

# **AGRI-FOOD '05**

## **Regulatory contradictions in the contemporary food system**

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### **AGRICULTURE IN URBANISING LANDSCAPES A CREATIVE PLANNING OPPORTUNITY**

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#### **ABSTRACT**

Agricultural lands and associated human activity in urban\* landscapes are in the main regarded as being of a transient nature. Reasons to retain agriculture as part of the urban and urbanising landuse pattern are becoming better developed as more information emerges of urban agriculture's social, economic, environmental and cultural benefits. The retention of agriculture as part of the urbanising landscape will increasingly become a political issue. The United States Department of Agriculture estimates 30% of that country's agriculture production occurs in metropolitan areas. The Sydney Statistical Division, as defined by the Australian Bureau of Statistics, produces at least 12% (\$1 billion) of NSW's total agricultural production on less than 1% of the State's agricultural land employing 11% of the State's agricultural work force (NSW Agriculture 2002). Urban agriculture models such as Hawkesbury Harvest in Sydney's north-west are beginning to demonstrate how sustainable agriculture has the potential to contribute to long-term triple bottom line outcomes. Sydney's migrant-based agriculture makes a significant contribution to the City's dynamic and evolving food culture. Creative planning can assist to unlock the community capital that will recreate urban agriculture on an on-going basis in accordance with changing circumstances. This paper will explore the full spectrum of agriculture that constitutes urban agriculture ranging from that which is essentially economically focused such as hi-tech controlled environment agriculture, eg. mushrooms, to that which is totally community focused, eg. community gardens. A number of landuse planning questions are posed to stimulate creative solutions for urban agriculture.

\*The term 'urban' is used to describe all agriculture whether it is in the middle of a city or on its fringe. In either case agriculture is part of and not separate to the urban environment.

#### **THE SITUATION**

The value of agriculture as it leaves the farm in the Sydney Statistical Division is in the order of \$1 billion per annum. This represents 12% of NSW's

agricultural production grown on approximately 1% of the State's agricultural land. Sydney agriculture employs more than 8,841 people representing 11% of the total employed in agricultural production in NSW (Gillespie and Mason 2003 – unpublished)

In the four years between 1997 and 2001 the area available for agriculture in the Sydney Statistical Division as determined by the Australian Bureau of Statistics decreased by 10.5% to 76,900 hectares. There was however an increase in the number of agricultural holdings of 3.1% (Gillespie 2003). While there are no reliable comparative figures in terms of value of production over time, there is general consensus among those who are closely associated with Sydney's agricultural industry that these figures indicate an intensification of production.

Such intensification is not the result of strategic planning or targeted objectives at federal, state or local government or even at industry levels. Rather, it is due to the ability of a small number of people to grow products that meet market requirements and the capacity of agriculture to respond to changing social and economic values, demands and conditions. In this context, however, it is contended that without a strategic approach founded on the principles of security of tenure and resource, equity, incentive and appropriate knowledge, urban agriculture will by necessity be carried out on an ad-hoc and opportunistic basis. One outcome of unplanned urban agriculture would be landuse conflicts which could undermine the capacity for urban agriculture to provide the many benefits it already contributes, in varying degrees, to the quality of life of the Sydney community.

The authors suggest that one of the main reasons for the current adhocery for the development of type of agriculture is that the essence of urban agriculture is foreign to the majority of city dwellers and planning decision makers. Another reason postulated is that the easy and instant availability of food allows the culture of that food to be taken for granted – 'who cares as long as it is on the plate or in the bag'. Foreignness and being taken for granted are not conducive to reaping the potential benefits of a healthy relationship between city dwellers and the local food system.

This quality of relationship deficiency is balanced to a degree by a ground swell that has begun to recognise agriculture as a worthwhile, desirable and legitimate form of long term land use and human activity in the Sydney Region. Testament to this includes:

- The recent formation of the Sydney Farming Network with support from political, media, academic and farmer directions
- Details and advice on the role of agriculture as a component of sustainable cities are increasingly being sought at political levels; eg. Hansard: Commonwealth of Australia, House of Representatives Environment and Heritage Steering Committee, Sustainable Cities, 6 April 2004
- The social, economic and environmental benefits of sustainable agriculture were provided significant recognition at a recent meeting held between members of NSW Department of Primary Industries, NSW Department of Infrastructure, Planning, and Natural Resources, and strategic planners from a number of local councils in Sydney that

have a substantial agricultural land use. The purpose of this meeting was to consider the issue of agriculture in regard to Sydney's Metropolitan Strategy.

- Direction 3 of the Sydney Metropolitan Strategy 'Greater recognition will be given to non-urban land so that it is not treated as land 'in waiting' for urban development.' (DIPNR 2005)
- The increasing success of the Hawkesbury Harvest Farm Gate Trail and the following it has developed as a regular part of ABC Radio 702 each Saturday morning. This segment has done a great deal to inform and educate the Sydney community of some of the values and benefits of its local agriculture.

