EIGHT AREAS OF COMPETENCY IN DECISION MAKING FOR SUSTAINABILITY IN METRO FOOD SYSTEMS*

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Abstract

Michigan State University (MSU) held a focus group in Detroit, Michigan, USA in 2012 with members of the urban agriculture movement. The session included business persons involved in growing and selling food, members of the health system, community group members and city government. The purpose was to identify the full range of sectors of society involved in the food system, to identify the perceptions of the food system among the city population, test eight sustainability competency areas developed by MSU faculty as concepts and as they related to urban food systems, and to discover what kinds of decision support tools were needed to foster sustainable food systems in Detroit. The focus group session was video and audio recorded, the tapes transcribed and coded to identify common themes and responses to the competency area concepts. The competency areas presented were: ecological integrity, community well-being/social justice, economic vitality, aesthetic quality, civic responsibility, systems interdependence, critical thinking, and personal growth. Participants indicated that they considered sustainability a value that people in urban agriculture shared, but that people struggled with how to move forward toward sustainability. Focus group participants were able to identify some aspect of each of the eight competency areas that they perceived people in urban agriculture, and the broader city resident population already recognized, or engaged in without recognizing that they were doing something that could lead to more sustainable outcomes. However, participants perceived that a sustainable metropolitan food system remains a somewhat elusive goal to achieve for people engaged in pursuing urban agriculture in Detroit due to a negative perception they expressed that many of the city's population holds for growing food in the city, and in general for goods produced in the city. Information gained from the focus group and subsequent focus groups with members of the different urban agriculture sectors will be used to help develop university and partner organization education programs, to identify other research needs, and to help people developing school and other youth education programs in sustainability.

Keywords: sustainability, urban agriculture, focus group, Detroit, food systems.

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1. Introduction

How does a business, community organization or local government make decisions about how to plan for the future, start or grow a business, or develop their community and successfully incorporate such a big concept as sustainability? Sustainability is a term frequently used by government officials, stakeholder groups and citizens, but for which there is not a common understanding, and certainly not a common commitment to implement. For some, their understanding of sustainability may be narrowly focused on economic security, and with a time horizon of just a few years (Warbach *et al.*, 2004). For others, the term implies multi-generational well-being and resilience to major shifts in society and/or the climate and natural disasters. One widely circulated definition is: 'meet the needs of the present without compromising the ability of future generations to meet their own needs' (World Commission on Environment and Development, 1987). However, it is probably less important that people and organizations agree on a definition of sustainability than that they develop the ability to competently deal with how natural systems of the earth operate, and how people relate to each other and the planet.

Progressive city and national governments around the world are working to apply strategies to build sustainable environments (Droege, 2008; Newman, 2010; Harris and Padawanji, 2010; Kellidaikurichi, Anand and Tay, 2010; Ley and Newton, 2010). Many cities see sustainability as key to New Economy success (Newman, 2010). They are finding that sustainability can be achieved through patterns and forms of urban development that create a strong and appealing sense of place (Newman, 2010), and that operate as functional and efficient ecosystems which raise competitiveness and quality of life, thereby attracting and retaining the best talent. Environmental aesthetics, broadly defined to include both the sensory experience (sight, sound, smell, feel) of the environment and the meaning people make of it (emotional, spiritual and value-driven) shape our health beliefs and our overall well-being (Hale *et al.*, 2011). The practice of urban planning, which has historically been largely proscriptive, regulatory and a contributor to sprawl is being transformed to be strategic, flexible, integrative, partnering, and aimed at developing new spatial forms, especially in countries outside the U.S. (UN Habitat, 2009).

The leaders and residents of sustainable cities understand and make efficient use of circular urban metabolism, recognition of the benefit of natural and urban systems working synergistically, in which they use local energy, water, food and fiber resources, are carbon neutral, and are dense but not congested (Lehmann, 2008). Sustainable cities provide the technology and communications systems to grow businesses and social systems (Corey and Wilson, 2010), they are healthy and beautiful, and people from all backgrounds feel welcome, recognizing that there are systems in place to support them and their endeavors. Leaders and residents need to understand that the next generation of cities should be financially sustainable.

For a community, organization or business to truly move toward sustainability, its leaders, citizens and organizations need to have the information and decision tool

support to make competent decisions in the multiple elements of sustainability (energy, water, food, land, waste, transportation, shelter and others). To achieve multi-generation sustainability, youth need to develop the knowledge and skills, including how to obtain knowledge not yet discovered, to competently make decisions as adults.

