



‘Back to the future’? Urban backyards and food self-sufficiency

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ABSTRACT

Against a background of an escalating world population, there are now more people living in urban environments than elsewhere. While historically urban households have supplemented the family diet from the backyard vegetable garden, in periods of economic upturn (e.g., post- World War II) there has been a tendency for a transition from household food production to relying on supplies from commercial food outlets. In times of economic hardship there has been a switch back to backyard food production. In recent decades, even in the absence of major crises, there has been an increase in interest in growing ‘healthy foods’, and thus greater household food production. However, urban consolidation, and the associated reduction (or elimination) of the backyard have greatly reduced the space for household food production. With the continued increase in urbanisation predicted, associated loss of productive agricultural lands to urban sprawl and commitments of world leaders to reduce carbon emissions in response to climate change, the need for transition back to greater urban self-sufficiency will become a reality. Arguably, the major impediment to such an outcome has been that ‘food’ has not been embedded as a ‘community system’ along with others (e.g., housing, water) in planning. Increasingly this deficiency is being addressed but to maintain the current trajectory and momentum requires broad community participation in government policy development. Only then, will the increasing need to go back to the future and transform the urban landscape in support of greater food self-sufficiency be addressed.

1. Introduction

‘Urban agriculture is the cultivation of plants ... within urban and peri-urban areas’ (FAO, 2018, p. 1). This type agriculture provides approximately 15% of the world’s food supply (Gerster-Bentaya, 2013), and production continues to increase (Bourque, 2000; Burgin, 2018). Such agriculture may take many forms including ‘... small-intensive urban farms, food production on housing estates, land sharing, rooftop gardens and beehives, school-yard [sic] greenhouses, restaurant-supported salad gardens, public space food production, guerrilla gardening, allotments, balcony and windowsill vegetable growing’ (Schupp and Sharp, 2012, p. 1), or any other means of producing vegetables within urban areas (Burgin, 2018). These different forms of agriculture vary ‘enormously’, with one fundamental division. ‘Community gardens’ are public and ‘backyard gardens’ are private (Ferris et al., 2001). A backyard garden that produces food to supplement the household requirements may therefore be viewed as a subset of ‘urban agriculture’, and is the topic of this article.

In the current context, the definition of a backyard garden (cf. dooryard, urban, kitchen, home, household gardens (Niñez, 1987); familiar urban, vernacular urban, house-lot gardens (Kimber, 2004)) used is an adaptation of Kimber (2004, p. 263) and incorporates ‘common, ordinary gardens around the house, or substitutes for them, developed

for production of useful, material goods ... for individual households’.

These gardens have been considered a permanent feature of households (Taylor and Taylor Lovell, 2014), and are possibly the oldest form of agriculture (Diamond, 2006). Indeed, supplementing the household food supply from backyard gardens (or elsewhere close by) has occurred throughout human history. In modern times, at least in industrialised countries, supplementing the family diet with food from the garden has ‘waxed and waned’. Typically, in times of economic crisis, or threats to the supply of food more generally (e.g., during periods of war), urban food production increases substantially. As has occurred in Australia (Larder et al., 2014), this has been frequently due to governments’ urgings, only to wane with the end of the emergency and/or with economic upturn. Despite the importance of urban food production, beyond periods of threatened or actual food shortages, the topic has been one of the most ‘overlooked, understudied, and unsupported by government agencies, non-government organizations [sic] and academics’ (Taylor and Taylor Lovell, 2014, p. 285). Within the Australian context, the history, current situation, and potential future of self-provisioning can be regarded as the most basic, and enduring, level of agriculture: the ‘backyard veggie garden’.

I have commenced with definitions of ‘urban agriculture’ and ‘backyard garden’. In the next section a brief introduction to trends in backyard gardening to supplement household food requirements will be

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discussed. This is followed by consideration of the influence of urban development on backyard gardens, and the consequences for the associated vegetable garden. I subsequently consider current trends in household backyard food production, and conclude by commenting on the future of urban production. In developing this article, I have used the Australian context as a ‘case study’. However, largely due to the paucity of quantitative data about domestic production in Australia (Larder et al., 2014), examples from research undertaken in other industrialised countries deemed relevant to the Australian context are included.

2. Trends in the use of backyard gardens to supplement household food requirements

Food production on small plots of land adjacent to human settlements is the ‘oldest and most enduring form of cultivation’ (Niñez, 1987, p. 168). To produce supplies to supplement household requirements, this form of agriculture has occurred throughout history anywhere humans have formed settlements (e.g., Australia – Burgin, 2015; Cochrane, 2006; Newling, 2015; America - Diamond, 2006; Doolittle, 2004; Whitmore and Turner, 2001: Southeast Asia, Southern China - Kehlenbeck and Maas, 2005: numerous Pacific islands - Diamond, 2006). The excess food produced has typically been distributed among neighbours, friends and/or relatives, sold, or bartered. In recent history, the practice of vegetable gardening has continued in Australia.

