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Localising Food Production: Urban Agriculture in Australia

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Key Points

- An increasing number of urban Australians are struggling to access healthy, affordable food. The high cost of living and volatile food prices are leaving an increasing number of households requiring support from organisations like Foodbank.
- The re-localisation of food production, processing and consumption is increasingly discussed as a solution to the high cost of long, complex supply chains.
- Urban agriculture presents an opportunity to support domestic food security, but scope to develop these food systems needs to be part of the urban design and planning processes of local and state governments.
- Biosecurity and soil contamination risks inherent to farming can be effectively mitigated through improved regulation and training.
- Regular networking and knowledge transfer is required, involving rural and urban farmers and regulation bodies, such as the Department of Agriculture and Research. This would ensure coordinated, timely and efficient responses to biosecurity threats.

Summary

Urban agriculture is becoming an increasingly prominent topic in discussions on food security in Australia. More than 90 per cent of Australia's population lives in urban centres and depends on a decreasing agricultural workforce to meet increasing food demand. Long food supply chains, although economically efficient, lead to poor nutritional and environmental outcomes for society. The re-localisation of food production will support and enhance Australia's food system and has the potential to increase access to nutritious, affordable food for the most vulnerable.

Analysis

Australia produces enough food to feed 60 million people, yet economic barriers leave an estimated 2 million Australians dependent on food relief annually. Foodbank Australia is reportedly struggling to meet demand; it turns away as many as 60,000 people each month due to a shortage of food. To enhance food security, efforts need to be focussed on overcoming the increasingly volatile food prices that are expected to occur as a result of increased production and energy costs and the effects of climate change.

There is a strong consensus amongst academics and policy makers that urban agriculture is a viable means of increasing domestic food security. Urban agriculture has assisted communities in both developed and developing nations to cope with food insecurity, by ensuring local availability of nutritional and affordable food. Greater support, however, is required from the Federal, State and Local governments, to ensure that benefits can be realised within Australian cities.

Supporting Food Security: Opportunities in Urban Centres

Food insecurity in developed countries is largely experienced by low-income households, which struggle to overcome the economic barriers to purchasing fresh, nutritional food. Urban agriculture has been proven to improve access to affordable and nutritional food, but support is often required to allow urban farming initiatives to remain operational.

In London, Spitalfields City Farm is located in one of the most deprived and densely populated areas of its region. The farm is instrumental in providing low-income, marginalised communities with increased access to locally produced fruits and vegetables. It also provides valuable education on food production. Although it has enjoyed strong local support since it began operation in 1978, it has had to overcome significant challenges, including a lack of funding and regular threats from developers. Initial funding from local councils and, more recently, funds from charitable trusts, public funding bodies and companies, have ensured that the farm can continue its work and benefit the community.

Cuba has been regularly cited as an example of the success of urban agriculture in addressing food insecurity and increasing nutrition levels. The collapse of the Soviet Union in 1989, and the subsequent reduction in oil and commodity imports, left the nation facing a food crisis. Higher food prices, a decline in rural farming productivity and increased migration to urban areas caused significant food scarcity. Urban agriculture became an essential source of food and nutrition within these communities and the Cuban government created policies to support urban-farming initiatives. As a result, communities enjoyed improved nutritional and health outcomes, increased community connectedness and an improved knowledge and appreciation of food production.

These examples highlight the intrinsic value of urban agriculture as a tool to increase food literacy and healthy food consumption, through active community participation in food production. It also displays the importance of support and funding to ensure urban agriculture is able to overcome challenges and external threats. Policymakers need to acknowledge the value of urban agriculture in providing opportunities to promote

nutritional education, and support strategies which leverage on existing and new urban farming initiatives to deliver educational programs that promote healthy eating habits.

Urban agriculture can also provide the additional benefit of generating increased public interest in agriculture as a viable career, by creating more widespread knowledge and interest in food production. Australia is experiencing a shortage of qualified professionals in the agricultural sector, as well as a decline in enrolments for higher qualifications in agricultural science. This is expected to have negative implications for the future status of food security in Australia. This lack of interest is linked to, among other factors, the growing disconnect between people and the production of food due to the growth of urbanisation. Urban agriculture can assist to bridge this disconnect and support the Australian Government's objective of promoting agriculture as a career choice.

