

Emerald Hills Urban Village

FOUNDATION RESEARCH BULLETIN

Design Centre for
Sustainability at UBC

No. 6
December, 2006

FOOD

1.0 Why is Food a key theme?

As acknowledged in the Strathcona County Municipal Development Plan, "Farming communities are facing many difficult challenges, which in turn threaten the future of agriculture not only in Strathcona County, but throughout the Country. The cost of such things as fuel, fertilizer, chemicals, equipment as well as the cost of living, have steadily been outstripping the return on the commodities that farmers produce."¹

"Agriculture contributes greatly not only from an economic perspective, but it adds significantly to the social, environmental, and aesthetic character of the community. Agriculture is and should continue to be an important part of the diversity that is Strathcona... No specific tool will create a viable longterm agriculture community. Tools must be used comprehensively, with the choice dependent on local circumstances. It requires the joint action of many participants."²

While the agricultural industry has made progress towards reducing its environmental impact, the transportation of food can make a significant negative impact on the environment. Foods from the grocery store typically have travelled between 2,500 and 4,000 kilometres.³ A diet based on these imported foods can require four times more energy and generate four times more greenhouse gases than the same diet based on local production.⁴ Supporting locally grown food products can reduce the carbon footprint associated with transportation.

Support for local food production also ensures a sustained agricultural base in the community, which provides fresh, seasonal food, promotes the local economy and provides employment to residents. Progressive grocery outlets are already making an effort to source local foods. Other opportunities for local food production and distribution include edible landscaping, community or allotment gardens, educational gardens and farms, local farms both within and around the community, community kitchens and micro-processing facilities, farmers' markets, and food buying clubs.

Pilot projects have demonstrated that local agricultural systems can also support municipal infrastructure. Organic wastes account for 25 to 40 percent of municipal waste streams, and often end up emitting the greenhouse gas methane from landfills.⁵ An off-site windrow system or an on-site in-vessel composter can recover and use these wastes

¹ Strathcona County. 2006, p 14-1.

² The Future of Agriculture. 2003, p. 34-35.

³ Halweil. 2002.

⁴ Ibid.

⁵ Recycling Council of BC, Organics Working Group. April 2000.

to amend soils in agricultural production. Agriculture-based industrial systems can use wastes to produce both food and energy, as well as treat municipal wastewater.

2.0 Why is food important to Emerald Hills Urban Village?

The food system can be generally understood in five stages: production, processing, distribution, consumption, and waste recovery. Several factors for food sustainability are already in place in Strathcona County:

Production and Processing

Eighty-percent of the county's land base is in agriculture, and local agricultural production and processing is basic to the fabric of the community. The local knowledge and resource base for agricultural production and processing is very strong.

Distribution and Consumption

Some initiatives exist which attempt to promote the value of local food products, such as the AAFRD's 'Dine Alberta' local food directory, the AAFRD's Regional Cuisine program, and Sherwood Park's three Farmer's Markets (there is also a winter Farmer's Market that is just starting).

Organic Waste Recovery

Strathcona contributes to Edmonton's state-of-the-art composting facility. Sewage bio-solids and residential organic wastes are composted and sold as a soil amendment, and liquid sewage is recovered for fertilizer. Strathcona also has a home composting program which distributes low-cost bin composters for residences.

These conditions create an exceptional opportunity for the Emerald Hills Urban Village to contribute to food sustainability both within the community and in the region by focusing on the social and economic benefits of local food production and processing, and on the opportunity to source local food products for distribution:

Social Benefits

Food growing and sharing in a community creates many opportunities for social inclusion and networking. Community gardens, community kitchens, food clubs, gardening clubs, and school gardens are all examples of activities in the public realm that promote learning and social exchanges that are uniquely capable of engaging people of all ages and backgrounds.

Economic Opportunity

Value added food products and food services are a growing industry in Alberta and Strathcona County. In an urban residential area, this opportunity can be engaged by small businesses such as micro-processors, caterers, and restaurants that source local food.

Local Food Distribution

Local foods can be sourced through a variety of mechanisms such as food buying clubs and contract production for restaurants or farm shareholders (CSA's). This direct marketing supports area farms and encourages farmland protection. The displacement of imported food helps reduce the greenhouse gas emissions and energy use associated with transportation.



Figure 1: Garden Block - Mole Hill, Vancouver. This multi-unit mixed-use block includes a lane, parking, a cross-block greenway, and community garden plots.

3.0 How can EHUV impact on this theme?

Food production and distribution is a global industry that sustainable developments can engage locally. Design and programming strategies can create the spatial framework to support some amount of local food production and processing. Economic and social programs can support nearby farm operations and food processors. Once in place, this framework also provides the capacity for a community to respond to future changes in the food and transportation economy, and to take further steps towards sustainability.

3.1 What strategies are relevant for EHUV?

Community Gardens

Community Gardens are areas of land that are parcelled out to individual gardeners. The small parcels are most often used to grow food or flowers. Community gardens can be located in a multi-family development with plots allocated to tenants, or they can be located in a park with plots allocated for the area residents. They are generally managed by a club or non-profit group.

Design Measures

Area ranges from 20-2000 sq m or more, planning targets range from 6 to 20 plots per 1000 people. Gardens can be designed and located to create strong edges or gateways to public spaces and corridors, but require some protection from vandalism. A shared community greenhouse can be included in the site plan.



Figure 2: Garden Village - Village Homes, Davis CA. This 28 ha/240 unit development includes orchards and community gardens. The community produces 24% of its fruit and vegetable needs (Francis, 2003).

