

# Glasgovana

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## Let Glasgow Flourish

The first few weeks of the Coronavirus epidemic laid bare the flaws in our food system – our reliance on imports, on large corporations, and on just-in-time delivery systems. As key foodstuffs went into short supply and delivery slots from major supermarkets dried up, many with the means to were stockpiling, and those without began to fear for their ability to feed their families.

One can't help but wonder whether the first few weeks of the pandemic were a window to a future in which a growing global population places increasing pressure on decreasing arable land. A future where the impacts of climate change, sea level rises, soil erosion, and poorly managed industrial agricultural methods will eventually force us to think differently about the way in which we source our food.

As a country that is not self-sufficient in food production (we aren't even close...) these global variables should be a significant concern. The UK relies on imports for 51% of its food supply, and that dependency is growing (House of Lords, 2018).

True shortages are, however, rare in recent memory, in this country at least. One has to look back to the Victory Gardens of World War II to see the last real extended food shortages that led to sustained responsive action from the public. Perhaps a more pertinent example is the price spike in 2008 that saw supermarket food prices jump by between 15-40%. Much like the effect of the current pandemic, the 2008 price hike had a disproportionate impact on the least wealthy in our society; the poorest families spend 15% on their income on food, and the wealthiest just 7% (UK Cross-Government Programme on Food Security Research, 2015).

This tells us two things: firstly that we need to produce more of our own food, and secondly that we need to address the links between societal equality and food security.

As a university student I considered this question, at the time largely driven by the theoretical impact of 'Peak Oil' – a 2000s trend amongst environmental doom-mongers such as my younger self. This began with the research of Marion King Hubbert in the 1960s, related to the potential impact of exponentially increasing oil prices in the wake of decreasing resource availability – an ironic thing to reflect on this year when at one point the value of oil was below \$0 per barrel.

Through my dissertation, I investigated methods of urban food production with a particular emphasis on Cuba which experienced a true oil shock with the collapse of the Soviet Union in the 1990s, which catastrophically impacted upon its supply of food, oil, and machinery – its primary source of trade. This left Cuba with the huge problem - it needed to become as self-sufficient as possible in a very short timeframe.

“Key foodstuff imports by Cuba prior to the collapse of the Soviet Union included 100 percent of its wheat, 50 percent of its rice, 38 percent of



its milk and dairy, 99 percent of its beans, 44 percent of its fish, 22 percent of its poultry, 21 percent of its meat, 94 percent of its oil and lard and 64 percent of its butter. Of the population's total calories in diet 57 percent came from imported food items." (Peter Schwab, 1998)

The Cubans responded with extensive land reforms and widespread adoption of urban agriculture, resulting in thousands of small plots in cities being converted into urban market gardens. This was supported by the government through the provision of parcels of land to anyone willing to cultivate them; utilisation of experts from universities to educate the citizens about agriculture; the establishment of a department for urban agriculture; and by allowing farmers to sell their produce at markets. The farms run as co-operatives, where an agreed quota of food production for rationing is set, and farmers can then sell any excess they produce over and above this. A study from The Economist found that this averaged out at around 15% and enables many farmers to earn up to double the national minimum wage (The Economist, 1999).

As a result, yields within Cuba's cities are steadily increasing and there are now more vegetables available to Cubans than there were before the crisis. The people of Havana now produce around 90% of their fruit and vegetables from over 200 organic urban farms and 25,000 allotments, whilst 35,000 hectares of vacant and derelict land (equivalent to about 8% of the city) has been converted to some form of agricultural use (10,000 for crops and the remainder for animals, forestry and fruits), and any settlement of 15 houses or more has its own food production space (Koont, 2009).

Havana's Urban Agriculture developed into many different typologies, but these can be reduced to three main categories:

1. Huertos Privados account for people using their own property for farming; for example, those growing on their rooftops or in their gardens. It was estimated in 2003 that over 300,000 back gardens had been turned into productive spaces, although due to their being private spaces there is no indication of much they actually produce (Kisner, 2008).
2. Huertos Populares are community gardens located within an urban or peri-urban environment. These community gardens can be dissected into two sub-headings: plots and intensive cultivation gardens with plots typically occupying an area of less than 1000m<sup>2</sup> whilst intensive gardens are usually between 1000m<sup>2</sup> and 3000m<sup>2</sup>. They can be farmed by anyone from individuals through to co-operatives, and in 2000 they produced an average of around 8-12kg per m<sup>2</sup> for the year (Viljoen, ed. 2005).
3. Organopónicos are the most publicised component of Cuba's urban agriculture, most likely due to their highly impressive rates of production. They can be distinguished from Huertos Populares by the method of farming that is used. Organopónicos traditionally consist of containers – typically low concrete walls – that contain a mixture of organic materials like manure, soil and compost. Raising the bed in this manner provides the ability to grow on sites that would otherwise have been unsuitable. They can also be separated into two typologies: community gardens and high yield gardens. The community gardens are usually between 2000m<sup>2</sup> and 5000m<sup>2</sup> in size with the high yield gardens typically being



hectare or more. In 2000, they produced 20kg/m<sup>2</sup> per year and 25kg/m<sup>2</sup> per year respectively, around double the production rates of the Huertos Populares (Viljoen, ed. 2005).

