. In Chris' twelve years with The Trust for Public Land, he has helped conserve more than 2,750 acres of land worth more than \$75 Million and he helped permit and build Boston's first new urban farm under Article 89. Chris has a BA in Environmental Policy from Colby College and an MS in Natural Resource Planning from the University of Vermont. Chris is President of the Hamilton-Wenham Open Land Trust, and was a founder of the Hamilton-Wenham Community Garden.

Amy Laura is a staff attorney and directs the Garden Justice Legal Initiative (GJLI) at the Public Interest Law Center of Philadelphia, providing support to Philadelphia's gardens and farms, through legal services, policy advocacy, education, and organizing. GJLI works to promote community land and food sovereignty and to ensure that residents have the tools and information they need to have a meaningful and equitable voice in the future of their neighborhood.

Chensheng (Alex) Lu's research interest focuses on understanding how pesticides affect ecological and human health. His recent research extends to save pollinators, specifically honeybees, from the hazards of a group of insecticides, neonicotinoids. His public health service involves the ongoing collaboration with Boston public housing authority and residents living in Boston's low-income public housing aiming to mitigate pesticide exposures by adapting IPM practice in their dwellings. Before joining Harvard T.H. Chan School of Public Health, Chensheng served as an Assistant Professor at Rollins School of Public Health, Emory University, from 2004-2008.

Frank Mangan serves as the Extension Associate Professor at Stockbridge School of Agriculture. A focus of my research and outreach program has been to evaluate production and marketing systems for vegetable crops, with an emphasis on crops popular among immigrant communities. Since 2003, farmers in Massachusetts made more than five million dollars in retail sales of crops introduced from my program, crops that had not been grown in Massachusetts before.

Tyler Martin serves as the Project Leader of Gardening the Community. Tyler is a rising Senior at Springfield Renaissance School in Springfield, MA. He has been an integral member of the youth growing team for 4 years, and has taken on leadership responsibilities both outside on our sites, and through Board work and committees where he has been an active member of our board for 2 years.

Chad McClain works with YouthGROW of Somerville. Chad has been involved with YouthGROW for the past four years as a teen participant, a Youth Leader, and his current staff role, as Assistant Youth Coordinator. He supports all administrative aspects of our program and is pursuing a career as a fashion editor. Chad served as a member of the city's Youth Leadership Council and is an active participant in local Black Lives Matter campaigns. He is currently a freshman at Quinsigamond Community College.

Brad McNamara is the CEO and co-founder of Freight Farms, an agriculture technology

company that provides tools for a more sustainable and connected food system. Brad and his co-founder, Jon Friedman, developed the company's flagship product, the Leafy Green Machine, to allow any business to grow a high-volume of fresh produce in any environment regardless of the climate. He has big expectations for the future, envisioning Freight Farms scattered across the globe making a dramatic impact on how food is produced.

Elena Mihaly is a Legal Fellow funded through the Betsy and Jesse Fink Foundation to work in the Healthy Communities and Environmental Justice Program at Conservation Law Foundation (CLF). She works primarily on policy development for CLF's Farm & Food Initiative, but is also involved with CLF's transportation policy work and climate change litigation. Elena helped launch and is now the Coordinator of CLF's Legal Services Food Hub – a pro bono legal services clearinghouse for farmers and food entrepreneurs.

Vincent Nunez is with Groundwork Lawrence. Vincent is a 15 year old sophomore at Greater Lawrence Technical High School focusing in Electrical. He joined Green Team in the winter of 2014 and quickly became known for his wisdom and work ethic. Vincent previously presented at the New England Environmental Justice summit and recently helped his team create a business plan for their upcoming farm season.

Lipasha Pradhan is with Groundwork Somerville. Lipasha is 17-years old and a high school senior at Somerville High School. She began working with the Green Team at Groundwork Somerville in the summer of 2012. Lipasha has a strong drive toward leadership, and she has participated in Peace Conference and the Leadership Development Institute.

Bayoán Rosselló-Cornier serves as the Community Organizer & Planner at the Dudley Street Neighborhood Initiative. Bayoán has been an organizer since graduating Boston College in 2006. He spent 3 years organizing food service workers for UNITE HERE Local 100 in Newark, NJ and NY, NY.

Jenny Rushlow is a Staff Attorney and Director of the Farm & Food Initiative at Conservation Law Foundation (CLF). CLF is a New England-wide environmental advocacy organization, based in Boston. Jenny leads CLF's agriculture and food system advocacy as well as advocacy on clean vehicles and transportation fuels.

Brendan Shea serves as the Construction Manager at Recover Green Roofs. Brendan's career is grounded in over ten years of experience working with plants and livings systems to treat wastewater. A LEED accredited professional, Brendan has worked on over a dozen LEED projects and has extensive experience with project management and design/build implementation. In 2009, Brendan co-founded Recover Green Roofs, a design-build-maintenance firm specializing in rooftop gardens.

Liz Sheehan Castro is the Director of the Worcester Food & Active Living Policy Council, a coalition of community partners in Worcester, Massachusetts. Liz joined the Policy Council as the Project Manager in 2009, helping lead the successful implementation of its cornerstone project, Hunger-Free & Healthy.

Lydia Sisson serves as the Co-Founder/ Director of Mill City Grows, an urban food production initiative in Lowell, MA. She is an experienced commercial farmer and small business owner, and holds a Masters degree in Economic and Social Development of Regions. She began farming at Vassar College where she became passionate about food movements and food justice. She has ten years of farming experience and ran a successful Community Supported Agriculture farm business for four years prior to Mill City Grows.