School and Demonstration Gardens

These gardens are located in or near schools or community centres and are used as an outdoor classroom. Curriculum developed around these gardens can include a range of subjects including math, biology, and nutrition.

Design Measures

Area ranges from 10-1000 sq m. School gardens often require controlled access.



Figure 3: Local Cuisine - Farm fresh local foods are a valuable ingredient for restaurants.

Community Farms

Community Farms are small farms located within or on the edge of an urban area, and may be understood as an agricultural park. Community farms can include community gardens, school gardens, and demonstration gardens. They are often owned and managed by the municipality, school district, or a non-profit group, and generally focus on education and training programs. Some larger community farms also rent allotments or fields for new farmers to enter

the market or grow specialty crops.

Design Measures

Minimum area is 300 sq m. Can be located near other civic services or as a land use buffer between urban and agricultural lands.

Private gardens: from backyards to rooftops

Private gardening space is a valuable amenity that is often displaced by multi-family housing. Backyards, shared yards, balconies, and rooftops can all be designed to support food gardens by providing the space on the ground or the structural requirements on the balconies and rooftops.

Design Measures

Backyard space can be maximized by reducing front yard setbacks. Multi-family developments should allocate garden space for each unit during site planning. Gardens should have maximum sun exposure. Rooftop and balconies require sufficient load bearing capacity and an outdoor water spigot.

Urban Micro-Industrial Production

Many forms of small-scale, intensive food production exist which can fit into the urban landscape. Bioaponics, for example, combines tank-based aquaculture with hydroponics to create a closed-loop system in which the nutrient-rich water created by the fish is used to feed the plants, and the plants partially filter the water for reuse in the fish tank.

Community Kitchens

These are small, commercial grade kitchens located in a community centre. They can be used to provide nutrition and cooking programs, food preservation classes, and community meals. They can also be rented out for events, to caterers, or to small processors.

Design Measures

Typical sizes range from 40-100 sq m. These are usually attached to a dining hall.

Kitchen Incubators

These are larger commercial or industrial grade kitchens which are shared between multiple food processing tenants. The shared facilities create opportunities for small businesses to enter the market. This is a measure that Strathcona County as a whole should investigate.

Design Measures



Figure 4: Farmers Markets - This is one of many methods of distribution that directly connect residents with local farm products.



Figure 5: Classroom Kitchen The Edible Schoolyard at King Middle School in Berkeley CA. Community cooking facilities provide a venue for learning, social interaction, and small enterprise.



Figure 6: Good Business - City Market, Burlington VT. Small businesses can support local food. This 17,000 square foot market, which includes catering, a bakery, and deli, sources 75% of its products locally.

Kitchens range in size from 40-150 sq m.

Farmer's Markets

A farmer's market is a weekly or monthly event, often located in a parking lot or park, where local farmers and food processors can rent a stall and sell their products. These events often include local artisans and are animated by musicians or other performers.

Bio-energy

Agriculture also can play a role in community energy systems. Small scale systems such as CHPs (community heat and power), powered by biogasifiers, can use chipped wood for fuel.

4.0 What policies and/or programs will add value?

Edible Landscaping

Landscaping in the public realm can include fruit or nut trees. These are generally planted well back from streets and are managed by a gardening club or other community group.

Community Supported Agriculture, direct purchasing, and food buying clubs

These are purchasing arrangements made between farmers, distributors, and community groups or individual consumers which attempt to support local farms and reduce food prices by minimizing the chain of distribution.

5.0 What other resources are available?

Foundation Research Bulletins:

#8 Waste. For more information on composting.

Community Garden Network of Edmonton and Area Resource Manual. December 2002.

www.gov.edmonton.ab.ca/community_gardens

Dine Alberta

Directory of Alberta-grown farm products by type produced by the Government of Alberta.

<http://www.agric.gov.ab.ca/app68/dinealberta>

Sherwood Park Farmer's Market

Includes a local farm products directory.

www.sherwoodparkfarmersmarket.ca

Strathcona County Strategic Plan

- goal "To provide opportunities for healthy lifestyle choices"
 - goal "To maintain a viable agricultural community in Strathcona County"
 - goal "To foster economic prosperity for residents and businesses" by "Seek[ing] businesses that provide local employment opportunities" and "Encourag[ing] local shopping and business purchases"
- www.strathcona.ab.ca/Strathcona/Departments/Corporate+Planning/Strategic+Plan.htm

Strathcona County Future of Agriculture report

- suggests that specialty and value added agriculture is growing market that would fit well in the Strathcona context.
 - notes that Strathcona's agricultural knowledge and resource base is very strong.
- <http://www.strathcona.ab.ca/Strathcona/Departments/Corporate+Planning/Future+of+Agriculture+Report.htm>

Strathcona County Business Directory
Includes farm services and products
www.knowledgechannel.com/strathcona/business/#product
Strathcona County Composting Program
Promotes backyard composting.
www.strathcona.ab.ca/Strathcona/Departments/Utilities/Waste+collection+and+recycling/Backyard+composting/default.htm
Southeast False Creek Urban Agriculture Strategy
Reviews strategies for including food and agriculture in urban planning and design
www.city.vancouver.bc.ca/commsvcs/southeast/background/pdf/urbanagr.pdf

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<http://www.strathcona.ab.ca/Strathcona/Departments/Planning+and+Development+Services/Zoning+and+planning+documents/Municipal+Development+Plan/Municipal+Development+Plan+review/Draft+2+Municipal+Development+Plan.htm>

Photo Credits

Figure 1: VanMap.

Figure 2: Michael Corbett.

Figure 3: Claire Tebbs.

Figure 4: Claire Tebbs.

Figure 5: State of California.

Figure 6: www.citymarket.coop

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