Urban and Peri-Urban Agriculture in Australia

Research suggests peri-urban agriculture alone accounts for approximately three per cent of total agricultural land use in Australia. Despite this, it is responsible for 25 per cent of the total gross value of economic production in Australia. Farming on Melbourne's urban fringe produces 40 to 50 per cent of Victoria's vegetables. This is a contribution of an estimated $1.3 – $1.6 billion to Victoria's economy and generates over six thousand jobs. In New South Wales 20 per cent of the total vegetable production and 80-100 per cent of all perishable vegetables are produced in the Sydney region. A 2008 study using a combination of wireless technologies, GPS, satellite imagery and cadastral mapping along with on-ground verification, found 1052 properties growing vegetables in the urban and peri-urban areas of Sydney. The extent of urban agriculture in other Australian cities is difficult to assess and similar studies to those done in Melbourne and Sydney are required.

Interest in urban agriculture has been rising in Australia; this is linked to a growing awareness of food production systems, campaigns on 'food miles' and 'buying local' and an increased concern regarding the 'freshness', quality and nutrition of food consumed. A 2013 study, conducted by The Australia Institute, found that 48 per cent of the urban households surveyed, were likely to grow food at home. The study also revealed strong support for food gardens in schools (72 per cent) and aged care facilities (65 per cent). Less than 50 per cent however, showed strong support for existing and new community gardens, which suggests there are community concerns about urban land development.

Community gardens are spaces open to the community to grow food for their personal use. These gardens are often created on vacant blocks, undeveloped land, and, in some cases, public parkland and rooftops. The precise number of community gardens in urban centres is difficult to calculate, since there is no unified network of community gardens. The informal Australian City Farms and Community Gardens network (ACFCGN), is currently building an Australian community gardens map through its Community Garden Directory. According to the directory, there were at least 212 community gardens across Australia in 2010; this number continues to grow, and more recent estimates suggest over 500 community gardens are currently active.

Local councils compile separate directories, with the City of Sydney listing 22 community gardens within its area alone. Brisbane City Council lists 39 community gardens operating within Brisbane and its urban fringe. In other capitals, local estimates show 28 community farms across Perth and 50 in Adelaide.

In Melbourne, community gardens can be found on Department of Human Services (DHS) public housing estates and local government land. Four community gardens are operated by the DHS, while 21 public housing community gardens are supported by 'Cultivating Community', a community organisation contracted by the Department of Human Services.

'3000 acres', an organisation based in Melbourne, lists approximately 122 sites across Melbourne as either active, proposed or potential sites for community gardens. This number includes DHS and public housing community gardens already mentioned. Launched twelve months ago, the list of sites on the 3000 Acres website is not exhaustive and further sites in Melbourne are likely to be identified as the organisation develops.

The absence of a uniform network of community gardens impedes efforts to quantify, monitor and assess the impacts and progress of current initiatives. The formation of an official representative body is required to gather and record statistical information on urban agriculture throughout Australia. Further research is also required to determine the size and impact of community gardens in Australia and quantify the potential that exists for growth of urban agriculture within Australian cities.

Urban Planning and Policy Development

State Governments are responsible for urban planning within their regions. In recent years, state strategies have begun to incorporate more 'agriculturally sensitive' urban designs. Research has shown, however, that action is mostly being taken at a local level, rather than by the State and Federal governments.

Metropolitan planning strategies reveal a growing focus on food production in urban areas. Melbourne's latest planning strategy, *Plan Melbourne (2014),* emphasises the need to use undeveloped urban land for food production. It includes the enhancement of food production within Melbourne city and its non-urban areas, as well as the protection of high-quality agricultural land in and around Melbourne for food production.

The State of Queensland has taken the lead in recognising the importance of urban agriculture. The *South East Queensland Regional Plan 2009-2031* has provisions that support 'initiatives that increase access to fresh food in urban environments, including provision of space for fresh food markets and community gardens' and 'conserve agricultural land for food production, provide spaces for urban agriculture such as community gardens and enable access to fresh, quality, seasonal local produce'. It also recognises the link between better access to fresh produce, and improvements in diets; a link that contributes to reducing the levels of obesity and poor health. The 2010-2011 Queensland floods and the susceptibility of the city to disruptions to its food supply due to extreme weather events, have contributed to this prioritisation.