If society is going to meet the needs of the present without compromising the ability of future generations to meet their own needs, it will require wholeness and balance among: a) social equity, b) economic vitality, c) ecological integrity and d) aesthetic understanding. Faculty at Michigan State University (MSU) believe that in order to achieve these outcomes students should achieve proficiency in 1) critical thinking; 2) systems thinking; 3) personal awareness and development (knowledge of self); and 4) civic engagement, as well as the above mentioned social, economic, ecological, and aesthetic dimensions (Link *et al.*, 2008).

Students at MSU requested more sustainability learning opportunities. In response, faculty at MSU developed a sustainability specialization that structured opportunities to optimize learning in sustainability, through direct experiences that expose them to the social, economic, environmental and civic processes involved in sustainability, and by making sense of it in practical and personal ways (Link *et al.*, 2008). Faculty of MSU identified eight global sustainability competency areas to serve as the learning structure for MSU's Sustainability Specialization. These eight competency areas are:

1. Ecological Integrity – knowledge of basic ecological principles and the ability to apply ecological science to current issues.
2. Community Well-Being/Social Justice – equitable sharing of benefits of sustainability strategies.
3. Economic Vitality – knowledge of how to apply economic systems to the equitable benefit of society.
4. Aesthetic Quality – recognition of the basic human value of beauty and understanding of how to apply it to communities.
5. Civic Responsibility – the use of knowledge of the responsibilities of citizens and communities in dialogue, decision making and capacity building on local, regional and global issues.
6. Systems Interdependence/Thinking – ability to recognize multiple systems and feedback loops at play in an issue and understanding of the need to incorporate multiple groups, perspectives and institutions in decision making.
7. Critical Thinking – The ability to recognize, invite and consider a full range of evidence, strengths and weaknesses across different modalities recognizing uncertainty, biases and assumptions; and using that range in capacity building and the decision making process.
8. Personal Growth (Personal Development and Self-Awareness) – understanding one's personal values and those of others related to issues, and being provided the opportunity for growth and capacity building.

We can look at community planning in relation to renewable energy as an example of applying the competency areas. When a community seeks to embrace locally-produced

renewable energy, is biomass a feasible option? Is suitable land available? What portion of total energy needs can it provide? Will it displace local food production? What ecosystem effects will result? Will all segments of the community benefit? Will it enhance the beauty of the community or detract? Does it provide for learning opportunities for children and adults? Are all interests included in the exploration of the concept and decision?

MSU is taking the suite of eight competency areas beyond courses for university students to assist with decision making in the community. It is doing so to help provide more concrete direction to individuals, businesses, government and organizations wanting to pursue sustainability goals, but not knowing what to do beyond recycling, installing energy efficient light bulbs, and better insulating buildings. Society faces the problem of enlarging the concept of sustainability out of local context and into buzzwords and universal approaches and products to solve problems. However, resilience, redundancy and innate wisdom, applied locally and in context are vital to real sustainability (Dahlberg, 1993; DeLind, 2011). The eight competency areas provide a framework for local, contextual and place-based civic and individual sustainability decision making, by making critical thinking, systems thinking, personal awareness and development (knowledge of self) and civic engagement, conscious elements of the process of addressing social, economic, ecological, and aesthetic dimensions of the plans individuals and groups make for the activities they pursue.

As Michigan State University works to help individuals, businesses and government in decision making for sustainable development, it is doing so through the coordination of faculty research, outreach and technical assistance by MSU Extension (field educators and faculty), and partnerships with stakeholder groups and state and local government.

One important area of sustainability is food. How do we feed several billion more people in the future, especially considering that most of the world's population will be concentrated in cities, and it may be increasingly difficult and costly to move large quantities of food the great distances food markets now reach, and that water to grow food in some parts of the world may be scarce, as more people claim water for domestic use.

