

2015

Using spatially explicit supply/demand and local participants' perspectives to integrate urban agriculture with community planning

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Recommended Citation

Thompson, Janette R.; Tyndall, John; Moore, Marissa; and Naeve, Linda, "Using spatially explicit supply/demand and local participants' perspectives to integrate urban agriculture with community planning" (2015). *Leopold Center Completed Grant Reports*. 494.

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Using spatially explicit supply/demand and local participants' perspectives to integrate urban agriculture with community planning

Abstract

Community gardens boast many attractive features, from appearance to opportunity for healthy food production to encouragement of citizen engagement. This project looked at the potential for community gardens to enhance their reach and successes.

Keywords

Natural Resource Ecology and Management, Sustainable Agriculture, Value Added Agriculture Extension, Community-based food systems, Food pathways food system assessments, Market research and feasibility studies, Models and assessment tools

Disciplines

International and Community Nutrition | Natural Resources and Conservation | Natural Resources Management and Policy | Sustainability | Urban, Community and Regional Planning



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Abstract: Community gardens boast many attractive features, from appearance to opportunity for healthy food production to encouragement of citizen engagement. This project looked at the potential for community gardens to enhance their reach and successes.

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Budget:

\$25,788 for year one

Is access to community gardens important to city residents, and if so, how and why? What facilitates or limits participation in community gardening activities? How can city governments effectively integrate community gardens as a part of their ongoing city planning and infrastructure development processes?

Community gardens emerged as important to study participants, for a variety of reasons. A draft framework was developed for integration of community gardens in city government.

Background

Human well-being in urban areas is influenced by interactions among social and ecological factors in those settings. Urban land uses and patterns of development that integrate social and ecological functions are increasingly important to enhance the resilience of cities and their human populations. One approach to doing so is urban agriculture, a land use that preserves or creates landscapes that address a number of social and ecological challenges in urban areas.

One form of urban agriculture, community gardens (in which multiple participants engage in intensive production of fruits and vegetables), have the potential to promote such integration, and also are thought to provide for economic stability of households, address inequalities in food access, increase social bonds among participants, support ethnic and cultural culinary diversity, and enhance biodiversity. Despite the array of benefits that they could provide, integration of community gardens as a formal land use is not commonly found in the long-term planning processes that guide municipal decision-making. The team hypothesized that: data-driven understanding of both the biophysical and social assets of a community could be used to:

- support long-term planning for community gardens, and
- inform a community on how to respond to this opportunity.

Approach and methods

Meetings and interviews were conducted to document knowledge, attitudes, and behavior/actions related to community gardens for residents, non-governmental agency personnel and city officials. Between June 2014 and March 2015, the researchers held

- three meetings with Des Moines residents who were actively engaged in urban agriculture,
- two meetings with ethnic neighborhood residents,
- two meetings with residents from areas where urban agriculture amenities existed nearby, but they were not engaged with these activities, and



MARKETING



Franklin Community Garden, Des Moines, IA.

(d) two meetings with residents from areas where there were not urban agriculture facilities or opportunities nearby.

Participants responded to brief questionnaires before and after (approximately 3 months later) each discussion session. Forty-nine people participated in these discussions. The team also held eight interviews with representatives of non-governmental organizations that are urban agriculture stakeholders. These participants were identified through key informant interviews and purposive sampling.

Finally, one meeting occurred with members of city staff from departments that play or could potentially play a role in implementation of community gardens in Des Moines.

Prior to initiating this project, the team created a comprehensive Geographic Information System layer to show the spatial distribution of community gardens in Des Moines, including municipal community gardens, school gardens, faith-based gardens, and NGO-sponsored gardens. A layer from the GIS was used to create a large-format map that provided the basis for discussion of Des Moines community gardens in the meetings.

Results and discussion

This study revealed that community gardens are important to residents, non-governmental agencies, and city staff alike. Residents cited opportunities to grow high-quality food, interact socially, engage in outdoor recreation, and maintain traditions as primary reasons for participation. Consistent garden administration and provision of water were noted as especially important to facilitate community gardening. Additional actions that could be taken to facilitate broader participation included locating gardens near public transportation routes, better publicizing existing garden locations and opportunities start new gardens, improving communication about and making alternative means available for potential participants to sign up, and creating a more even distribution of community gardens with particular attention to underserved areas.

