

Beyond Food Security: Urban agriculture as a form of resilience in Vancouver, Canada

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The more people become sequestered in cities and insulated from ecological engagement, the greater the danger is that they will lose sight of the mounting economic, social and ecological burden that we are imposing on the earth's resources and systems.

In the context of examining the role of urban agriculture in building resilient cities, our research at the *Institute for Sustainable Horticulture* in British Columbia, Canada, attempts to answer the question: *How can urban and periurban agriculture be tied directly to the economic, social and ecological vitality of our cities?* We believe the answer lies in part in building sustainable bio-regional, agri-food systems, as a necessary pre-condition for creating food sovereignty.

The metropolitan Vancouver region of south-west British Columbia (B.C.), Canada, is an amalgamation of 21 cities and municipal districts, encompassing 282 million ha, including 41,000 ha of farmland, with a population of 2.1 million. Metro Vancouver has a long and rich agricultural heritage and remains an important part of the province's agriculture sector. The region currently generates 25 per cent of B.C.'s gross farm receipts from 14 per cent of its agricultural land base. Smaller, family owned and operated farms still dominate (88 per cent are smaller than 26 ha), but the number of farms has declined by 25 per cent in the last 10 years. The average farmer is 55 years old, and farmland has become prohibitively expensive for those who are interested in starting out.

Efforts to promote the expansion of urban agriculture in this region range in scale from grassroots activism (such as community gardens and farmers' markets), through design parameters (such as green roofs and edible landscaping), to public policy initiatives (such as the City of Vancouver's *Food Policy Council* (Mendes, 2006), *Sustainability Charters* proclaimed by several municipalities, Metro Vancouver's *Regional Growth Strategy*, and the *Agricultural Land Reserve* maintained by the Government of British Columbia). At the same time, however, there is a growing awareness in our region that the combined effects of peak oil/peak water, climate change, rapid urbanisation and continued population growth have the potential to undermine the resilience of our cities, threaten our food security and ultimately not result in a sustainable agri-food system for the Metro



A vision of the Farmscape Vancouver
Photo: Michael Marrapese

Vancouver region. Evidence of the convergence of these forces was felt in 2008 when the overall inflation rate was 1.2 per cent while food costs in general rose 7.3 per cent, cereal products 12.4 per cent and fruits and vegetables a staggering 26.9 per cent.

The Agricultural Land Reserve (ALR) is a precedent-setting provincial regulation intended to conserve agriculture land and enhance agriculture in British Columbia. For the last 30 years it has been a de facto urban growth boundary, which has resulted in a metropolitan area that is significantly more compact than most in North America. While this has been a positive outcome, ALR land values have risen to CAD\$ 250,000 or more per ha - a cost that cannot be supported by typical farm receipts. Urban agriculture and related efforts to support the ALR are necessary to increase sustainability and contribute to resilience in British Columbia, but they are not sufficient to achieve full sustainability and reconnect urbanity to its roots in the land.



Peri-urban agriculture land in Metro-Vancouver
Photo: Graham Osborne

In Canada, municipalities have a pivotal role to play in laying the foundations for a sustainable 21st century urban-centred society. Resilience and adaptability are examples of the type of potentials that we believe to be essential for creating sustainable futures for our cities and their associated agricultural lands. Urban agriculture, defined to include farming in and around cities for and by residents of those cities, can provide the comprehensive social, environmental and economic integration needed to create a sustainable agri-food system at the municipal scale.

The B.C. Ministry of Agriculture and Lands' recent publication: *British Columbia Agriculture Plan: Growing a Healthy Future for B.C. Families* calls for enhanced community-based/ local food systems that ensure food security through diverse local production, environmental stewardship / climate change mitigation and linkages across the urban/agriculture divide. At Kwantlen Polytechnic University, the Institute for Sustainable Horticulture (ISH) is responding to this call by making the advancement of urban agriculture and food sovereignty a programmatic priority. The institute is engaging community partners in applied research and using the land base to create living laboratories. Two examples can serve to illustrate our emergent focus.

We are promoting a dialogue across Metro Vancouver through which citizens, NGOs, governments and institutions of higher education can build partnerships and explore ways to create urban-focused, bio-regional agri-food systems that can, in tangible and substantive ways, connect urbanites to agriculture and contribute to regional food self-sufficiency. In a recent publication, *Agricultural Urbanism and Municipal Supported Agriculture* (2008), we advance our view of urban and peri-urban agriculture as a mechanism whereby municipalities can make municipally owned lands available, at affordable cost, for agriculture enterprise. In this approach, municipalities would procure lands to facilitate the development of an agri-food sector that serves its citizenry and thereby fosters

increased food security. A companion paper, *Agriculture on the Edge* (2009), addresses the central challenge of the increasing value of land in the region, and the pressure this creates for the remaining viable agricultural lands that face the continuous threat of encroachment by urban sprawl. The proposed solution is to reserve part of the rural-urban fringe land for agriculture, and to seek to maximise the value of this land. A new zoning designation would transfer a portion of this land to public ownership (to be held in perpetual trust for agriculture only). In addition the value of non-agricultural land use could be used to support this new urban agriculture infrastructure. To model this concept, a partnership of a local developer, broad community stakeholders, and ISH have designed a plan for a model community - a high density, 5000 person development - in which agriculture (on 100 designated ha) will be central to community economics, sustainable design and land use governance.

Our second example involves a partnership between ISH, the City of Richmond and two Richmond area NGOs. Together they plan to develop the **Richmond Farm School** in recognition of the fact that farmers in our region are aging and that developing urban agriculture in Metro Vancouver will require many knowledgeable, skilled and dedicated people. The objective is to prepare a new generation of urban farmers to engage in urban agriculture enterprises including production, processing, adding value, distribution, marketing and sales. The school will also develop the participants' leadership capacity to advance urban agriculture as an element of sustainable cities. This partnership and the land access programme are unique in North America.

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