A sustainable food system is critical to making appealing and supportive places. If our regions are to recover economically, and the people in them experience a good livelihood, health and wellbeing in the 21st century, regions will have to attract and retain talented, entrepreneurial, educated and energetic people (Glazer, 2010), and to lift up people and communities that have been left behind. To do that, a 21st century sustainable built environment will have a unique signature of neighborhoods, public spaces, public systems such as schools, culture and heritage, and green infrastructure to which people will form attachments (Knight, 2010), and around which a workable, efficient, socially engaging and just, and beautiful built form can be arranged. Infrastructure and social systems will be focused on supporting this place, resulting in a smaller ecological footprint, but a bigger identity. People will have the institutional and social support to grow a robust economy. The strength of using food as a placemaking theme is that it is a commonality that brings people together to achieve their common goals,

and it relates to the basic human needs of sustenance and connection with nature. A focus group held in Detroit in the summer of 2012 identified the importance of food and growing food in the sense of place of Detroit. The Project for Public Spaces has worked with Detroit's Eastern Market to develop food marketing placemaking concepts for the Market area.

Through a memorandum of understanding (MOU) between MSU and the City of Detroit, an innovation cluster is being developed to address how technology in food, energy, water, and land can be applied to growing healthy food, in greater quantities in and near metropolitan areas, where population growth is expected to concentrate in the future across the globe (http://news.msu.edu/story/msu-city-of-detroit-plant-seed-for-urban-food-system-innovation/).

2. Method and initial research findings

With the help of the Detroit Lower Eastside Action Plan (LEAP), Warren Connor Development Corporation, a focus group session was held by MSU with people growing food, helping others grow food, business owners involved in growing and processing food, and local government. The information will be used to help develop MSU Extension community and business education programs, to identify other research needs, and to help people developing school and other youth education programs in Detroit and other areas.

The focus group was held in Detroit in August, 2012, following MSU Institutional Review Board approved procedures. There were eight participants, individuals representing themselves and various stakeholder groups, the private sector, and government in the Lower Eastside community. The format for the focus group was as a discussion session, with a facilitator asking for opinions based on knowledge and experiences related to growing food in the city. Focus group questions sought to identify a full range of sectors of society involved in the food system, test the eight sustainability competency areas as concepts and as they related to urban food systems, and to discover what kinds of decision support tools were needed to foster sustainable food systems in Detroit.

The following observations about the different sectors directly involved in urban agriculture, and the city population more broadly, were derived from the focus group discussions about the eight sustainability competency areas. Sectors the focus group identified as being directly involved in urban agriculture include urban growers, processors, retailers, banks, government, health organizations and agencies, philanthropy, community groups, and urban agriculture related nonprofits.

Ecological Integrity. Ecological integrity is viewed as important by many of the public and private sectors involved in the food system in Detroit. However, ecological integrity was interpreted by participants as environmental quality and safety, such as if food is grown locally and organically, and whether the food is grown in uncontaminated soil, and thereby safe to eat. A general perception reported by participants is that residents believe that farming is not an appropriate activity for inside the city, with the view that

farming requires heavy equipment, spraying and raising animals. Participants indicated that this perception has policy makers cautious about the city moving forward with urban agriculture – crafting zoning ordinance provisions to permit, with constraints, urban agriculture, and selling or leasing city-owned land for growing food. Participants also reported that the environmental concern is multi-faceted. For example, banks want people to be safe in the community, and not exposed to hazards. However, they also want to make sure that the food system businesses they lend to do not fail because of food contamination. A grower may use fabric crop row covers to keep insects out because they do not want to use pesticides, but neighbors may complain about the appearance. Participants perceived that the philanthropy sector assumes that efforts to ensure environmental quality, and learning opportunities related to the environment, are criteria of any project they fund.

Community Well-Being/Social Justice. Participants indicated that some groups within the city have an expansive understanding of what social justice and community well-being can mean, but also believe that their city still has a long way to go in fully understanding the concept and how to operationalize it. For some in the focus group, community well-being meant making existing health systems available to and work for all members of society, a standard that is not currently met. For others, it meant that people understood the importance of healthy food, and being able to obtain healthy food. Where food is grown is important – both that it is local and therefore in some ways better, or that growing it in the neighborhood is not an imposition on the neighborhood. Where food is available was very important to community well-being as well as whether the food system could be improved to better serve social justice rather than to deny it. Not being able to obtain good food at good prices close to where people live was seen as unjust by participants. The food system, including how land is allocated for urban agriculture, and how retailers operate was reported not to be at all transparent. Residents reported wanting more information on why some vacant parcels are being made available for growing food and others not. They want to know why prices for food can be so high while the quality so poor. Participants reported that if residents feel that they benefit from food being grown in the neighborhood, perhaps even on a large scale, or that jobs were created, there would be much greater support for those activities.

