Carrot City: Designing for urban agriculture

Resilient cities and buildings that work with nature instead of against it have to be designed by professionals who have been trained in and are focused on sustainability. The landmark Carrot City show at Toronto’s Design Exchange brought designers, planners, architects and the general public up-to-date on developments in designing for urban agriculture.

Green vision in the stock exchange
Despite the fact that food production, processing and consumption together constitute perhaps the most basic aspect of resilience for human communities, recognition of this has been slow in the design and planning professions. This is now starting to change. For Toronto it all started when a few students at Ryerson University chose buildings that incorporated urban food production as subjects for their architecture classes in 2006. The idea really took off and the core group linked up with others in schools of architecture, planning, design and landscape architecture across the city, eventually across the country, and even in other parts of the world.

“Carrot City, Designing for Urban Agriculture” is an exhibition that ran at the Toronto Design Exchange throughout March and April of 2009, and was curated by June Komisar, Mark Gorgolewski and Joe Nasr of Ryerson University. It brought the vision of a green city (in which vegetables are grown and even livestock are raised) into the heart of Toronto’s financial district, symbolically perhaps into the old Stock Exchange building. There are also plans to show the exhibition elsewhere and to produce a book. The exhibition showed how increasing interest in growing food within the city, supplying food locally, and food security in general, is changing urban design and built form. Projects in Toronto and other Canadian cities illustrated how the cities and buildings are changing, while relevant international examples showed how ideas from other countries can be integrated into the Canadian experience. The Carrot City collection of displays is divided into four parts: city, community, building (home or work) and products.

Imagining the productive city
Despite the historical importance of food in cities, food production, distribution and related issues represent a new area of study for the building professions. Re-imagining the buildings and spaces within the city empowers designers to develop exciting and imaginative new proposals for what a future “productive” (and more resilient) city may look like.

The city level part of the exhibition looked at transformations of urban space that go beyond particular sites, pointing to new ways of imagining urban areas. An influential concept explored here was the idea of “Continuous Productive Urban Landscapes” [also see UA-Magazine no. 15], which link underused spaces such as riverbanks, median strips, public parks, schoolyards and boulevards for continuous urban food production. Large-scale public planning initiatives in Canada that incorporate urban agriculture within a larger master plan include the Mayor’s Tower Renewal Project and Downsview Park in Toronto, and the Olympic Village of South East False Creek in Vancouver. The ambitious thinking...
reflected in some of the concepts presented, such as Vertical Farms and Pig City, are purposely provocative, but other projects such as “Making the Edible Landscape” demonstrate that these ideas are not merely speculative but can be realized.

Food production in communities
The process of designing for food production in, and with, communities has the potential for strengthening community cohesion. Yet the emerging alternative food movement in Canada has only just begun to take advantage of the possible contributions that designers and the design process can offer. The built environment and food policy meet at the point where architects and landscape architects incorporate farmers’ markets, greenhouses, edible landscapes, living walls, permeable paving, green roofs, and community gardens into architectural programmes. Such connections between food issues and built form have the potential to transform not only food production and distribution, but basic assumptions about the programming required in the design of buildings and urban spaces.

This part of the exhibit presented projects, ranging from community greenhouses to community food centres, that house initiatives such as teaching people to grow food, helping to develop and manage allotment and community gardens, assisting in the development of food-centred micro-enterprises and supplying food banks and soup kitchens with fresh produce they otherwise lack. Neighbourhood-scale initiatives such as Growing Home in Chicago and Growing Power in Milwaukee have shown how urban gardening can have the power to transform communities through educational initiatives, back-to-work programmes, improved access to affordable and healthy food, and the creation of a focal point for the community. The exhibition showed how designers can play their part in this transformation.

Designing buildings for food at home and at work
From restaurants to hotels, from condominium complexes to row houses, the projects in this part of the exhibition illustrated how to get food production closely linked to where it is processed and consumed. Since design is the integration of many variables, buildings can provide a variety of benefits, including thermal performance improvements from productive green roofs and green walls that act as insulation and buffer layers. Chefs can offer fresh herbs in winter from their own greenhouses, and families can have vegetables from their front yard or rooftop that taste better than anything they can buy in the store.

Compelling ideas presented in this part of the exhibition included the integration of food production in alternative spaces, such as co-housing, orchards and allotment gardens on rooftops, and community gardens in laneways. All home and work spaces were shown to be potentially productive, from front lawns to flat roofs. But this was not all “pie in the sky”.Alongside the student and other visionary projects were examples of buildings already in use and under construction. Toronto is already home to many green roofs and buildings and it has now adopted a green roof policy, by passing a by-law that requires such roofs on new buildings of most types.

Product design for urban agriculture
Urban agriculture requires a toolbox of objects, technologies, systems and components that can enable food production to take place in urban locations or can incorporate it into building design. Shown in this section of the exhibit were designs from around the world, either proposed or currently in use, that foster urban agriculture. The term “products” describes ideas that are not site specific but can be applied in various locations and situations. These include technologies such as living walls, green roofs, planter systems, chicken coops, beehives, vertically integrated greenhouses, and mobile support structures. Several products that were shown tackle the problem of urban soil remediation through container gardening. Other designs solve the problem of small growing spaces or deal with existing roofs that cannot support heavy planters. While some of these items are based on sophisticated principles and state-of-the-art techniques, many use off-the-shelf components that provide creative urban agriculture solutions for a variety of challenges.

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