Urban Agriculture as an Opportunity for Michigan

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Mr. Chair and members of the committee; thank you very much for having us here today to discuss a topic that has so far been underappreciated and underserved in the urban areas of our state- the ability of urban centers in the 21st century to be food sources. While there is a long history of farming in towns and cities; the most famous of the 20th century being the Victory Gardens of WWII; it has largely fallen into disfavor since that time as anything beyond gardening for a few people. However, as the core urban areas of our state, and much of the old industrial Midwest, have depopulated we have an opportunity to rethink that attitude and develop a productive and useful strategy for the re-use of large amounts of abandoned land in our cities.

I would like to give a very brief snapshot of the why's and wherefore's of that opportunity and then clear the stage for those who are actually making these things happen in Detroit and Flint. First, let me provide a very brief context for why I think this is critical. We are all clear that the overriding task facing Michigan is rebuilding an economy that both fits the 21st century and recognizes that there is no single-industry silver bullet like we had in the 20th century. We are also clear, in Michigan and as a nation that the general health of our population needs to improve so that, while we are debating the best way to insure health insurance for all Americans, we are putting less strain on our health care system and avoiding chronic disease to the extent possible. These twin issues- economic development and public health improvement are tied to what I consider an important third component of the future of Michigan - preserving and enhancing our natural resource base for future generations of Michiganders. These three issues present a golden opportunity and a critical imperative for us when we consider our current food supply.

Globally, while there are currently about 6.6 billion people, it is projected this will grow to 8 billion by 2025 and 9.4 billion by 2050.[i] Over the same time span US population will grow from our current 300 million to about 420 million. Using recommended U.S. consumption characteristics as our base of analysis each of these people should consume about 1200 pounds of food per year[ii,iii],excluding coffee, tea, soda, fats/oils, or sugars/sweeteners. Thus, every

billion people added to the earth require about 1.2 trillion pounds of food, a great deal no matter how it's calculated.

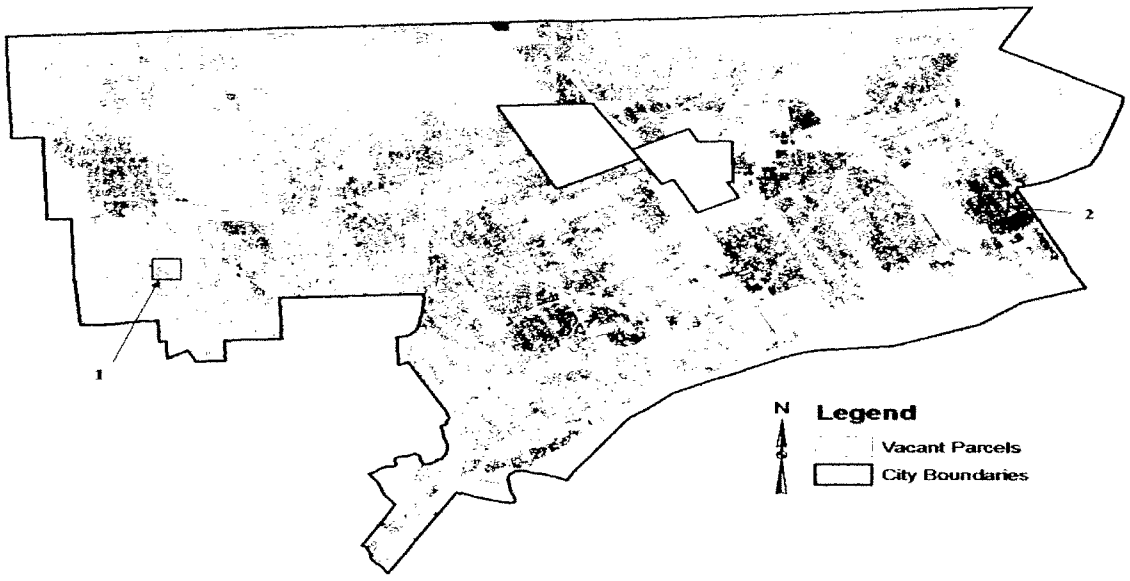
This continuing increase in global demand accompanied by reasonable questions concerning global productivity gains can be placed in a U.S. domestic context. It is clear that at a time when we are concerned with our diet and its relationship to obesity and chronic disease we are becoming more dependent on global supplies for our food. A study of vegetable sourcing indicates that we currently import over twice as many vegetables as we export – a balance of trade that continues to widen.[iv] This begs the question: Are we short-changing, future domestic food security through growing dependence on a distant food supply? Additionally the American Farmland Trust[v] estimates that 86% of our fruit and vegetable production occurs on land that is under threat of development.

From a dietary standpoint, this should be of great concern. It's clear that, excepting tobacco use, poor diet and physical inactivity are the leading causes of death in United States.[vi] This implies that agriculture and public health are intimately connected. However, a recent report from USDA's Economic Research Service finds[vii] that we would need to increase our fruit and vegetable production by approximately 13 million acres (based upon 2005 population) to produce sufficient quantities that would allow for adoption of the Dietary Guidelines for Americans by the entire population. This is equivalent to the current production of 2-3 California's (and we can anticipate a decline in CA production due to population growth and climate change reductions in water for irrigation). Therefore, from a food supply standpoint our agricultural production is currently incapable of providing sufficient levels of fruits and vegetables for all to consume a healthy diet. We can't have good public health without a good, healthy food supply.