Economic Vitality. The concept of economic vitality had a wide range of interpretations among participants. Economic vitality was recognized as involving multiple sectors of society, including banks, retail and wholesale businesses, customers, the philanthropic community as well as being related to geography. Participants noted that the economy, including the food-related economy was doing poorly, in part due to poor perception, poor community relations, an outdated mindset of economic success, and a lack of access to good information. Participants perceive that banks lend to businesses, but need to weigh investment risk, with some locations being perceived to pose greater risk, such as in Detroit, compared to the more wealthy suburban areas. Retail businesses require a minimum customer population, and many areas of the city have lost a significant number of households. The city is home to a number of different ethnic and racial

groups, and there had been a history of conflict in the retail sector. People of one group were made to feel unwelcome in the grocery store run by someone from another group. A concerted effort by nonprofit groups to educate store owners, managers and employees has reduced the perception that stores discriminate. Theft is also perceived as a problem, but a focus group participant involved in food retail explained that theft in Detroit groceries is not higher than in other locations, and most is the result of employees rather than customers or burglaries. Focus group participants were critical of those in government, business or residents who only pursue manufacturing as the route to restored prosperity. Incentives were granted to a large food employer to locate in the city, when many small businesses in many locations in the city could have become established if incentives were distributed, and provided as many jobs and economic stimulus across more of the city. Resident members of the focus group explained that individuals also measure value, not just the banks and businesses. They look to whether a business is going to provide jobs, and add to property values of the neighborhoods.

Aesthetic Quality. Aesthetics was primarily associated with visual quality. Focus group participants used terms like beautification and physical appearance. However, they also presented the idea of freshness of food as having an aesthetic benefit. Aesthetics, almost uniquely, was associated with other sustainability competency areas. For example, the focus group said that while people might initially see an urban farm as ugly, with more knowledge, they might appreciate it for the fresh tomatoes they could have to feed their families. Visual appearance was cited as very important, but primarily important to residents who are or expect to be neighbors of urban growing activities. There could also be a difference of opinion on how a building or landscape should look between residents and government or a corporation, a reason the group suggested that residents be consulted in the design of new buildings and urban growing operations. The focus group also established that if a building or landscape appears to function well, using an expression like 'engineered well', there is greater aesthetic appreciation for residents.

Civic Responsibility. The group saw ensuring a successful and sustainable urban agriculture economic sector in Detroit as a shared responsibility of all sectors of society. However, the mechanisms for involving all sectors in meeting this shared responsibility are not all worked out. Cross-sector discourse was identified as essential for real progress, but resident involvement was emphasized. Focus group participants were adamant that the location of farms and gardens, what they grow, what they look like, and how neighborhood and family values are affected and measured need consultation with the community. They also said that community members have the responsibility for communicating what they think to government and the other sectors of society. According to focus group members, the community has not yet figured out what social justice looks like. Retailers do listen to customers, but are more responsive when consumers organize and do such things as letter writing and boycotting products and stores.

Systems Interdependence/Thinking. Thinking and working with interdependent systems in mind does occur to an extent in Detroit and in relation to urban agriculture.

In part it depends on the scale of a project. If one person is putting in a vegetable garden on their property, they simply go ahead and do it without consultation with others, including government. If there is a proposal for a community garden or small urban farm, then many players become involved. Focus group participants cited a problem with food system literacy as a barrier to people thinking about systems interdependence. Focus group participants talked about the regional economy as being a system, and that increased complexity in the regional economy is a potential outcome of an expanded food system. A sustainable food system, according to focus group participants, must include good information about how food is grown in cities and the benefits of doing so, something that is currently lacking in the Detroit metro region.

Critical Thinking. Focus group participants indicated that although city residents would generally be confused if they were asked what the concept of critical thinking means, or if they engage in it, they do it all the time. Participants reported that much of the critical thinking that goes on around the food system in Detroit is through storytelling and in informal settings. They reported that people in the community listen to each other and make decisions based on what they learn from others, especially neighbors. They then voice their support for or opposition to urban agriculture activities within their neighborhoods and city, in community meetings or to their elected representatives. The focus group participants stressed that there are information gaps. Many people are learning and acting on misinformation. Participants indicated that more accurate information is needed on how and where urban farming would take place, its benefits, how government policy affects urban farming, the long-term prospects for urban farming, and how neighbors can be involved. The focus group noted the need for common terminology related to growing food in the city.