Adelaide and Sydney have both identified the positive role peri-urban agriculture plays in increasing accessibility to fresh, local produce and improving local food security. Neither, however, has expanded on this to reflect the provisions set out in Melbourne or Queensland's planning strategies.

Perth's '*Directions 2031 and Beyond'* does not go any further than recognising the importance of local food production and the need to protect agricultural land on the urban fringe. Strategies prioritise urban housing development ahead of developing areas for local food production. It proposes that 'greenfield' sites need redeveloped to create a 'connected city form' as populations increase. This is probably due to pressures stemming from Perth's chronic housing shortage.

Barriers and Challenges for Urban Agriculture in Australia

In February 2014, community farming groups experienced a substantial setback with the discontinuation of the Federally funded $1.5 million Community Food Grants Programme. The funding cuts received support from AUSVEG, Australia's peak industry body representing Australian vegetable and potato growers, which claimed that community gardens presented a biosecurity threat. This threat, however, is overstated. A 2010 study by the Bureau of Rural Science, found that smallholder farmers in peri-urban Australia pose "no greater biosecurity risk than any other segment of the population".

Biosecurity risks arising from urban agriculture can be effectively mitigated through greater regulation and increased training of urban farmers. This could be managed by issuing permits, which would only be given to urban farmers who had undergone the necessary training in the prevention of biosecurity threats.

Health risks associated with contaminated soils could also be mitigated by ensuring that soils are tested before permits are provided. Policymakers need to focus on developing strategies that reduce the barriers urban farmers may face in gaining the necessary training in biosecurity and also provide easier access to consultation and soil testing services.

Greater networking and knowledge transfer between urban and rural farmers can ensure that current and updated information on biosecurity is available for all stakeholders in the horticulture industry. This should be facilitated through partnerships and meetings between regulating bodies, such as the Department of Agriculture and Research, and urban and rural agriculture representative bodies, to ensure that the mitigation of biosecurity threats is coordinated, timely and efficient. The establishment of a coordinated body representing urban agriculture and community garden networks across Australia is therefore required to make these processes possible.

Competition for urban land is another major barrier to urban agriculture in Australia. Rapid urban population growth and a trend in Australia for horizontal rather than vertical city expansion, are leading to more land in and around cities being used for housing. Urban planners need to consider food production capacity as an essential component of urban development planning and a way to assist in creating a more resilient urban food system. This can be done by ensuring that adequate space is provided for food production and both

funding and support are available for existing initiatives that localise food production. In addition, investments in alternative farming methods, such as green roofs and vertical farming, will be vital in ensuring that adequate amounts of fresh, affordable and locally produced food are available for densely urbanised areas in the future.

Conclusion

Food prices are expected to become increasingly volatile, due to the effects of climate change, depleting groundwater supplies and increasing production costs. Reliance on long, complex food supply chains will add to the barriers low-income households face in gaining to access to affordable, nutritious food. Urban agriculture is essential in providing a robust and resilient food system, but it requires increased support and funding from both state and Australian governments. The following actions have been identified as methods of ensuring that there is an increased capacity for urban agriculture in Australian cities.

- Greater networking and knowledge transfer is required between urban and rural farmers and regulating bodies to prevent biosecurity threats and provide coordinated and timely mitigation efforts.
- Biosecurity risks can be reduced through greater regulations, such as the introduction of permits requiring that urban farmers receive the training needed to minimize the risks associated with biosecurity and soil contamination. Funding is needed to reduce the barriers to this education and training.
- Food systems need to be an integral part of the urban design and urban planning process. Government support and funding are required to promote innovative ways to create and use spaces for urban food production such as vertical farms and green roofs.
- The formation of an official coordinated body representing community garden and community farm networks across Australia will assist with the collation of reliable statistical information on urban agriculture, as well as serve as a representative body to meet with regulating bodies and rural farmers. This will allow it to effectively disseminate important information about health, safety and biosecurity to all operating community gardens and community farms.

Rapid urban expansion and land development threaten to diminish the potential of urban and peri-urban agriculture in Australia. A lack of locally produced, fresh food will reduce the capacity to form robust and resilient food supply systems. Overdependence on long food supply chains is detrimental to long-term food security in Australia and will lead to reduced nutritional and environmental outcomes. Urgent action is required by policymakers to increase support and funding for urban agricultural initiatives, as well as provide the necessary support to overcome the barriers preventing its success.

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