Edible Landscapes refer to the visual, physical and social impacts of producing food on urban land. The report sheds light on the joys of growing one's own food, and its neighborhood impacts. Hopefully, it will also inform planners, city officials and architects about the potential for gardening on under-utilized urban land. First, the global impacts of these landscapes in different parts of the world are observed. Then observations and lessons from field-trips made to community gardens in Montreal are presented. Finally, social benefits, challenges and costs associated with growing food in the city are highlighted. For matters of simplicity, the report focuses on built forms, human interactions and neighbourhood impacts.

1

1.0 INTRODUCTION

RUNE KONGSHAUG

This report is a review of urban gardening for food and pleasure. It is about alternative use of urban land, and in particular its use for food production. People grow food or raise animals in cities for nourishment, extra income, or for the sheer joy of it. Urban gardens exist in distinct physical and organizational forms, and occur for various reasons. Research on the subject refers to all these phenomena as Urban Agriculture.

The subject matter is too vast to fully give justice in a small report to the diversity of individual approaches and anecdotes that could have been told. After a brief introduction to the subject of one semester (less than four months), our group of seven students suffered from information overload. Part of the challenge was cultural: Our team consisted of five Chinese nationals, one Indian, and one Norwegian; the gardeners we met with were both English and French speaking, and recent immigrants predominantly from South-East Asia. Sometimes we could not understand a word said, but we still received a useful demonstration of various gardening techniques, and we were always proudly offered a sample of the harvest.

Another culture shock was the multi-disciplinary nature of the project. The small scale of a plot, the seasonal and short-lived nature of a plant, at first seemed at odds with the architect's mind-set. At first we were looking in vain for an object to design. The architecture discipline does not consider growing and planting at the same level with the building of permanent structures. Indeed, some of us were asking ourselves why architects, urban planners and designers need to be aware of and familiar with planting and community gardening. An adjustment period was thus needed before we began to recognize what we were observing in front of us: the lasting and physical impacts of these little greens on the neighbourhoods and lives of people that we visited.

Project team members with gardeners in Le Mannais garden, Rosemont/Petite-Patrie, 2002.

While attempting to understand urban agriculture phenomena, the report provides many more questions than answers, especially regarding the links of urban agriculture with the peri-urban and rural areas. We have attempted to observe in detail how Montreal gardeners transform a vacant plot into an alternative green and living form: functional, aesthetically pleasing, and tasty! Also, to put our findings in perspective, we have grappled with the socioeconomic and cultural issues to understand the importance of these activities as either a necessity and/or for pleasure. Is it a worthwhile activity that officials and planners should encourage? We have compared our physical and on-site observations in Montreal with observations made by other scholars elsewhere in the world, hoping to shed light on similarities and differences that exist between food activities in cities, worldwide. Examples from Africa, Asia, North and South America, demonstrate Montreal's unique and privileged position and also firmly establishes that both richer and poorer city centers are increasingly involved in food production.

Again, from a designer's perspective, the most challenging element of this report is to view lettuce and chard on equal footing with brick and mortar. After all, a garden's value needs to be considered against other alternatives such as parking, housing, commercial development, roads, and parks for recreational use. Previous studies are quick to point out that urban agriculture is a contradiction in terms. True, in a conventional sense, food production is associated with rural, not urban areas. Urban centers are by and large dedicated to manufacturing, services and other commercial activities. At least theoretically, we expect urban open spaces to serve as roads or for recreational spaces of purely ornamental value. The modern city dweller is thought of as different from the farmer, and is expected to consume the foods produced and shipped from elsewhere. Most food in North America today is produced by "industrial agriculture" synonymous with mechanization, high yields, mono-cultures and export crops, which is considered to be a strictly "rural" activity. The phenomena of urban agriculture challenge these conventional industrial notions.

On behalf of the MCHG class of 2002-2003, I would like to thank Mr. Jean d'Aragon who was both patient and persistent with us during and outside of class; Mr. Mark Redwood, himself a McGill graduate of the School of Urban Planning, who as a Program Officer of IDRC is now instrumental in providing us with critical inputs and the means to continue our research; and Vikram Bhatt, our professor who had the vision and courage to lead us down this path.

1.1 WORLD VIEW
DEFINITIONS OF URBAN AGRICULTURE

Conventional wisdom predicts that rural populations will stay constant, while rapid urbanization and exponential population growth in cities will continue unabated. This could deplete our land's ability to produce sufficient foods and other resources, and cause world hunger and conflict over resources of various sorts.

The creation of edible landscapes, however, is often a popular and positive response contributing to food security, energy conservation, additional income, and a better quality of life. Our study begins by contrasting the phenomena of urban agriculture around the world with said development challenges.

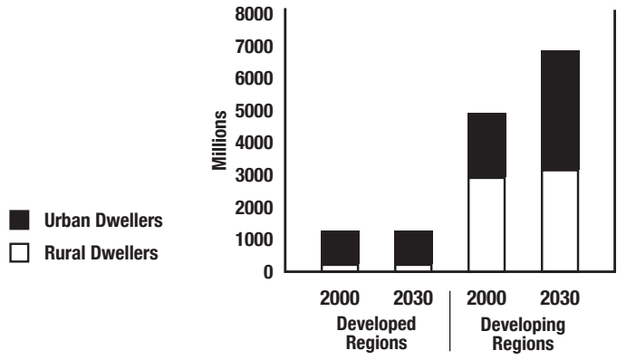

Table 1.1.1 Worldwide growth in rural and urban populations
Source: UN HABITAT, 2001.