What started out as a desperate response to dire circumstances has now developed into the most revered organic agricultural experiment in the world. It is now less expensive for the residents of Havana to buy produce from the urban farms within the city than to buy food that has been brought in from the countryside, making organic produce the cheapest option.

But the benefits extend beyond the availability of food - the creation of the larger farms has provided thousands of jobs within Havana and throughout Cuba. In 2003, 22% of new jobs created were in the urban agriculture sector (Kisner, 2008). The urban landscape of Havana has been beautified by the conversion of rubbish tips and collapsed buildings into gardens, creating a variety of green spaces spread throughout the city that can also absorb CO<sub>2</sub>, improving air quality.

And whilst my research focussed on Havana, urban agriculture is a key part of urban life for huge numbers of people around the world. In 1999, the FAO reported that “findings of national censuses, household surveys and research projects suggest that up to two-thirds of urban and peri-urban households are involved in agriculture.” (FAO,1999) Yet in the U.K. only 1.5% of the population is directly employed in agriculture with the figure dropping even further in Scotland to 1.2% (Girardet, 2008; SG, 2009; General Register Office for Scotland, 2009).

So how could we implement change like this in Glasgow, in the wake of the current pandemic?

The Scottish Government has acknowledged the vulnerability of our current food system:

“Scotland has long been dependent on imports to complement domestic production in meeting our food needs. The supply of food and drink is highly reliant on highly complex domestic and global food chains. These may be vulnerable to both short and longer-term emergency situations that could disrupt this supply.” (SG, 2009)

Scotland as a whole could benefit from a transition to healthier consumption patterns and a better relationship with food, but the need for this transition is particularly acute in Glasgow; where instances of severe illnesses are amongst the highest in Europe (largely attributable to poor diets, and inactive lifestyles). Currently, around 65% of adults are overweight, including 28% who were obese – figures which have remained consistent since around 2008 (SG,2019).

Whilst there are a variety of approaches to urban agriculture - from rooftop gardens and vertical farms, to allotments and urban farms - I think it is the latter that are the most practical to implement.



Glasgow has 25 different allotment sites, containing a total of 1,320 plots, this amounts to an area of 22 hectares or 0.04% of the current available green space in the city. There is also a consistent demand for more allotments with over 650 people typically on the waiting list for a plot (SAGS, 2007). But the greatest potential lies in the available open space that is either derelict or vacant within the city; after all, it was this type of plot that proved to be most productive in Cuba.

Glasgow has the highest levels of vacant urban land in Scotland, and the highest proportion of derelict land within the most deprived areas within the city, with over 60% of the total area being located in the 15% most deprived data zones in the Scottish Vacant and Derelict Land Survey (SG, 2018). In total there is approximately 950 Ha of vacant or derelict land within the Glasgow city boundary – notably less than the 35,000 currently devoted to agriculture in the urban and peri-urban areas of Havana.

The average size of a site in Glasgow is 1.3 Ha, or 13,000m<sup>2</sup>. Making them comparable both in size and nature with Havana's 'Organopónicos' that took vacant urban sites that were considered unsuitable for direct agriculture and used a raised bed form of growing. Based on that comparison, these sites could produce 237,500 tonnes of fruit and vegetables annually, far exceeding Glasgow's notional demand of 91,980 tonnes per year (based on WHO minimum daily consumption recommendations) and not taking into account the wider agricultural industry in Scotland or the potential of larger peri-urban sites.

Would we achieve yields like this immediately? No, in Cuba it took almost a decade to reach levels of production like this, not to mention the distinct climatic differences between Glasgow and Havana. But there is undeniably potential that exists to transform vacant and derelict urban sites into health and productive spaces.

Achieving change like this would require support to address some of the key questions that would arise from supporting such an endeavour:

- How would sites be made available? The Cuban solution was to provide title deeds to farmers for sites in perpetuity on the basis that they ensure that the site remains actively productive whilst the state retains ownership. In Glasgow, pilot projects should be established on city council-owned property in the first instance, whilst an incentive could be developed to encourage private owners of vacant sites to turn these over to temporary agricultural use.
- Who will farm the sites? The Cuban solution of investing in training and education above all has yielded tremendous success; provision of training both for the creation of jobs, but also to encourage amateur growers will be vital to the success of the initiative.
- How will this produce be distributed? A review of current legislation around the sale of produce from allotments is required – currently, this is limited to surplus produce, but the definition of 'surplus' is a grey area. However, thriving local examples such as Locavore show how successful



a small business growing and selling its own organic produce within the city can be.

But Scotland has done just this before; in the 1930's and in response to mass unemployment that the country was experiencing due to the closures of coal mines and the decline of shipbuilding the Scottish Allotment Scheme for the Unemployed was established. Through this scheme plots were provided to unemployed men and women, grants were given to cover the costs of tools, seeds and manure – all with the aim of providing people with a means to provide for themselves and in the hope that this would keep them physically and mentally healthy. Funds were also provided to cover the construction of communal huts and shelters on the proviso that these were built by the ploholders (Baxter, H. 2016).

With the country likely heading towards a sustained recession at a time where, prior to COVID-19, a record number of people were relying on food banks in the UK, I think having a discussion around ways in which we can generate employment and training opportunities, whilst responding to key issues such as population health, climate change, and food security is a very worthwhile one.



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