Personal Growth (Personal Development and Self-Awareness). Focus group members associated personal growth with education that covered many topics, not just those highlighted in K-12 school curriculum, and with people learning how to gain new knowledge, and learning for the sake of learning. They said that the more highly educated are more willing and capable of learning, and it is the responsibility of all sectors of society to support education. Participants perceived that if more people had knowledge about urban farming, and many of the myths could be dispelled, more people would be willing to support it. The focus group frequently mentioned that there are pervasive perceptions among the residents about Detroit and farming that educational opportunities should be made available to address. These perceptions include the idea that anything outside Detroit is better for you, farming is red barns, chickens and pigs, and people should not try to promote something reminiscent of the tenant farming lifestyle Detroit residents' ancestors escaped Mississippi, Alabama and Arkansas to come to a better life in Detroit, and new ideas such as urban farming are being imposed on Detroit from outsiders. Participants indicated that if people in Detroit can see the many ways urban farming can produce good food for them, and jobs, they will be willing to support it. The focus group also said that good food is not just a concern for lower income people, that people with higher income levels also do

not avail themselves of good food, and so there is an important educational need for healthy eating for all of the city's residents. The focus group talked about fostering 'learning adventures' related to urban farming. Business persons who are already established and have been able to obtain bank funding can be teachers, and can show city residents, other business owners and banks that urban food growing can be a vital part of the city future.

3. Discussion of findings

Sustainability remains a somewhat elusive concept for people engaged in pursuing urban agriculture in the major metropolitan area of Detroit, Michigan, USA. A focus group held in August, 2012, with participants from public and private sectors, business, health and government, was presented with the concepts of eight sustainability competency areas and asked to respond with their interpretation of those competency areas and how they applied to the urban agriculture system. A secondary purpose of the focus group was to identify a vocabulary associated with the urban agriculture movement in Detroit that could be used to improve dialogue between researchers and practitioners. The competency areas presented were: ecological integrity, community well-being/social justice, economic vitality, aesthetic quality, civic responsibility, systems interdependence, critical thinking, and personal growth. Participants indicated that they considered sustainability a value people in urban agriculture shared, but that they all struggled with how to move forward toward sustainability.

Focus group participants were able to identify some aspect of each of the eight competency areas that they believed people in urban agriculture, and the broader city resident population already recognized, or engaged in without recognizing that they were doing something that could lead to more sustainable outcomes.

Ecological integrity was interpreted as environmental safety. Many sectors of society are concerned about whether food is being grown in contaminated soils, and if so, this could mean that some urban agriculture businesses may not be viable. Residents and government are concerned about pesticide and other chemical use in farming, and believe that the favorable ecological approach is organic farming.

There appeared to be community-wide buy-in to the concept of social justice, and groups are working on it, but it was evident that city residents, community groups and government have a long way to go to figure out how to more fully implement a social justice agenda. The social fabric of the city has gone through dramatic change for over fifty years, with many people leaving, a large disenfranchised population left without the financial and educational resources to build a new economy, new groups moving in through international immigration, and huge legacy costs in infrastructure and employment-related benefits sapping the potential for the city to adequately invest in its people and infrastructure.

The group saw economic vitality as multi-dimensional. To them, economic vitality had as much to do with the recognition of value – benefit to the community and the way a venture was organized and managed, as it did with profitability. There was disagreement within the group over the impact of resident income levels, a reason often

cited as why there are few full-service groceries in Detroit. Some believed there were enough people with enough income to support more food-related businesses in the city, but that people thought they had better choices outside the city. Blight and decaying infrastructure may fuel the perception that the business climate is poor. Retail businesses require a minimum customer population, and many areas of the city have as few as 2-5 households on blocks that used to have 50 households. Dozens of groceries went out of business in the city, leading to research suggesting more than half the population lives in a 'food desert'. A food desert is defined as an area where people have difficulty obtaining healthy, affordable food. Although there was a long period in which retail food businesses have been reluctant to reestablish groceries in the city because there are not enough people with high enough income to support the stores, progress has been made in that a number of small groceries and one large one have either located in the city or have plans to do so. Unfortunately, many people in the city receive public assistance, generally once a month at the beginning of the month. As a result, some businesses do well the first week of the month, but not so well in the following weeks. It also limits the amount of refrigerated space retailers will devote to perishable milk, fruit and vegetables if people only purchase those products once a month.

