

Land Use Planning Topics

Food Security and Food Sovereignty

References that have links are freely available on the internet.

Badami, M. G., & Ramankutty, N. (2015). Urban agriculture and food security: A critique based on an assessment of urban land constraints. *Global Food Security*, 4, 8-15.

Urban agriculture (UA) is promoted because of its contribution to food security and poverty alleviation. A considerable literature highlights these benefits, but there are also criticisms that they are overstated. We review these divergent perspectives and assess the potential for UA to contribute to urban food security in different regions, based on a low threshold of urban land required to grow the daily vegetable intake for the urban poor. We find that UA is feasible in these terms in high-income countries, but its potential is low, except in the most optimistic scenario, in low-income countries, where it might be most useful. We conclude that UA can only make a limited contribution in achieving urban food security in low-income countries.

Barthel, S., & Isendahl, C. (2013). Urban gardens, agriculture, and water management: Sources of resilience for long-term food security in cities. *Ecological Economics*, 86, 224-234.

Food security has always been a key resilience facet for people living in cities. This paper discusses lessons for food security from historic and prehistoric cities. The Chicago school of urban sociology established a modernist understanding of urbanism as an essentialist reality separate from its larger life-support system. However, different urban histories have given rise to a remarkable spatial diversity and temporal variation viewed at the global and long-term scales that are often overlooked in urban scholarship. Drawing on two case studies from widely different historical and cultural contexts – the Classic Maya civilization of the late first millennium AD and Byzantine Constantinople – this paper demonstrates urban farming as a pertinent feature of urban support systems over the long-term and global scales.

Beeby, J., Moore, S., and Joyner, S. (2010). *Climate Change and Grow Biointensive*. Willis, CA: Ecology Action.

Our current food system is responsible for 19%–29% of global greenhouse gas (GHG) emissions attributable to humans.¹³ Conventional intensive tillage and conventional fertilizer usage need to be minimized. Livestock production needs to be minimized. We must increase our crop production on our currently available agricultural land, and reduce or halt deforestation. How can we do these things and still feed ourselves and our growing population? GROW BIOINTENSIVE® offers some real solutions.

Berezan, R. (2010). **Edible forest gardens: A perennial agriculture alternative**. *The Canadian Organic Grower*, (fall). 18-23.

Berezan, R. (2010). **On a wing and a prayer: The urban chicken-keeping movement takes flight**. *The Canadian Organic Grower*, (spring). 12-17.

Berezan, R. (2007). **The edible landscape: An urban farming renaissance?** *The Canadian Organic Grower*, (fall). 32-36.

Chappell, M. J., Wittman, H., Bacon, C. M., Ferguson, B. G., Barrios, L. G., Barrios, R. G., ... & Soto-Pinto, L. (2013). **Food sovereignty: An alternative paradigm for poverty reduction and biodiversity conservation in Latin America.** *F1000Research*, 2.

Strong feedback between global biodiversity loss and persistent, extreme rural poverty are major challenges in the face of concurrent food, energy, and environmental crises. This paper examines the role of industrial agricultural intensification and market integration as exogenous socio-ecological drivers of biodiversity loss and poverty traps in Latin America. We then analyze the potential of a food sovereignty framework, based on protecting the viability of a diverse agroecological matrix while supporting rural livelihoods and global food production. We review several successful examples of this approach, including ecological land reform in Brazil, agroforestry, milpa, and the uses of wild varieties in smallholder systems in Mexico and Central America. We highlight emergent research directions that will be necessary to assess the potential of the food sovereignty model to promote both biodiversity conservation and poverty reduction.

de la Salle, J. & Holland, M. (Eds.). (2010). *Agricultural urbanism: Handbook for building sustainable food systems in 21st century cities*. Faringdon, UK: Libri Publishing.

Taking sustainable food systems far beyond community gardens and local farms, this guide, compiled by some of the most innovative leaders of the agricultural urbanism movement, envisions much larger networks that include food-processing businesses, organic-food wholesalers, and many kinds of training programs. Outlining key strategies for creating food precincts in towns and cities, the discussion describes ways to grow produce all year round and unify urban and rural life in innovative ways.

Desmarais, A. A., & Wittman, H. (2014). Farmers, foodies and First Nations: Getting to food sovereignty in Canada. *Journal of Peasant Studies*, 41(6), 1153-1173.

This article explores the various meanings of food sovereignty developed by distinct actors in Canada to better understand existing challenges, tensions, convergences and divergences in developing a national movement for food sovereignty. It begins with some theoretical reflections on food sovereignty that have informed our analysis of food sovereignty movements in Canada. It then focuses on how food sovereignty is manifested in Canada by exploring how three distinct sectors of society — farmers, foodies, and First Nations — use food sovereignty discourse. It then critically assesses how the “unity in diversity” principle of food sovereignty functions in the Canadian context, paying particular attention to the policy implications of debates about the meaning of food sovereignty.

