

With the requirement of fifty percent of the site area having to be green, grade (street-level) growing and rooftop gardens became key. Every Millennium Water parcel includes opportunities for urban agriculture except Parcel 4, which has patios well over 100 square feet. The city's formula for urban agriculture is that there must be 24 square feet of gardening space for 30 percent of the units whose balcony or patio is under 100 square feet. This means approximately 1,000-1,500 square feet of urban agriculture per parcel (and more for non-market parcels), which translates into approximately 20-30 twenty-four square foot plots per parcel.

Each building's strata council will manage how gardening plots will be allocated to residents. In non-market urban agriculture areas, there are communal crops where plots are not delineated and where everyone can harvest. The grade (street level) growing gardens are owned by the strata corporations but are publicly accessible.

"There needs to be an attitudinal shift," says Peter Kreuk. Initially, the developers were concerned about how urban agriculture would look. "The perception of urban agricultural areas as being 'weed patches' with timber retaining walls is changing. Developers are realizing that urban agriculture can be beautifully integrated into a garden's design."

Growing Veggies On Your Roof

Unlike growing produce in your backyard where there is at least a few feet of dirt, the soil depth on the roof gardens of the Olympic Village is 18 inches. "This soil depth should be plenty to grow your carrots," says Jennifer Stamp. However, it is important to note that the soil heats up faster when you have planting on roofs, due to a thinner soil profile and the concrete underneath. There is no irrigation system in the SEFC urban agricultural areas in part due to plumbing and health bylaws not allowing non-potable water for edible plant irrigation and in part because many gardeners are particular about watering their veggies. For each urban agricultural area, there are compost bins, hose bibs with potable water and a potting bench.



The SEFC Policy Statement set the stage for urban agriculture in SEFC. Its objectives were: "to establish clarity on the role food production should play in the development of a sustainable city and neighbourhood" and "to use urban agriculture and community gardens to assist in meeting other social, environmental and economic objectives in SEFC."

The City retained Holland Barrs Planning Group (now HB Lanarc) to look at the range of urban agricultural possibilities in a high-density site. In November 2002, the SEFC Urban Agriculture Study highlighted the importance of food-related activity and urban agriculture in the planning of a sustainable community. This study outlined a range of recommendations from community gardens and rooftop gardens to more complex systems such as on-site aquaculture and rooftop greenhouses. In March 2007, "Designing Urban Agricultural Opportunities for SEFC" provided more site-level detail.

The Merge Consultancy report (2003) summarized the SEFC urban agricultural study and proposed to move the following recommendations to satisfy the strategy of capacity building:

- Create community gardens that might be shared with the school while the school is in session
- Require edible landscaping capacity in building projects
- Create a Community Kitchen to encourage micro-food processors
- Provide educational programming for gardeners to improve the effectiveness of urban agriculture in SEFC
- Use stormwater/rainwater collection on site to provide irrigation water for edible landscaping
- Make provision for a farmers' market in the proposed site plan.

The challenges of implementing urban agriculture are numerous. Rob Barrs of HB Lanarc says, "The typical reaction to the idea of growing food in high-density areas is 'you've got to be nuts.' Food has largely been ignored by planners and designers until recently so the first challenge is overcoming the perception that this is a weird thing to do, and secondly, you're also competing for expensive real estate."

The green roofs and community demonstration garden within SEFC will showcase how to integrate urban agriculture and high-density living. Barrs remarks,

"I think we're 30 percent of the way there to the full potential of urban agriculture. I'm pretty pleased about what we got done and am grateful for those successes. The next challenge will be getting some research dollars to really understand how we integrate urban agriculture into closed-loop systems."

"SEFC has become a model for the rest of the community and a testing ground for how you do high density urban agriculture," says Barrs. "This project has educated the planning, design and building industry to include urban agriculture in their projects."

CHALLENGE

To municipal and building developers: to explore and facilitate the implementation of urban agriculture and to support the provision of retail and amenity space that supports the distribution of locally grown produce.