Aesthetic quality was an oft-cited issue, with complaints about the sometimes ragged appearance of urban farms, and the broad perception of agriculture as red barns, chickens and pigs as a visual image that just did not fit urban living. Detroit suffers blight on an unprecedented scale, with vast areas growing as prairie or early succession forbs, grasses, shrubs and trees, with most of those species not associated with ornamental residential and commercial landscapes, which are often a preferred aesthetic. Where ornamental plant species still exist on vacant lands, they are not well maintained. We hear from multiple sources that residents would prefer buildings on vacant land rather than fields and unkempt plants. Vegetable gardens present a different visual appearance than a typical residential landscape, and that may be part of the difficulty residents have in accepting urban food growing on a larger scale – it changes how they envision a city should look.

Establishing a viable urban agriculture economic and social sector is a complex civic endeavor. Many groups within the city are working to support urban agriculture as a health improvement strategy, a strategy to diversify and grow the economy, and as a productive use of vacant properties. Government sees its civic responsibility as ensuring that agriculture, perceived as primarily rural activity, fits into an urban setting. A recurring theme of the focus group was that consultation with residents was essential to moving urban agriculture forward. Resident organizing is fairly common in Detroit, and appears to have an effect on decision making in the public and private sectors. Community organizations have an impact on how government responds, and whether and where action is taken by government in the city, at least to the extent government has the capacity to respond. The concept of systems interdependence was interpreted by the focus group as primarily involving social systems. There was no mention of natural systems. All sectors of society are currently involved in urban

agriculture, especially philanthropy, government, nonprofit greening groups, food security (emergency food support) groups, neighborhood block groups, banks and businesses. Social interdependence becomes a factor when urban agriculture raises above the level of an individual property owner growing a vegetable garden, to a neighborhood group establishing a community garden on city-owned property, a farmer growing organic vegetables on a single vacant lot for commercial purposes, or a business seeking hundreds of acres of vacant land to grow crops. The concept of systems interdependence should be thought of as an aspect of sustainability literacy. The fact that it is missing from the vocabulary of so many working in urban agriculture limits the scope of thinking and action that people and groups will pursue to optimize the benefits of urban agriculture being viewed as interdependent among sectors and the physical environment. Focus group participants talked about the regional economy as being a system, and that increased complexity in the regional economy is a potential outcome of an expanded food system. This would include integrating technology, developing and growing new crops, using vacant land and abandoned buildings in growing and processing food, new branding and distribution to markets, and measuring response from customers.

According to the focus group, nearly everyone engages in critical thinking, but they would not characterize it as such. In Detroit, people learn from each other through story-telling and personal experience. Focus group members suggested that education to dispel negative myths about urban agriculture should involve 'learning adventures' in which people tour urban farms and indoor growing facilities so they can tell their neighbors about them. Lack of common and understandable terms appears to be a part of the problem in moving to debunk myths and change a poor general perception of urban food growing. Urban food growing can be a platform for school children to learn about different professions, such as soil science, agriculture, food sciences and other sciences.

Personal growth and critical thinking are strongly related, and personal growth should occur through educational opportunities designed to help people to overcome negative perceptions. It would help to have a more highly educated population, but experiential learning, in which people get first-hand knowledge of urban agriculture, could foster more positive feelings about growing food in the city. One area in which personal growth was seen as important is in the cultural stigma associated with farming. A large segment of the Detroit population is descended from people who 'escaped' farming – often tenant farming, to take manufacturing jobs in Detroit, and a better life. Many residents need to grow beyond that association if urban agriculture is to become sustainable in Detroit.

4. Conclusions

Focus group participants confirmed that at least a small group of people active in the urban agriculture movement in Detroit recognize how the eight sustainability competency areas relate to their efforts in that movement. They also indicated that others in each of their sectors probably would also recognize that relationship. However, an

understanding of the full scope of what sustainability is, and how people involved in urban agriculture can successfully develop sustainability practices (ecological, social, economic, aesthetic, and continual learning) is limited.

The focus group participants asked for additional conversation opportunities. This was somewhat unexpected as many of them have been working in the urban agriculture movement as long as ten years. The research team will attempt to grant this request in two ways. 1) The research team has proposed a series of drill-down focus groups to explore the eight sustainability competency areas in more detail with specific urban agriculture sectors, such as growers and processors, food sellers, community well-being (health, social justice, government, philanthropy), and education. 2) Michigan State University Extension and MSU Global are developing a web-based knowledge network where people can learn more about the sustainability competency areas and share stories.

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