



## Can urban agriculture help regenerate soils?

The industrial food system harvests nutrients from rural landscapes and imports them into cities, degrading rural landscapes and creating waste management problems for urban communities. Urban agriculture is an opportunity to regenerate these wider ecosystems on which we all depend.

### Feeding the cities of the future

There are already 7.1 billion people on this planet. The UN projects a rise to 10 billion by 2060; 80% of these people will live in cities. With all wanting to eat daily, we face a major challenge to avert social collapse.

Up to now, urban communities have relied on imports of vast quantities of food – initially from adjacent rural landscapes but increasingly from subsidized, globalized food chains.

Into the future, this industrial food system will face many challenges:

- Oil, fertilizer nutrients, land and water will become scarce and more expensive.
- Subsidies, externalities and globalized logistics will likely become untenable.

Urban communities can meet these challenges by expanding urban agriculture.

### Lessons from the past

We know from experience during World War 2 and more recently in Havana, Cuba, that communities can meet most of their fresh food

needs by recycling their organic wastes and using these to grow healthy food in urban gardens.

Supplemented with local sources of grain for energy and meat for protein, urban agricultural systems like these have sustained viable healthy communities for millennia.

As demonstrated, for example, in China for over 4,000 years, urban agriculture is the only system that has been able to sustain high populations without reliance on external nutrient inputs. By contrast, no civilization dependent on the import of its food has survived.

Urban agriculture is not just the only basis for securing the future of urban communities, it is also critical in restoring the health of our soils and wider landscapes.

### How our food system affects wider landscapes

Over the past 200 years we have effectively been 'mining' our rural soils and landscapes as we continuously harvest nutrients from them to import into cities as food and other materials.

Once brought into cities, these nutrients are

converted into wastes that pollute and then eutrophy urban waterways, habitats and the wider urban environment.

More seriously, this concentration of waste nutrients in cities can create major health risks. These have often contributed to pandemics and the collapse of communities and civilizations.

The harvesting and export of essential nutrients from the countryside has progressively degraded the productivity and stability of rural landscapes. This impairs their ability to sustain food supplies to urban areas.

### **How urban agriculture supports regeneration and our future**

Urban agriculture safely manages and recycles nutrient wastes. It not only avoids the risks of disease and of food shortage, but promotes community health and prosperity. It does this by:

- Enabling urban communities to produce much of their fresh food needs safely in local gardens.
- Cycling composted waste and effluents to produce nutritious food.
- Preventing the accumulation of organic wastes and effluents that would otherwise risk breeding and transmitting disease.
- Enabling many of the nutrients imported from rural areas to be returned to the land as stock feeds or bio-fertilizers, closing this larger cycle and restoring the landscape.
- Creating a viable urban market for rural produce. This allows farmers to sustain economically and ecologically viable operations on their land.

By reinforcing the synergy and cycling between urban and rural areas, urban agriculture helps us to recognize that we are all part of the wider physical environment. Communities, economies and civilisations are all nested within - and depend on – this wider ecology.

As it restores urban-rural links and the wider landscape, urban agriculture restores the integrity of our food by ensuring:

- The security of our food supplies at affordable prices.
- The quality of that food, in terms of its nutritional value and freedom from toxic effects.
- The viability of the farmers and regional communities on which we rely for our food.
- The sustainability of our food system.
- The autonomy and resilience of our essential food needs to disruption.

Our industrial food system has been designed to maximize corporate profits. It does not address any of these community or health values. Nor does it consider its impact on the long term viability of our soils and landscapes – the ecological fundamentals on which we all depend.

Australia's current food plan, our national policy, is similarly focused on the commercial health of the globalized food processing and distribution duopoly, and not on the health and viability of farmers, urban consumers or the landscape.

Community interest in agriculture is not just about growing plants; it is part of a growing call for a food system that delivers integrity and a sustainable future.

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### **Further information on this topic:**

*Soils, an Australian Viewpoint* (CSIRO, 1983)

*Australian Soils and Landscapes*, by N McKenzie et al (CSIRO, 2004)

*Permaculture, a Designer's Manual*, by Bill Mollison (Tagari Publications, 1988)

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