Yet despite this, it is contended that part of the problem is that people at all levels of the community have none or incomplete and differing views and understanding of the diverse forms that constitute agriculture in an urban environment, the benefits provided by each form and the implications for a planning response so that urban agriculture is provided an equitable opportunity to contribute to the quality of life of the Sydney community. In the end it comes down to what the Sydney and wider community will ultimately gain from knowledge of the benefits that urban agriculture is capable of providing and appropriate effort at all levels of the community to realise those benefits.

This paper is intended as an informative step in dealing with these differences and deficiencies of knowledge. This in part will address the assumption that appropriate effort on all levels will not stem from statutory requirements or other factors outside one's perceived area of control or influence. Rather it will grow from a sense of understanding and development of a relationship between the culture associated with what one eats and one's own value based perception of their well being.

## THE CONTINUUM OF URBAN AGRICULTURE

**Table1. The continuum of Urban Agriculture in the Sydney Region and values / benefits. (Attachment 1)**

	<b>Forms of Urban Agriculture</b>	<b>Values/Benefits</b> (Strategic Plan for Sustainable Agriculture – Sydney Region, NSW Agriculture, 1998)
PRODUCTION 	Backyard	Recreation, human health on all dimensions
	Community and Communal Gardens	Social cohesion
	Rooftop	Corporate involvement – worker wellbeing
	School/Agriculture Plots	Education
	Historical	Heritage, education, research
	Lifestyle/Hobby	Environmental management, recreation, diversity of lifestyle
	Boutique/Cottage/Niche	Diversity, rural open space, small business
	Farm Gate	\$\$ remain locally; 80% profit from 20% of farm sales.
	Agritourism	Income diversification; inter-industry leverage – hospitality, tourism, agriculture; home/farm based value added agribusiness; producer/consumer relationship benefits.
	Equine - Recreation - Studs/Training	Recreation; landscape visual aesthetics; \$ multiplier for support industries.
	Flood Plain - Market Gardens - Dairy - Turf - Orchards - Fodder Crops	Intergeneration equity; food security; greatest inherent sustainability – soils, water access, landform, biodiversity (riparian, wetlands); water effluent and green recyclables.
	Flood Free - Market Gardens - Dairy - Orchards - Fodder Crops/Agro-Forestry	Retention of a natural resource to meet future and perhaps yet unknown needs and considerations (eg. as a result of global warming) and technologies such as nanotechnology; sustainable urban agriculture as a NRM instrument particularly when land use is matched to agricultural suitability; community cultural diversity – people of culturally and linguistically diverse backgrounds (CLDB); carbon credits.
	Controlled Environment/High-Tech - Greenhouse Horticulture - Nurseries - Poultry - Fixed Pad Dairies - Mushrooms - Protected Cropping	\$ Multiplier for support industries, eg mushrooms >5; fresh perishable foods grown close to market; reduced emissions due to less transport distances.

In most instances the values/benefits identified for one form of urban agriculture above also apply to other forms. The values/benefits provided for each form are indicative of the most dominant value/benefit.

**Table2. The continuum of Urban Agriculture in the Sydney Region and land use planning responses. (Attachment 1)**

	<b>Forms of Urban Agriculture</b>	<b>Planning Implications</b>
ENTERPRISING ↓	Backyard	Traditionally Ad Hoc Needs Micro Planning Responses
	Community Gardens	
	Roof Top	
	School / Agriculture Plots	
	Historical	
	Lifestyle / Hobby	
	Boutique / Cottage / Niche	
	Farm Gate	
	Agritourism	
	Equine	
	- Recreation - Studs / Training	
PRODUCTION ↓	Flood Plain	More Structured Macro Planning Responses  Traditionally Numerically Based - Minimum Lot Size - Thresholds - Zonings - Land Capability - Land Suitability - Environmental Standards - Food Safety - Site Selection
	- Market Gardens - Dairy - Turf - Orchards - Fodder Crops	
	Flood Free	
	- Market Gardens - Dairy - Orchards - Fodder Crops / Agro-Forestry	
	Controlled Environment / High Technology	
	- Greenhouse Horticulture - Nurseries - Poultry - Fixed Pad Dairies - Mushrooms - Protected Cropping	

### Land Use Planning Implications

Does local government recognise the enterprising and social forms of agriculture as legitimate land uses? If 'Yes':— local government is saying that it recognises the values of local food production, eg. Hawkesbury Food Program (Hawkesbury District Health Service 2005), Agenda 21 (UNCED 1992), 'fresh is best' and increased family involvement in agribusinesses. If traditional strategic and statutory planning tools cannot be applied to the forms of agriculture towards the social end of the continuum, local government needs to consider affirmative planning strategies for these land uses, eg. generic planning guidelines for agritourism and farm gate sales. These may draw on traditional planning tools however they will need to be adaptive and provide micro-level responses (Kennedy 2005, pers. com. 5 April).