France, R.L. (Ed.). (2016). *Integrated urban agriculture: Precedents, practices, prospects*. Faringdon, UK: Libri Publishing.

Intended as a “one stop shop” of a veritable who’s who of leading urban agriculture authors and scholars, this book brings together seventeen contributions on the design, development, science, and society of the rapidly expanding, multi-disciplinary field.

Frye, A. L. (2007). *Insights from the edge: farmers' perspectives on agricultural viability near urban centres* (Doctoral dissertation, University of British Columbia).

The goal of this research is to help improve farmland management by providing information with which to update planning and land valuation tools. Specifically, the objective was to assess factors that influence the viability of farmland on the urban edge and expand the criteria by which agricultural land is valued. To do this, interviews were conducted with 29 farmers in British Columbia.

Lewis, D. A. (2012). *Constructing local food systems: land and livelihoods in the Bella Coola Valley* (Doctoral dissertation, University of British Columbia).

This dissertation contributes a case study of the agricultural food systems in the Bella Coola Valley in British Columbia, framed by the question, 'how do we feed ourselves'. The research approach was a combined historical analysis and university-community partnership. The university-community partnership achieved the following main objectives during fieldwork in the Bella Coola Valley: we identified the biophysical resources for sustainable agriculture, surveyed current local food production, and explored the potential for increasing participation in agricultural production.

Lin, B. B., Philpott, S. M., & Jha, S. (2015). **The future of urban agriculture and biodiversity-ecosystem services: challenges and next steps.** *Basic and applied ecology*, 16(3), 189-201.

Urban agricultural (UA) systems appear in many forms – from community farms and rooftop gardens to edible landscaping and urban orchards – and can be productive features of cities and provide important environmental services. As highly managed plant communities, UA can exhibit high levels of biodiversity, often exceeding that of other green space areas within the city. Additionally, it is likely that variation in vegetation cover, diversity, and structure influence not only the biodiversity in UA, but also the quantity and quality of ecosystem services supported by such systems. The biodiversity and ecosystem services (B&ES) of UA can have potentially large societal and environmental benefits for cities, such as enhanced food security, air quality, and water regulation. Yet few studies have synthesized knowledge regarding UA vegetation management impacts on the quantity, quality, and stability of B&ES provided. This article presents the first survey of the existing research on the characteristics of UA management and their potential to support ecosystem service delivery.

Mansfield, B., & Mendes, W. (2013). Municipal food strategies and integrated approaches to urban agriculture: Exploring three cases from the global north. *International Planning Studies*, 18(1), 37-60.

A municipal food strategy is an official plan or road map that helps city governments integrate a full spectrum of urban food system issues within a single policy framework including food production (typically referred to as urban agriculture (UA)), food processing, food distribution, food access and food waste management. This exploratory article examines factors that may affect the capacity of local governments in three global north cities to develop and implement

their respective food strategies. It goes on to ask whether food strategies may enable UA, as the part of the food system that to date has garnered the most attention in both research and practice.

Mougeot, L. J. (2000). **Urban agriculture: Definition, presence, potentials and risks, and policy challenges**. *Cities feeding people series; rept. 31*.

A fuller integration of UA into the urban eco-system requires that urban planners, public health and environmental management actors join in with others committed so far. Areas of intervention at the community, city, national, and international levels are identified, where more efforts should concentrate relative to recent progress. More needs to be done by actors on the national and internal planes that will help communities and cities to capitalize on their collective experience and to integrate UA into the city organism in a fairer, more viable and sustainable way.

Porter, E. R. (2006). **Integrating the urban-agricultural edge: An exploration of new ruralism in South Delta** (Doctoral dissertation, University of British Columbia).

Urbanization is eating our foodshed. While policy-level attempts to address agricultural land conversion focus primarily on the preservation of agricultural land and urban containment, few solutions have been explored for the edge - where the two meet. Developed at the regional scale of land-use planning, present-day strategies are generally characterized as prescriptions for land-use conflict mitigation and the resultant places - or placelessness - is largely defined by the segregation and/or buffering of residential development from agricultural land. This project examines the alternative strategy of integration at the urban-agricultural edge, based on the articulation of agrarian values and the ideas presented by 'new-ruralism.' The application of these principles to the Southlands property in Tsawwassen, British Columbia, serves as a test case to explore strategies for the re-integration of the urban-agricultural edge, the development of agriculturally integrated neighborhoods and the use of development as a mechanism for the transformation of our local food system.