Conclusions

The majority of meeting participants in this case study focused on the City of Des Moines expressed strong support for community gardens and indicated that access to community gardens was important. Factors cited by members of different groups that facilitate successful community gardens included oversight by dedicated staff (city or volunteer), and provision of amenities (primarily water, but also mulch, compost, and in some cases tools/storage for tools). Participants who were active gardeners indicated general satisfaction with city-administered and NGO-sponsored gardens.

Several elements that could improve participation also were noted; among them were locating gardens in areas near public transportation routes, publicizing community gardens to increase awareness of existing facilities and increase participation, making information on starting new gardens more available (e.g., via side-lot leases available from the city), and providing more information about (and alternative means of) signing up as well as waiting lists for those who would like to participate. Based on

information provided about quantity and distribution of community gardens, members of several groups said that the current community garden space was inadequate. Further, members of all groups noted the uneven distribution of existing community gardens, and many suggested that community gardens should be added in areas that are currently underserved.

The generalized framework developed as part of this project is structured to provide guidance for conducting and integrating biophysical and social assessments to characterize opportunities and potential limitations for municipalities considering developing or evaluating existing community garden programs. The current draft guidance includes elements related to definition of scope, design of biophysical and social assessments, identification of means to integrate community gardening with city planning and policy elements, as well as administrative implementation. The guidance framework is structured specifically for incorporation in long-term municipal planning processes. Potentially, it could also be developed as a broadly available web-based resource.

Impact of results

The GIS database showing the quantity and distribution of community gardens in Des Moines effectively engaged local participants in discussions about supply of and demand for such amenities. The structured interview approach generated information that combined with the map itself allowed the team to identify “gaps.” There is unmet demand for community gardening in Des Moines, and there are specific areas of the city that lack opportunities for participation.

This information helped to develop a process model that could be used to facilitate integration of community gardens (and potentially other forms of urban agriculture) in planning processes, in a generalized form that could be adapted for use by many communities. Based on interactions with city staff members, they indicated their intentions to include a statement in support of community gardens in the new comprehensive plan for Des Moines (IA). They would include it as an element in their discussions of green infrastructure and sustainability (with specific reference to their participation in the STAR Communities program), and to provide additional outreach/public education on the side-lot lease program for community garden implementation. They also discussed including questions about community gardens in future annual community surveys, potentially broadening the applicability of the project results.

The maps and underlying data were delivered to the City of Des Moines Information Technology Department GIS support personnel, who anticipate using it to support planning and decision-making by city staff.

Education and outreach

Publications

- Moore, M., J. Thompson and J. Tyndall. 2014. Community Gardens: A Study of Urban Agriculture in the City of Des Moines, Iowa. Fact Sheet provided at outreach events.
- Moore, M., J. Thompson, and J. Tyndall. 2014. Community gardens: Identified locations and participants' perspectives. Upper Midwest Planning Conference (Abstract).

Presentations and Workshops

- Moore, M.L. 2014 (August). National Night Out (presenter). Martin Luther King, Jr. Park, Des Moines, IA
- Moore, M.L. 2014 (August). Riverwood Neighborhood Association Meeting (presenter). Evergreen Church of Christ, Des Moines, IA.
- Moore, M.L. 2014 (October). Community gardens: Identified locations and participants' perspectives. In Urban Agriculture Studies Funded by the Leopold Center for Sustainable Agriculture. Upper Midwest Regional Planning Conference; Mason City, IA.
- Moore, M.L. 2015 (January). Agricultural Urbanism - "Farming in the City" (participant). Ames, IA.
- Moore, M.L. 2015 (February). Second Annual "It's Almost Spring" Conference (participant). Hiatt Middle School, Des Moines, IA.
- Moore, M.L. 2015 (June). "Farm to School: Connecting Classrooms to Gardens (participant). Food Corps of Iowa, Des Moines Community School District, Des Moines, IA.

Leveraged funds

Additional funds were received from the Natural Resource Ecology and Management department to support undergraduate and graduate students who helped conduct some of the research for the project.

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