There are issues, such as preventing land use conflicts, that should be considered where Councils support entrepreneurial urban agriculture opportunities. For example, inappropriately located farm stay bed and breakfasts may attract complaints from guests that are awakened at night or early morning by agricultural activities.

The NSW Department of Primary Industries (DPI) encourages councils to be strategic in determining areas where agritourism developments are permitted. The Gosford/Wyong Local environmental Plan 2001 (Central Coast Plateau Areas) notes areas that are preferred for the location of rural tourist facilities or rural tourist units (Attachment 2). Although other agritourism developments may be considered outside these areas, the aim of clustering of like development is to prevent land use conflicts restricting agricultural activities and investment.

The appropriate siting of urban agricultural development or tourist accommodation is particularly important on small allotments. From DPI experience intensive agriculture occurring on allotments less than 2 ha often results in land use conflicts. The level of activity that triggers whether urban agriculture is intensive is an on-going dilemma for land use planner's dealing with small scale developments.

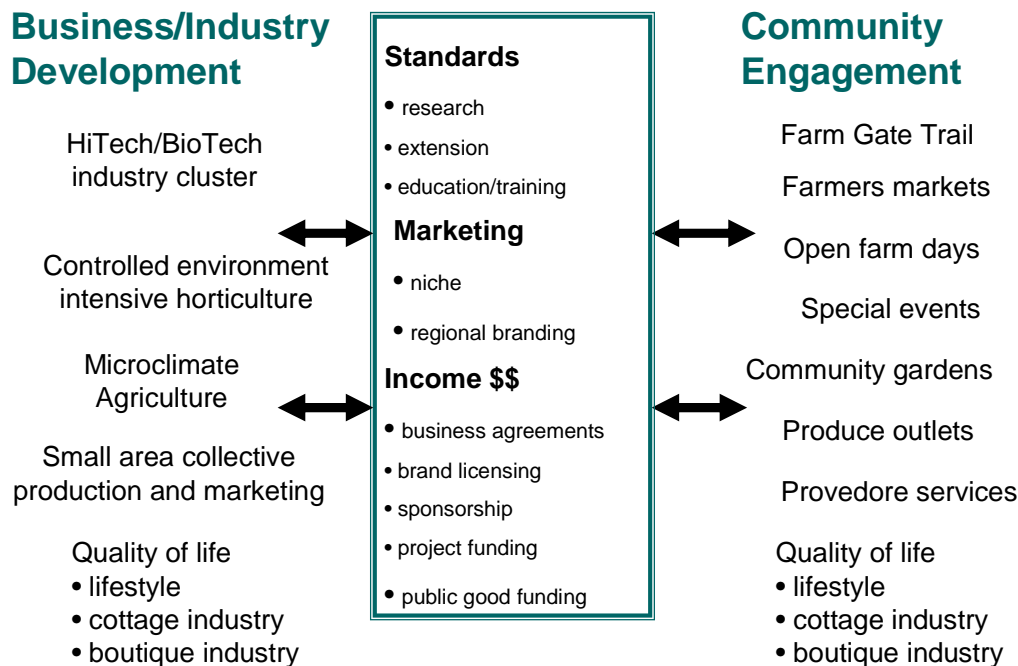
An example of where legislation has been modified to accommodate farm gate sales is in the Hawkesbury Local Environmental Plan 1989 (LEP 1989) which previously prohibited advertising structures in the rural zones. This restricted the display of road side stall signs. The Council introduced a new definition for exempt development into the LEP 1989 called Farm Gate Sales (Attachment 3) and modified the advertising structure prohibition (Attachment 4) which addressed the advertising signage constraint in support of the Hawkesbury Harvest concept. (Montgomery 2002, pers. com. 12 July).

## **THE HAWKESBURY HARVEST MODEL**

The aim of the Hawkesbury Harvest (HH) model is to provide better community access to nutritious and safe foods grown in the local area while enabling opportunities for diversification of income through other mechanisms such as tourism and farmers markets. The protection of agricultural land and agricultural heritage is more likely to occur where farmers are profitable and maintain the natural resources thereby contributing to sustainable cities (Hawkesbury Harvest 2005).

The potential of the HH Model (Figure 1) is based on various assumptions including the innate desire of people to achieve and governments providing the institutional arrangements to encourage the uptake of the concept. The HH Model encompasses industry clustering, industry development, small business development, income generation, community gardens, controlled environment intensive horticulture, matching local climate to crops and markets, farmers markets, agritourism, research and education and training through extension. The overarching goal is to provide an economic, social and environmentally sustainable agriculture industry which has wide community sectoral support.