In industrialised countries (e.g., Australia, Europe, North America), with the onset of crises that result in the threat (or reality) of food shortages, such as in times of war, households quickly revert to urban agriculture, including growing food in their backyard to supplement household requirements. For example, in World War I, between 1917–1918, ‘amateur gardeners’ overcame food shortages, and even produced an excess in the United States of America (Cole, 1993). Also in the U.S., in the Great Depression and World War II, household gardens produced more than 40% of the country’s fresh food (Cole, 1993; Naimarck, 1982; Niñez, 1987). In its most successful year (1943) the number of garden plots tended by household gardeners exceeded the government’s target by two million, and the previous year’s target by more than five million (Cole, 1993). Germany also relied on home gardens for food during the post-World War II reconstruction (Niñez, 1987). Produce from Australian cities, including backyard gardens, has also made a ‘significant’ contribution to food production during times of war (Houston, 2005; Larder et al., 2014; Mullins and Kynaston, 2000), although the relative contribution between public and private gardens is typically not identified.

In Australia, the popularity of supplementing the household diet with home grown produce has paralleled the economic trends that occur in the U.S. and other Western countries (see e.g., Hall, 2010, 2015). For example, in the first years of European settlement in Australia, necessity demanded that colonists grew food for their household requirements (Burgin, 2015; Cochrane, 2006; Newling, 2015). More recently, during World War II, in response to ‘massive food shortages’, the Federal Government encouraged a significant upsurge in food production which was achieved (McKernan, 1995). It was with Australia’s post-war affluence that prompted a greater desire for ‘leisure’, that there was a transition from supplementing the household diet with produce from the backyard garden (Dyson, 2009) to relying on the local supermarket and dining out, and thus the demise of self-provisioning from the backyard vegetable garden. Indeed, by the end of the twentieth century, some considered that growing food in the Australian backyard to supplement the household ‘formed part of a bygone era’ (Gaynor, 2001). Although Gaynor (2001) suggested that by that time, in part due to the ‘impact of rolling recessions’ and changing environmental views, there appeared to have been a ‘renaissance’ in growing produce in the home garden.

Overall, in the U.S. there has also been a long-term overall trend away from ‘self-provisioning’ from the garden to supplement the

household budget (Schupp and Sharp, 2012). However, as has occurred in Australia (Gaynor, 2001), in times of economic downturn, for example, with the economic recession of the 1970s and 1980s, there is a surge in home gardening to supplement family requirements (Gladwin and Bulter, 1982; Niñez, 1987). Indeed, Gladwin and Bulter (1982) reported that the estimated harvest of produce from U.S. gardens in 1981 was one billion dollars. As Niñez (1987) suggested, these trends indicate that gardening to supplement the household requirements typically reflects the economic trends of a Nation more broadly. When employment is plentiful and workers well paid, urban backyard vegetable gardens transition into recreational spaces with the reverse occurring when supplementing the household income becomes desirable with a downturn in the economy.

3. Influence of urban development on backyard gardens

In parallel, with the decline of the backyard garden to support the household diet, urban populations have continued to increase to the point where more than 50% of the World’s population now live in urban areas. It is predicted that by 2050, 70% of the global population will be urban (Parfitt et al., 2010). Cities will thus undoubtedly continue to encroach on productive non-urban agricultural landscapes (e.g., Australia – Burgin et al., 2016; Great Britain and U.S. – Best, 1968; U.S. – Theobald, 2001). For example, in North-Western Sydney it was planned that between 2005 and 2036, almost 25% of new urban homes for Sydney will be developed. Much of this land is currently under agriculture (Burgin et al., 2016; New South Wales Department of Planning, 2005): often intensive agriculture (e.g., greenhouse produce, mushrooms, poultry; id, 2010; Burgin et al., 2016). The agricultural production associated with this land will, therefore, be lost with the transition to urban space and commercial food production will necessarily move further from the urban market (Burgin et al., 2016).

Some food will be produced in the urban backyard gardens that replace agricultural lands. However, the size of the garden will limit the extent of self-provisioning that occurs. For example, in Sheffield (England), Smith et al. (2005, p. 235) observed that ‘garden size played an overwhelming role in determining garden composition’, and that larger garden areas were more likely to have a proportionately greater coverage of land under cultivation to support self-provisioning than smaller gardens. Likewise, the coverage of lawn tended to differ. For example, in the U.S., the proportion of lawn was observed to be proportionately greater in larger than smaller gardens (e.g., Robbins and Burkenholtz, 2003; Runfola et al., 2013). Measured as approximately 23% in larger gardens, Robbins and Burkenholtz (2003), observed that the area of lawn around the home had increased over time as a relative proportion of allotment area. These data indicate that at least in larger gardens, there is likely to be competition for space between plantings to support self-provisioning and lawn.

Another factor, influencing the potential to self-provision from the home garden is that within cities (e.g., Australia – Hall, 2010, 2015; New Zealand – Mullins, 2008; U.S. - Burke, 1991), the density of housing has increased in recent decades. In Australia, increasing demand for urban dwellings has occurred along with a transition to smaller allotment size. For example, Hall (2010, 2015) reported that until the late 1980s most Australian urban allotments were ‘several’ times larger than currently. In established suburbs, the houses typically covered 20–30% of the allotment with a maximum of 35–40% coverage. More recently (post-1980s), allotment sizes have decreased and dwelling size increased such that the previous maximum-sized dwelling has become the minimum, and there has been a substantial downsizing in allotment size. Consequently, the area behind the house and the narrower width at each side of the dwelling that were previously available for self-provisioning gardens has often disappeared with the changing dimensions of house and allotment. As a result, urban backyards are often less than 50 m² (0.01 acre), although some backyards may be as large as 100 m² (approximately 0.02 acre). Hall (2010, 2015)

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