Renewable Agriculture and Food Systems: 30(1); 1–2 doi:10.1017/S174217051400043X

The promises of farming in the city: Introduction to the urban agriculture themed issue

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Accepted 23 October 2014 **Introduction for Themed Content: Urban Agriculture**

Key words: urban agriculture, farming, city, research

As the finishing touches go on this themed issue, evidence of widespread enthusiasm for urban farming is apparent in many developed countries. Farming in the city, commonly referred to as urban agriculture, has been put forth as a solution to multiple social problems, including the provision of new green spaces, control of runoff and provision of shade that offsets the heat of the concrete city. In cities with abundant vacant land and abandoned plots, urban agriculture promises a reduction of urban blight.

Urban farms appear in many locations and take many forms. Farms are located in the urban core and in the areas surrounding the city center, referred to as the peri-urban area. Farms are placed on rooftops, on the ground, or in buildings (vertical farming). The growing medium can be soil or water. Urban farms may have an expressed purpose of food production or may exist to serve social goals, such as increasing city residents' awareness of farming or educating communities about nutrition. While urban agriculture sounds simple, that is, farming in the city, the practice of urban farming is much more complex than the phrase suggests.

The contemporary passion for urban agriculture may be entwined with the current zeal for food, sustainable agriculture and civic engagement in food systems. However, the popular culture's association with urban agriculture seems to have less emphasis on food production, and more to do with community and change. Even as farms appear in cities, there are many unanswered questions about and challenges around urban agriculture.

The papers in this themed issue illuminate the current state of questions and research on urban farming. The issue begins with a provocative paper by DeLind, who asks whether the success of an urban farm, in terms of acreage and sales revenues, may unknowingly work counter to its goals of increasing neighborhood empowerment, and instead 'rationalize the displacement and continued social and political inequity of urban neighbors'. The second paper, by Wagstaff and Wortman, analyzes data collected during fieldwork conducted in Chicago. The exploration of the biophysical challenges of farming in the urban environment, and their preliminary findings are indicative of significant variation in both yields and environmental factors, such as ambient carbon dioxide levels and wind speed.

The next two papers provide insight into the benefits of home gardens. Wilcox et al. present preliminary findings of a study of kitchen gardens farmed by women in Afghanistan. Extension activities provide training for women with a goal of self-reliance. The authors state, 'Home food production allows women to gain control over food security and nutrition for their families while also providing opportunities to participate in the market'. Taylor and Lovell's study of home gardens in Chicago points to their cultural benefits, which allow immigrants to maintain their cultural identities through the choice of foods grown. The authors find, however, that the home gardeners' use of chemicals contributes to nutrient loading of urban stormwater runoff, which does not support ecosystem health.

In their paper, Surls et al. discuss the implications of their needs assessment of personnel at the University of California, including Cooperative Extension advisors/agents/educators, extension specialists and campus faculty working on topics related to urban agriculture. The authors suggest that an on-line reliable source of science-based information about urban farming would be

helpful for technical assistance providers, urban farmers and many other stakeholders.

The next two papers demonstrate the multiplicity of urban farming typology. Thomaier et al. focus on zero-acreage farms, which are those in buildings or on rooftops. The authors identify 73 such farms in upper middle-income countries, and find '… a broad range of nonfood and non-market goods and is expected to have positive socio-cultural, economic and environmental externalities for urban societies'. Farming in soil presents a different set of challenges for urban farmers. Soil quality is often suspect, so farmers typically plant their crops in raised beds or containers, with different growing media, which has implications for productivity. Sullivan et al. test the relative efficacy of different planting systems, and found higher yields for three crops in raised beds with a subsoil reservoir, called sub-irrigated planters, or in conventional beds with soilless medium, compared to a conventional bed with topsoil.

Using census data for the years 2002 and 2007, Rogus and Dimitri explore the number of farms and amount of farmland to see if the current interest in urban farming is measurable in the census data. They find that increases in urban farmland were more likely to take place in population dense, land scarce areas. Urban farms in the Northeast were more likely to produce vegetables, eggs and goats. That said, Rogus and Dimitri find little evidence of clustering of urban farms in the largest metropolitan statistical areas in the US.

The final three papers in the issue directly address the goals of urban farming, along with some challenges unique to the urban setting. Pfeiffer et al. acknowledge that while the primary focus of some farms might not be yields or product quality, all urban farms could benefit from accessible technical assistance so they could improve their production practices. Weissman's analysis of urban farming in Brooklyn reveals a tension between the goals of civic agriculture, such as improved food access, and the need to operate within the market, for example, to generate cash to pay for farming infrastructure. Cohen and Reynolds' paper, an assessment of urban farming in New York City, calls for a realignment of the goals of urban farms with available resources. Echoing a theme brought up by DeLind in the first paper of this themed issue, they argue that while urban agriculture has the potential to undo social inequities, the existing system may provide unequal access to resources for different racial or economic groups.

This set of papers explores different aspects of urban agriculture, and represents new directions in research. The interdisciplinary aspect of this research echoes the multiple purposes of urban agriculture, which aims to bridge food production with a myriad of aspects related to factors that include community, reshaping food systems, empowerment and awareness of agricultural production. At the same time, the literature calls for research into production methods and economic viability of urban farms.

Acknowledgements. Funding was provided by USDA-NIFA's Agriculture and Food Research Grant no. 2012-68006-30177.