# Hawkesbury Harvest Potential



**Figure 1. Hawkesbury Harvest Model (Hawkesbury Harvest 2005).**

## CONCLUSIONS

There is a continuum of agriculture in the urban landscape which currently is not recognised at all levels of the 'city' community to a degree to support its long term existence.

Without heightening the understanding of the general community regarding all the qualities of urban agriculture and the consideration by land use planning agents to manage the evolution of the social, non traditional forms of agriculture in an urbanising landscape, urban agriculture will become more tenuous and non-sustainable.

To support social types of urban agriculture, planning authorities will need to be strategic in their planning to minimise potential for land use conflicts. For example, Councils may need to provide flexibility in their planning instruments to address urban agriculture.

For all forms of urban agriculture to be able to contribute to the quality of life for city dwellers on a long term basis it must be provided security of tenure and resources with equity.

## FOR FURTHER CONSIDERATION (in other studies)

- A better understanding of micro-planning responses – examples, research, and guidelines developed for social forms of urban agriculture.

- The relationship between urban agriculture, research, agribusiness and its different forms, eg. agribusiness clusters and research parks.
- How to engage as many people as possible at all levels in the urban community in the culture associated with the food they eat?

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## **PERSONAL COMMUNICATION**

Kennedy, A. 2005, Technical Specialist Natural Resources, NSW Department of Primary Industries, Orange.

Mason, D. 2003, Resource Management Liaison Officer, NSW Agriculture, Windsor.

## Attachments

**Attachment 1:** Continuum of Urban Agriculture in the Sydney Region - some values/benefits and planning responses.

	<b>Types of Urban Agriculture</b>	<b>Values/Benefits</b> (Strategic Plan for Sustainable Agriculture – Sydney Region, NSW Agriculture, 1998)	<b>Planning Implications</b>
<b>ENTERPRISING</b>	Backyard	Recreation, human health on all dimensions	Traditionally Ad Hoc Needs Micro Planning Responses
	Community and Communal Gardens	Social cohesion	
	Rooftop	Corporate involvement – Worker wellbeing	
	School agriculture plots	Education	
	Historical	Heritage, education, research	
	Lifestyle/Hobby	Environmental management, recreation, diversity of lifestyle	
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<b>PRODUCTION</b>	Flood Plain - Market Gardens - Dairy - Turf - Orchards - Fodder Crops	Intergeneration equity; food security; greatest inherent sustainability – soils, water access, landform, biodiversity (riparian, wetlands); water effluent and green recyclables.	More Structured Macro Planning Responses  Traditionally Numerically Based - Minimum Lots Size - Thresholds - Zonings - Land Capability - Land Suitability - Environmental Standards - Food Safety - Site Selection
	Flood Free - Market Gardens - Dairy - Orchards - Fodder Crops/Agri-Forestry	Retention of a natural resource to meet future and perhaps yet unknown needs and considerations (eg. as a result of global warming) and technologies such as nanotechnology; sustainable urban agriculture as a NRM instrument particularly when land use is matched to agricultural suitability; community cultural diversity – people of culturally and linguistically diverse backgrounds (CLDB), carbon credits.	
	High Technology - Greenhouse Horticulture - Nurseries - Poultry - Fixed Pad Dairies - Mushrooms - Protected Cropping	\$ Multiplier for support industries, eg mushrooms >5; fresh perishable foods grown close to market; reduced emissions due to less transport distances.	

**Attachment 2.** Map of preferred locations for rural tourist facilities and units shaded in pink (NSW Government 2001).

**Attachment 3.** Hawkesbury City Council LEP 1989 amendment for Farm Gate Sales

“farm gate sales” means a building or place used for the selling of agricultural products grown on the land, and may include the selling of products made from agricultural products grown on the land, on which the building or place is situated provided that:

- a) sales take place in a building, an area within a building or a defined area of land;
- b) the building or area used for selling is not greater than 75 square meters;
- c) the building or area used for selling is located more than 20 metres from the boundary between the land and the public road; and
- d) a defined car parking area is provided on the land.

**Attachment 4.** Hawkesbury City Council LEP 1989 amendment for Advertising Structures (NSW Government 2003).

- (1) This clause applies to land within Zone No 1 (a), 1 (b), 1 (c), 1 (c1), 2 (a) 2 (a1), 2 (c), 7 (d) or 7 (d1).
- (2) Notwithstanding any other provision of this plan, the Council may consent to the erection on land to which this clause applies of an advertising structure displaying only notices relating to the purposes for which the land is used.
- (3) The Council may consent to the erection of an advertising structure on land to which this clause applies for the purpose of:
  - a) directing the travelling public to tourist areas; or
  - b) displaying private advertisements for tourist accommodation or other tourist facilities.