DEFINITIONS OF URBAN AGRICULTURE

"Growth of food and nonfood plant and tree crops and the raising of livestock (cattle, fowl, fish, and so forth), both within (intra-) and on the fringe of (peri-) urban areas." (UNDP, 1996)

"An industry that produces, processes and markets food and fuel, largely in response to the daily demands of consumers within a town, city, or metropolis, on land and water dispersed throughout the urban and peri-urban area."
(Cropper, John 1996; Smit et al, 1996)

Urban agriculture refers to producing food and fuel within city or town areas directly for the urban market (including street vending and home consumption). The products are usually processed and marketed by the producers and their close associates. It includes: crop and animal production on roadsides, along railroads, in backyards, on rooftops, within utility rights of way, in vacant lots of industrial estates, on the grounds of schools, prisons and other institutions, etc.; aquaculture in tanks, ponds and rivers; orchards and vineyards; trees in streets and backyards, on steep slopes and along rivers; and the recycling and use of urban organic wastes (waste water and solid waste) as resources, i.e. converting open-loop, disposal systems in closed-loop systems."
(de Zeeuw, Dubbeling, Waters-Bayer, 1998)

"Farming and related activities that take place within the purview of urban authorities ... under the panoply of laws and regulations regarding land use and tenure rights, use of water, the environment that have been established and are operated by urban or municipal authorities. Urban agriculture takes place within certain boundaries which may extend quite far from an urban centre, while peri-urban agriculture takes place beyond that often geographically precise boundary, although its own boundary may be less well defined."
(Aldington, 1997)

Source: IDRC, 2005.

1.2 OUR LAND AND OUR FUTURE
CONVENTIONAL WISDOM AND PERCEIVED CHALLENGES

Exponential Urbanization and Population Growth

“The rural population will stabilize while urban populations will continue to grow. By 2050 we will have expanded to more than 10 000 million people and the global economy will have expanded 5 times over.”

From Hunger and Poverty

“More than 800 million people are chronically malnourished and 1 100 million live in absolute poverty. Just to feed everybody adequately, food production will have to double within about 30 years. But the shortfall in domestic cereals production in the developing world is expected to widen – from less than 100 million tons today to more than 250 million tons in the year 2025. Even if resources were adequate, many people would not have the resources to buy all the food they need.”

The Threat of Land Erosion and Water Shortage

“For thousands of years, people have modified, degraded and destroyed natural ecosystems. In 1950, some 115 million km2 of the Earth’s surface were undegraded, vegetated land. Just 40 years later, almost nine million km2 – an area as large as China – were classified as “moderately degraded”, with greatly reduced agricultural productivity. A further three million km2 were “severely degraded”, having lost almost completely their original biotic functions.”

Increasing Energy Costs

Due to high fossil fuels costs, mechanized agriculture and transport is out of reach for many of the world’s countries.

Structural Changes Due to War and Economic Crisis

“Population growth, competition for resources and the widening gap between rich and poor lie at the root of many social and political conflicts throughout the world. As many as eighty countries are affected by civil strife and political violence, while spending on weapons for “low-level” conflicts is estimated at up to $10 000 million a year.

Poverty and unemployment have spurred a mass movement of people from rural to urban areas – and from developing to developed countries – in search of a better life. More than 80 million people now live in foreign lands and an estimated two million emigrate permanently each year. Since 1970, the number of refugees has grown from 2.5 million to 20 million people.”

OUR LAND AND OUR FUTURE
NEW POSSIBILITIES AND URBAN LANDSCAPES

Spur Innovative and Alternative Uses of Urban Land

Urban, peri-urban and rural food-related activities are physically overlapping, making it difficult to draw a clear physical distinction between “urban” and “rural” Informal economies and alternative land use demonstrate how people can take charge of their own families’ future.

Towards Self-Sufficiency

We observe that local urban and peri-urban food networks emerge creating more or less self-sufficiency in the production of certain food staples. Cities are becoming less reliant upon the industrial production of export crop and mono cultures. Food security is valued less in terms of hard currency, and more in terms of taking control of local means of production of a great variety of fresh quality foods for day-to-day consumption.

Causes Citizen Activism and Ecological Land Use

Faced with environmental challenge, people in both rich and poor countries integrate sustainable practices to manage the future productivity of their lands.

Eliminates the Need for Transport Over Long Distances

Locally produced food in the urban and peri-urban setting eliminate the need for transport, also assuring freshness.

Serve as Impetus for Solidarity and Local Production

Times of economic hardship and war give birth to neighbourhood garden movements and cooperatives in countries as far apart as Argentina, Canada, Cuba and Mali. The solidarity mouvements that survive war or economic crises become a basis for community and institution building.

Our land and our future.
Source: FAO and UNEP, 1996.