Richardson, J. M. (2010). **Foodshed Vancouver: Envisioning a sustainable foodshed for Greater Vancouver** (Doctoral dissertation, University of British Columbia).

This study explored assessment methods for sustainable foodshed design. A sustainable foodshed was defined as a regional form that meets local food needs, is energetically productive, and is ecologically and socially resilient. Food system energy inputs were measured through a life-cycle assessment of production, distribution, processing, and nutrient cycling inputs to determine the food system energy balance for Greater Vancouver's hypothetical foodshed.

Schutzbank, M. H. (2012). **Growing vegetables in Metro Vancouver: An urban farming census** (Doctoral dissertation, University of British Columbia).

Resilient localized food production systems must be economically, socially, and environmentally sustainable to succeed in a changing environment. Research on urban agriculture has largely focused on community gardens and their social benefits, leaving little known about entrepreneurial urban farms. This study examines the business models and economics of Metro Vancouver's urban farms through a newly developed tool, the 'Urban Farming Census.' The use

of this semi-structured interview tool revealed revenues, costs, financing, and sales models of urban farmers as well as their community connections and benefits. The Urban Farming Census was applied during the 2010 and 2011 growing seasons, capturing the first attempts by Vancouver's urban farming organizations growing sustainable businesses.

Smith, I. H. (2016). **From cultivation to consumption: linking urban agriculture, nutritional sciences, environmental sciences, and telehealth to food deserts and the social determinants of health.** *Journal of Agriculture and Environmental Sciences*, 5(1), 20-24.

Specht, K., Siebert, R., Hartmann, I., Freisinger, U. B., Sawicka, M., Werner, A., ... & Dierich, A. (2014). **Urban agriculture of the future: an overview of sustainability aspects of food production in and on buildings.** *Agriculture and human values*, 31(1), 33-51.

This study uses the framework of sustainability to understand the role of ZFarming in future urban food production and to review the major benefits and limitations. The results are based on an analysis of 96 documents published in accessible international resources

Tornaghi, C. (2014). **Critical geography of urban agriculture.** *Progress in Human Geography*, 38(4), 551-567.

Urban agriculture is a broad term which describes food cultivation and animal husbandry on urban and peri-urban land. Grassroots as well as institution-led urban agricultural projects are currently mushrooming in the cities of the Global North, reshaping urban landscapes, experimenting with alternatives to the capitalist organization of urban life and sometimes establishing embryonic forms of recreating the Commons. While this renewed interest in land cultivation and food production is attracting increasing interest in a wide range of disciplines – from planning to landscape and cultural studies – it remains a very marginal and almost unexplored field of human geography. Nonetheless, beyond the rhetoric of sustainability and health, urban agriculture raises several relevant questions of interest for a critical geographer. Starting by drawing a map of concepts and theories available in an interdisciplinary literature, and highlighting fields of possible inquiry, this paper aims to define the scope of and an initial agenda for a critical geography of urban agriculture.

Links to Resources about Urban Agriculture

(thank you to the **Urban Farmer**, BC)

City Farmer - Vancouver, BC

A fantastic clearinghouse for the global urban agriculture movement.

Agricultural Urbanism - Vancouver, BC

The Edible Schoolyard Project - Berkeley, CA

Food Not Lawns International

Growing Power - Milwaukee, WI

International Development Research Centre - Ottawa, ON

John Jeavons, Ecology Action - Willits, CA

Lifecycles - Victoria, BC

Resource Centres on Urban Agriculture and Food Security (RUAF) - The Netherlands

The Rooftop Gardening Project - Montreal, QC

SPIN Farming - Saskatoon, SK

The Stop Community Food Centre - Toronto, ON

Urban Agriculture Hub - Victoria, BC

Urban Agriculture News

The Vertical Farm Project

Links from **Alberta Food Matters (Growing Food Security in Alberta Network)**

Dietitians of Canada

BC Food Systems Network

The Centre for Urban Agriculture in Alberta

Food Matters Manitoba

Food Secure Saskatchewan

Food Security Network of Newfoundland and Labrador

Growers of Organic Food Yukon

Nova Scotia Food Security Network

PEI Food Security Network

QC Food Sovereignty Coalition

Sustain Ontario

Canadian Assoc. for Rainwater Management

Watershed Resources

Organic Alberta

Young Agrarians Alberta

Farm to Cafeteria Canada

Farm to Cafeteria Strategic Plan

Lacombe EcoVision Project

Little Green Thumbs

Rocky Acres School - Fort Vermillion