Dorothy Suput is the Executive Director and Founder of The Carrot Project. She works to increase the economic viability of farm and food enterprises through a combination of loans and business support services, and guides farmers in making sound financial decisions. The Carrot Project catalyzes increased numbers of lenders and the amount of financing devoted to the sector, through collaboration, research, and cross-fertilization

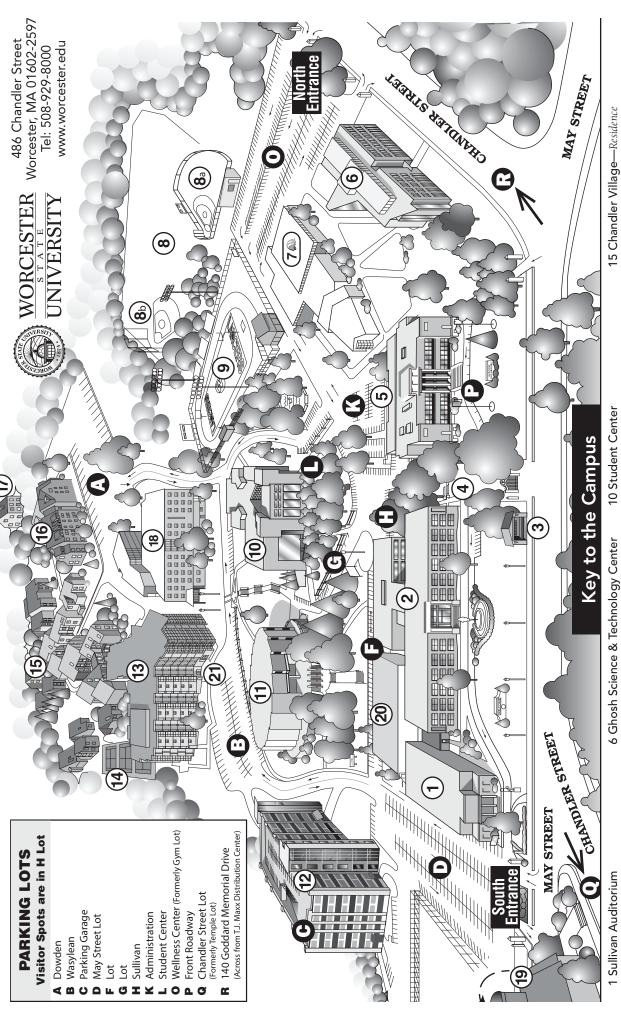
Hajera "Tanya" Tania works with Groundwork Somerville. Tania is 18 and a high school junior at Somerville High School. She began working with the Green Team at Groundwork Somerville in the summer of 2014. Her interest in new experiences has led her to participate in many other activities at school as well, including the asian, spanish, and astronomy clubs. Tania's enthusiasm and positive atitude are key contributions to the Green Team.

Bobby Walker III serves as the Farmer Manager at City Growers and as the trainer for the Urban Farming Institute. He is also a painter and builder by trade whose early beginnings began in the gardens of his grandparents. Nurturing his natural inclination to till the earth and harvest its bounty, Bobby became a Master Urban Gardener and trained at the New Entry Sustainable Farming Program at UMASS Lowell.

Kenneth Warchol is a 6th generation beekeeper going back to Poland. He was introduced to beekeeping early on in life. After college and a stint in the army, Ken started teaching and coaching at Northbridge High School and remained there for 37 years until he retired in 2009. He started as a seasonal apiary inspector in Massachusetts in 1976 and has been in the position ever since inspecting beehives all over Massachusetts in addition to managing his own 120 colonies. Ken has been actively involved in the Worcester County Beekeepers Association since 1950 as Vice President, President, Program Director and Bee School Director. He has been a Massachusetts Beekeeper of the Year and has received a number of other awards.

Ralph Weah works with YouthGROW in Somerville. Ralph has been involved with YouthGROW for the past four years as a teen participant, a Youth Leader, and his current staff role, as Assistant Farm Manager. When he is not working on our two youth farms, he is an active photographer and video editor. Ralph has completed anti-racism training and is an activist for social justice. He is currently a freshman at Assumption College.

Weijie "Tony" Xie works with Groundwork Somerville. Tony is 18 years old, and a junior at Somerville High School. He began working with the Green Team at Groundwork Somerville in the winter of 2014, and has participated in both the summer programming as well as the academic year program. Tony enjoys all sorts of outdoor activities, including running, hiking and rock climbing. His creative problem solving and openness to trying new things have been huge additions to the Green Team each season.



Bus and Shuttle Stops 3, 4 and 21

[Traffic patterns may vary as new construction comes on line.]

lava Junction, University Police—1st floor 13 Wasylean Hall—Residence Starbucks Café—2nd floor 12 Parking Garage 14 Tennis Courts UTS—3rd floor

8b Kevin Lyons Baseball Diamond

9 Coughlin Athletic Field

8a Rockwood Softball Field

15 Chandler Village—Residence 16 Dowden Hall—Residence

Bookstore, Food Court, Blue Lounge-1st floor

Fallon and Foster Rooms—3rd floor

Mary Cosgrove Dolphin Gallery—1st floor

102 auditorium—1st floor

under construction-opening 2016

7 Wellness Center

8 Rockwood Field

4 Worcester Center for Crafts Shuttle Stop

Sullivan Commons Woo Café—1st floor

3 WRTA Bus Shelter

2 Sullivan Academic Center

Eager Auditorium—1st floor

5 Shaughnessy Administration Bldg.

Academic Mall (various services)—1st floor

Admissions, Fuller Theater—2nd floor

11 Learning Resource Center

Library—2nd & 3rd floors

C-Store—Lobby

17 Campus Ministry

Pulse On Dining (POD)—1st floor Health Services—Lower Level 18 Sheehan Hall—Residence

20 Athletics Office & Counseling Services 19 May Street Building & Auditorium

21 Goddard Lot Res. Student Shuttle Stop

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