Making every city **sustainable**

A vision of how to create more sustainable families, communities and cities

By Jonathon Walsh

FREESHARE ARTICLE
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Agriculture is the third largest contributor to global greenhouse gas (GHG) emissions by sector after burning of fossil fuels to generate power and heat, and transportation.

Besides being a major source of GHGs, commercial agriculture also creates a significant amount of pollution including that created by food transportation, fertilizer and chemical runoff that pollutes waterways and creates dead zones in oceans and rivers, as well as the damaging effects that artificial fertilizers have on soil quality and pH levels.

What solutions – that could be implemented quickly, cheaply and effectively – are available to minimize these issues?

One solution aimed at bringing food production closer to home is **local-level mobilization of teams of urban farmers.** These food production experts would move around towns and cities on specific assignments to:

- Build and establish rooftop and ground level gardens
- Teach people how to grow their own food sustainably and without chemicals, and
- Distribute gardening/urban farming information packs

– all backed by a comprehensive online database of ideas, strategies and how-to guides.

Key objectives of this strategy would be to boost urban food production, reduce food transportation-related pollution, slash use of chemical fertilizers, and make every community, town and city as close to completely self-sufficient as possible in terms of vegetables, before similar strategies are implemented for other food sources.

The food on the street

At street level, the goal would be to maximize the self-sufficiency of individual households and subsequently build sustainability from the ground up. This would entail boosting the self-sufficiency of each residence in the two most important areas: **1/** food, and **2/** water.

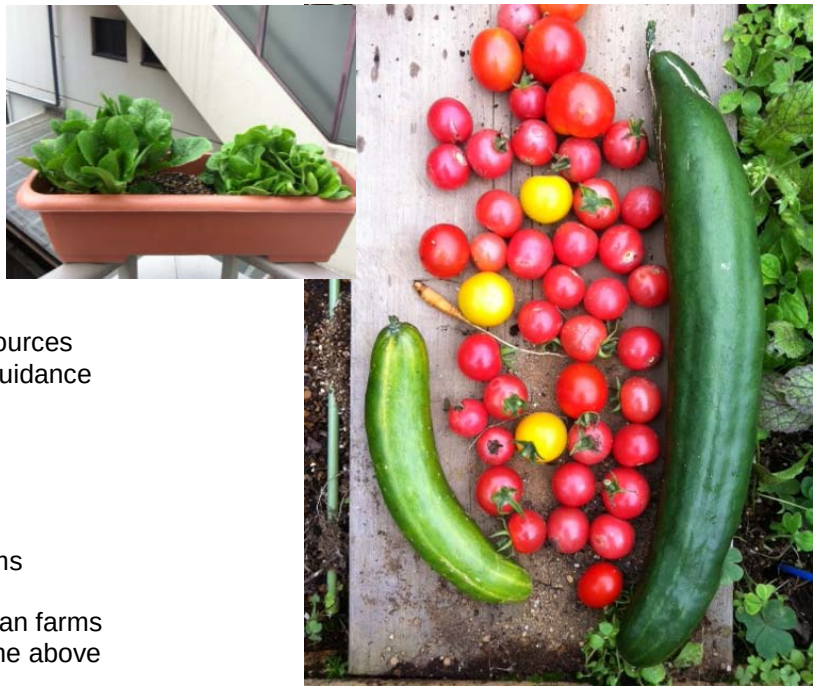
To accomplish the former, each household would receive basic guidelines – potentially sponsored to reduce costs – on how to become as self-sufficient as possible.

Required action at a city/regional level

To encourage local food production – and simultaneously reduce rubbish flows into landfills and bodies of water – local governments would select plastic recycling companies to recycle mainstream-use plastic products such as PET bottles and milk containers into plastic planters and flower pots.

As part of a local or central government-run advertising campaign, citizens nationwide would be encouraged to request these recycled planting containers.

The planting containers – along with basic instructions on how to grow food – would then be distributed either free of charge or offered at subsidized prices for people to use to grow food in at their homes or workplaces. Tax or rates rebates could be offered to citizens who opt in to the scheme.