How do vacant urban lands in Michigan potentially impact the scope and scale of this developing catastrophe? I like numbers and so let me use a few numbers from research in our group at MSU that can help frame the on-the-ground activities my colleagues will talk about. In both Detroit and Flint there is the capacity to significantly impact the diets of those cities' residents through urban agriculture. Kathryn Colasanti recently completed her Master's thesis with me examining the question: "if Detroit wanted to feed itself, could Detroit feed itself?" She examined all of the publically owned, vacant lands in Detroit, excluding parks and right-of-ways, as an analytical base amounting to nearly 5,000 acres[viii] (see first table below). These parcels are spread across the city with concentration in some areas (See Figure below for city map with parcels outlined). She analyzed the potential for meeting the fruit and vegetable requirements of Detroit's population if this land were put into cultivation. We are not arguing that this either should or would be the case; but rather sought to provide a base for understanding the extent of the potential in Detroit. Depending on the scenario (assumptions

about production yield, use of storage and use of season extension technology) there was a range of possibilities. Maximizing the use of season extension technology and cold storage of various types the city could produce as much as 76% of its vegetable needs and 42% of its fruit needs on only 2,000 of these acres (see second table below).

Ownership	No. of Vacant Parcels	Acres
City of Detroit	31,123	3,589
Wayne County	6,135	563
State of Michigan	401	104
Wayne County Land Bank	551	55
State Land Bank	5,875	537
TOTAL	**44,085**	**4,848**



Production Scenario		Acreage Needed to Meet Current Consumption	Acreage Needed to Meet Recommended Consumption	% Consumption Supplied
Field Only	High Productivity	263	916	31% Veg 17% Fruit
	Low Productivity	894	3,001	
	Commercial Yields	1,660	5,549	
Field + Storage	High Productivity	511	1,831	65% Veg 39% Fruit
	Low Productivity	1,839	6,174	
	Commercial Yields	3,063	10,210	
Field + Storage + Extension	High Productivity	568	2,014	76% Veg 42% Fruit
	Low Productivity	2,086	6,976	
	Commercial Yields	3,602	12,067	

In Flint, while the scale of the issue is less with about 11% of Detroit's population; the opportunity is similar. David Conner in our group, with help from the Genesee Land Bank, has calculated that with approximately 500 acres of Flint's 800 acres of Land Bank-controlled land the city could produce approximately 50% of its fruit and vegetable needs.

Clearly the opportunity exists. And it could make good economic sense. First, remember that we, as a population, consume approximately half of the fruits and vegetables recommended by public health officials. The difference between our current consumption and what we should consume we term the 'public health gap.' A study we completed in 2008 looked at the economic development potential of this gap and determined that meeting just 10-15% of it from Michigan-grown fruits and vegetables would require an additional 37,000 acres of production and yield over $200 million in the pockets of farmers. This means jobs, both on-farm and off-farm, and an important tool in our toolkit for both reviving a flagging economy and improving the public health of our population. Let me state this a different way: if we have the will as a state we can catalyze an increase in agricultural production in our urban areas that would simultaneously aid economic development activities and improve the public health of the population.

The really good news is that we have significant levels of activity occurring across Michigan that provide the keys to successful expansion of urban agriculture over the next five years. Detroit and the Flint area have wonderful examples of how urban agriculture can be promoted, grown and matured into a force for revitalization of these, and other, important urban areas of our state.

Thank you very much. I now look forward to hearing from my colleagues and then answering, or at least trying to, any questions you may have.

[i] U.S. Census Bureau *Total Midyear Population for the World: 1950-2050* (accessed 10/24/07 at http://www.census.gov/ipc/www/idb/worldpop.html)

[ii] USDA – ARS . *Data Tables: Food and Nutrient Intakes by Region, 1994-96.* ARS Food Surveys Research Group. 1998. (accessed at: http://www.barc.usda.gov/bhnrc/foodsurvey/home.htm).

[iii] Kantor LS. *A Dietary Assessment of the U.S. Food Supply: Comparing Per Capita Food Consumption with Food Guide Pyramid Serving Recommendations*. 1998.

ERS, U.S. Department of Agriculture, Agricultural Economic Report No. 772.

[iv] Huang S. and Huang K. *Increased U.S. Imports of Fresh Fruit and Vegetables*. USDA ERS Report FTS-328-01 (2007) (Accessed 10/24/07 at http://www.ers.usda.gov/Publications/fts/2007/08Aug/fts32801/fts32801.pdf)

[v] American Farmland Trust (accessed 10/24/07 at http://www.farmland.org/resources/fote/default.asp)

[vi] Moktad AM, Marks JS, Stroup DF, Gerberding A. *Actual Causes of Death in the United States, 2000*. J.A.M.A. 2004; (291:10) 1238-1246.

[vii] Buzby JC, Wells HF, and Vocke G. *Possible Implications for U.S. Agriculture From Adoption of SelectDietary Guidelines*. 2006. ERS Report #31.

[viii] All Detroit tables and figures taken from: Colasanti, K.J.A. *Growing Food in the City: Two Approaches to Exploring Scaling Up Urban Agriculture in Detroit* Michigan State University M.S. Thesis (2009).