



report

Agriculture Food Bowl

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Table of Contents

1	INTRODUCTION	4
2	MARKET DRIVERS	5
3	PROBLEMS	6
4	HISTORICAL APPROACH	7
5	GENERIC SOLUTION	8
5.1	Benefits	8
5.2	What to look for	8
5.3	How it works.....	9
6	SPECIFIC SOLUTION.....	10
7	CALL TO ACTION	11



1 Introduction

Food Security is a growing concern for developing economies as the proportion of the world's population living in urban environments increases. One solution to improving food security is the development of urban and peri-urban agriculture.



2 Market Drivers

“Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle”.¹ There are a number of market drivers that are threatening food security. Strong population growth, economic development and the diversion of food commodities to the production of biofuels has resulted in increasing demand for food. On the supply side, loss of agricultural land to urbanisation, increasing costs of inputs such as energy, climate change affecting production yields and issues of agricultural productivity growth are all factors negatively affecting the supply of food.

¹ World Food Summit, 1996



3 Problems

Growing urbanisation increasing urban population

According to the UN, by the end of 2008, 50% of the world's population will be living in urban environments. This is set to increase to 70% by the year 2050. In Australia, more than 90% of the population lives in an urban environment. The increasing demand for urban land is increasing the opportunity cost of agricultural land. Consequently more and more agricultural land is being lost to urban development and food production and consumption are moving further and further apart. As a result the food supply chain is increasingly reliant on fossil fuels both for production and distribution.

Rising Transport Costs

As a result of rising transport costs it is becoming increasingly important to locate the supply of food in close proximity to the point of consumption.

Health Issues

Associated with poor availability and inequitable access to nutrient rich fruit and vegetables (particularly in vulnerable populations' e.g. low income households).

Climate Change

Global concerns regarding environmental footprint and climate change has highlighted the need to develop more sustainable food production practices.



4 Historical Approach

Food production has not always occurred outside of urban areas. There was a time when a significant amount of food was produced within cities. However, this was lost during the twentieth century due to pressure for urban development and rapid progress in agricultural productivity. Demand for land for urban development resulted in rising land values which increased the opportunity cost of agricultural production. Consequently, it became more “efficient” to move food production outside of urban areas and rely heavily on transport infrastructure and relatively cheap fossil fuels to transport food to the urban consumer. This has led to the general perception that agriculture was unsuitable in urban environments.



5 Generic Solution

There is potential to enhance food security through urban agriculture. The Food and Agriculture Organisation of the United Nations (FAO), has defined urban agriculture as:

“ An industry that produces, processes and markets food and fuel, largely in response to the daily demand of consumers within a town, city, or metropolis, on land and water dispersed throughout the urban and peri-urban area, applying intensive production methods, using and reusing natural resources and urban wastes to yield a diversity of crops and livestock.”

The concern over food security is understandably greater in developing countries that are unable to feed their own populations. In the developed world, urban agriculture has a different function. Currently in Australia we have a plentiful supply of food that is both domestically produced and imported. However, productive land is being rapidly lost and the point of production is being moved further and further away from the point of consumption. Thus establishing urban agriculture in Australia is largely a pre-emptive action to ensure long term urban food security.

5.1 Benefits

The potential benefits of urban agriculture include:

- Ability to simultaneously address concerns of food security and sustainability
- Environmental benefits through the use of sustainable practices and decreased transport requirement
- Creation of local employment opportunities
- Expansion of the economic base through agricultural production and associated industries such as processing and packaging
- Social benefits including improved health and nutrition and the strengthening of the local community.
- Encouragement of research and development of new agricultural techniques
- Becomes a regional attractor encouraging visitation to the area

5.2 What to look for

- Proximity to markets, both local and international via major export routes
- Availability of land
- Availability of water
- Climatic conditions
- Availability of infrastructure
- Available labour force



5.3 How it works

For the purposes of this paper it is important to make a distinction between urban agriculture and peri-urban agriculture. The main difference is the location in which the production occurs, Urban Agriculture occurs within the city and generally refers to the use of small areas such as gardens, verges or vacant plots to generate agricultural goods for personal consumption or for sale in local markets. Peri-Urban Agriculture occurs on the fringes of the city and generally refers to farm units close to town which operate intensive semi or fully commercial farms.

Example

Community Gardens (Vancouver)

Vancouver is home to 1,000 community gardens at 22 sites and aims to increase this to over 3,000 gardens by 2010. Community gardens provide access to fresh local produce as well as a number of other social and environmental benefits. The gardens are predominantly located within city parkland however a number of temporary gardens have been established on vacant sites in collaboration with developers. The structure of the community gardens vary greatly. Some gardens are divided into plots of which a proportion is retained for community organisations to use for food security initiatives. The remaining plots are allocated to individuals interested in growing their own produce for a season. Other gardens are run solely by a community group. The community gardens also help support a range of other associated activities such as the Grow a Row Share a Row program (which encourages gardeners to grow an extra row of produce to provide for pre-school, after school, youth and seniors programs in the area) and the Vancouver Farmers Markets.



6 Specific Solution

- Preserve land for food production as part of the land use and economic development strategy for the region
- Identify and quantify potential markets (both domestic and international) for specific agricultural products
- Consider the local conditions (climatic conditions, soil, water etc) and identify specific cultivars that would be suited to both the environment and the potential market
- Identify opportunities for value adding to the agricultural products and determine what facilities and infrastructure would be required



7 Call to Action

In order to ensure long term urban food security in Western Australia, the State Government and the municipal planning authorities need to identify sites that would be suitable for urban and peri-urban agriculture and quarantine the land for this use. A targeted investment strategy should be developed to establish agricultural production in these locations and to promote the research and development of new sustainable urban and peri-urban agricultural processes.