Tomatoes and cucumbers grown without adding any artificial chemicals or sprays

This strategy would ideally be backed up with a range of additional initiatives and resources – all focused on providing information and guidance on gardening and sustainability, including:

- Gardening information websites
- How-To gardening brochures
- Food-growing kits
- TV gardening and sustainability programs
- Inter-town gardening competitions
- Installation of community gardens & urban farms
- Urban farming courses and training at the above community gardens and urban farms
- Promotion of food sharing and planned growing, ie: neighbors would decide among themselves what to grow – and share – to ensure they do not grow unnecessary amounts of the same crops.

Food on plates for people who need it

Many people would grow excess food. A portion of this excess could be distributed to those who cannot provide for themselves. This could easily be accomplished through a simple **food donation program**, such as Grow For Good, which enables individuals, families, companies, schools and other organizations to launch or expand their CSR/community support activities by growing food and donating a portion to charities, food banks and community organizations.

The press release (below) describes how Tokyo International School (TIS) donated a portion of the vegetables they grew on site to Second Harvest Japan food bank in July 2013.

>> TIS food donation press release

Key goals of such a program would be:

- To have large amounts of healthy, fresh – **free** – vegetables funneled to charities, food banks, community groups, etc. by families, schools and businesses as part of CSR and community outreach/support activities
- Cut pollution involved in growing and transporting food
- Increase participants' knowledge of critical urban food growing techniques
- Transform millions of consumers into food producers and subsequently boost their food independence and supply.

As more people grew food on site, either at home, work or educational facilities, they could not only begin providing for themselves as well as family, friends, neighbors and workmates, they could also directly contribute to putting food on plates for people who need it.
As the food self-sufficiency of households, streets, communities, towns and cities gradually grew, imports would fall (cutting food transportation-related pollution), and cities and towns – right down to street level – could begin collectively exporting food to other areas both domestically and internationally using a co-operative model.

What's possible?

Urban buildings can be transformed into urban farms. Rooftops can be converted into vibrant community food centers. Food grown on power poles could help feed entire streets. Sunlit walls can be turned into mini farms. Buses can be converted into mobile greenhouses that produce food anywhere. Office workers can become urban farmers without leaving their buildings.

SUSTAINABILITY PACK

Practical guides and information outlining 25 ways that individuals and families can start boosting self-sufficiency – within days – by growing kilograms of healthy, near-organic food and capturing thousands of liters of rainwater.

> Personal > Schools > Business

A simple raised garden will allow food to be grown on virtually any sunlit surface.

Towns and cities typically have millions of square meters of sunlit rooftops, lawns, parks, vacant lots, external building walls, and more that have the potential to be converted – or "re-purposed" – and used to capture rainwater and grow food.

The alternative? Continue to consume commercially-grown vegetables and unnecessarily expose ourselves and our families to dangerous agricultural chemicals and associated allergies, disease, food scares, and dependence.

Keeping it real

It's a fact that a significant portion of the population will not participate in this strategy for a range of reasons. However, the goals of boosting urban self-sufficiency and reducing pollution can still be easily achieved.

The key for local and city leaders would be to identify locations where food could be produced, and engage the public to take ownership of the garden building process. To support this, bylaws could be created that 'ring-fences' a minimum of 5 or 10% of town land for food production.

Car parks to gardens

The potential for large scale local food production is significant. In 2012 and 2013, the writer grew 3,000 tomatoes, 60 lettuces, 180 cucumbers and large quantities of other vegetables in a 3x5 m community garden allotment in Tokyo. That area is slightly larger than a standard car park. **>>** Read more.
Within months he turned from consumer to producer and ultimately gave away 25% of the harvest, including 800 tomatoes. He has also run 3 sustainability projects at Tokyo International School (TIS) that have shown students and staff how to grow large quantities of tasty, near-organic vegetables in their school gardens and that fed over 100 students and staff.

Under-utilized car parks in particular can be quickly converted into lush community gardens either by digging them up or building raised gardens on them. Supermarkets and other businesses with large rooftops could 'plant' gardens on their rooftops and produce a huge range of food.

>> How to Set up a Rooftop Garden

Green oases would spring up everywhere as lawns, back yards, empty lots, under-utilized car parks and many other community areas would be converted into gardens, and rooftops would be transformed into 'gardens in the sky' that not only beautify localities but also cool buildings and absorb carbon dioxide.

Why grow?

There's many reasons to grow food locally. Here are some of the key ones.

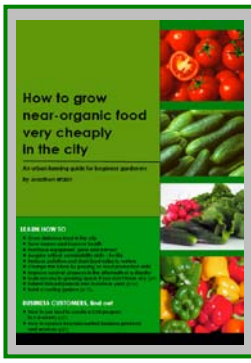
- ✓ **Grow extremely fresh "home-grown" near-organic food** – in the city
- ✓ **Grow food** within weeks – and learn food growing skills for life
- ✓ **Improve personal and family health**
- ✓ **Reduce intake of harmful chemicals** (very simple if pesticides, herbicides, etc. are not used)
- ✓ **Save money, slash food miles and directly help reduce pollution**

CASE STUDIES

Boosting self sufficiency – Tokyo, Japan

Click the below links to download reports showing how schools – and offices – can be quickly converted into food production and learning centers:

>> TIS Project Report – 2013
>> TIS Project Report – 2012



URBAN FARMING GUIDE

A hands-on highly practical step-by-step guide to growing healthy, delicious food in the city – minus harmful chemicals.

Learn the full cycle of food production: sowing, growing and harvesting, and much more.

>> Brochure

- ✓ **Boost food independence** and increase survival chances if a major disaster strikes
- ✓ **Set up gardens and grow food** for staff, events, or even sell 'company brand' vegetables
- ✓ **Increase eating enjoyment.**

Financial and other incentives would likely be required to realize this strategy, including:

- ✓ **National recognition** – Streets, towns and cities could all compete to achieve the highest level of food self-sufficiency in the nation. (Financial or other incentives could be offered)
- ✓ **Food security** – Growing food as near-organically as possible could be promoted as a way to eliminate suspicions and concerns about what is in food, promote food safety, etc.
- ✓ **Key incentives** for many budget-conscious home executives would be cost, proximity, health, etc.
- ✓ **A tree planting program** could be implemented in tandem with the food production strategy, creating more cool shady areas, fresh natural smells, and pulling more CO2 out of the atmosphere.

The only things holding us back are ideas and action.

The challenge now is for individuals to realize the limited nature of key resources, map out a sustainability strategy, and take responsibility for their own futures by boosting food and resource security. If groups of street residents, club members, schools, offices, or – on a larger scale, suburbs, towns and cities – cooperate, **there is huge potential to not only completely transform the way entire communities acquire food and conserve resources, but for consumers to become producers and rapidly turn 'dead' urban spaces into vibrant, thriving, sources of food, energy and health.**

The exciting aspect is, increasing our food and resource security is easy, affordable, can be integrated into a busy lifestyle, and we can take steps to achieve it immediately.

And we can start right here at home. ***Today.***

– **JRW.**

For more information about any of the ideas mentioned in this article, please contact the writer.

RUNNING A GARDEN: Time investment

How much time does it take to start and run a garden?

Growing food takes surprisingly little time. The following are time investment guidelines for starting and managing:

1/ A car park-sized garden plot:

- Digging in new soil: 2-3 hrs
- Sowing seeds, seedlings: 2 hrs
- Daily maintenance, watering: 20-30 mins in summer, less in winter.

2/ Home garden (using planter boxes):

- Placing planter boxes, adding soil: 2-3 hours
- Sowing seeds, planting seedlings: 90-120 mins
- Daily maintenance, watering: 15-20 mins

RESOURCES

- **Feeding the Future** – 15 methods that can and are being used to feed the world's expanding population. Many of these methods will be valuable during emergencies if food distribution links are broken.
- **A Crop-by-Crop Guide to Growing Organic Vegetables and Fruits** – A superb resource containing information on how to grow a wide range of crops.
- **How To Build A Raised Vege Garden**
- **Treehugger** – A leading media outlet dedicated to driving sustainability mainstream.
- **Urban gardening services** – (Tokyo only)

About the writer

Jonathon Walsh is director of Business Grow, a Tokyo-based company specializing in providing the following green business/sustainability services and advice:

- Garden design, consulting, installation and maintenance
- Gardening demonstrations, food growing kits
- Vertical gardening, balcony gardening
- Business sustainability consulting.

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