How to grow healthy food in the city

The essential urban farming guide for people who want to eat real food, improve their health, build self-sufficiency, and change the world

By Jon Walsh, Sustainability Consultant
How to Grow Healthy Food in the City

A step-by-step guide to growing healthy, no-spray food in urban areas

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Part of the proceeds of the sale of this book go to Second Harvest Japan food bank

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Introduction

Growing organic or no-spray food in the city is not only one of the best things we can do for our health, it’s also a very effective way to maximize self-sufficiency, boost disaster preparedness, help protect the environment and fight climate change – simultaneously.

That’s why the key focus of this guide is to equip readers with the necessary skills to grow fantastic food in the city using planet-friendly methods and no added chemicals while spreading some of the fun of urban farming.

For readers concerned about climate change, this guide presents a simple, workable and cost-effective solution that can be started immediately and will enable them to take immediate proactive steps to support the environment.

And, to make a good thing great, there’s little that can beat giving delicious, naturally produced food – in essence, good health and enjoyment – to people we love and care about.

What this guide will do

This urban farming guide presents the basics of sowing, growing and harvesting healthy food – without chemicals or sprays – with a focus on sustainability.

In it you will learn how anyone – even those who have zero growing experience – can grow great tasting food in, on, or around their house, school, office, or city.

For business customers, this guide also comes with a Grow For Good strategy that outlines how to turn your food growing efforts into a CSR program. > P57

Get inspired!

Watch teacher Stephen Ritz talk about growing green in the South Bronx where he and his students grow gardens for food, greenery – and jobs. > Video

Pam Warhurst: How we can eat our landscapes: How plots of unused land can be turned into communal vegetable gardens. > Video
What’s inside

To access any section, click on its name

Introduction / What this guide will do .................................................. 4
About the author .................................................................................. 5
Resources to start you up ................................................................. 12-13

PART 1: GETTING STARTED  ............................................................. 17
Why grow your own food? | Notes about chemicals and artificial fertilizers ................. 15
15 vegetable growing basics ................................................................. 16
Getting started | Selecting a site | Site/location checks ................................................. 17-19
Where can we grow food? 
   Essential gardening equipment | Basic gardening tools ................................................. 20-22
   Where to purchase gardening equipment, plants and seeds ....................... 23-25
   Where to buy organic seeds and soil in Tokyo .......................................... 23
   Sustainability options ...................................................................... 26
   How to identify the correct soil for your needs ......................................... 27-28
   What can you grow? | What should you grow? | When to grow? ......................... 29
   How to gain access to growing space if you don’t have any ...................... 30

PART 2: SOWING SEEDS  .................................................................. 31
What do seeds provide us with? | Important points to note when sowing seeds ..................... 32
   Basic seed sowing information ................................................................ 33
   How do seeds grow? | How to grow vegetables from seeds ................................. 34
FUNDAMENTAL SKILL #1: How to sow seeds ............................................ 35
   3 seed sowing mistakes and how to avoid them | 4 ways to sow seeds & maximize yield .................. 36
   Size matters: The bonsai effect .......................................................... 37

PART 3: TRANSPLANTING SEEDLINGS .............................................. 38
Introduction to transplanting seedlings | Required equipment ......................... 39
FUNDAMENTAL SKILL #2: How to transplant seedlings ............................... 40
   Transplanting seedlings – Getting the height right .................................. 42

PART 4: GROWING STRATEGIES & GARDEN MAINTENANCE ....... 43
How to extend your harvest ..................................................................... 44
   Seedlings vs. Seeds | How to maximize yield ................................................. 45
   Garden maintenance: Thinning, watering, mulch, harvesting ..................... 46-47

PART 5: THE GARDEN SECTION ..................................................... 46
   How to set up a planter box/balcony garden ............................................ 49-50
   [Promotion] Urban Farming Starter Packs .............................................. 51
   Raised gardens .................................................................................... 52
   How to build a raised garden ................................................................... 53-54
   Other food growing options ................................................................... 55
   Rooftop garden options for home and office .......................................... 56
   For businesses: Use food to create a CSR program .................................. 57
   Urban gardens in Tokyo ........................................................................ 58-60
   Know your Japanese food! ...................................................................... 60
   Final thoughts from the author ............................................................. 61
Part 1

Getting Started

Find out

- Why grow your own food?
- Notes about chemicals and artificial fertilizers
- 15 vegetable growing basics
- Getting started | Selecting a site | Site/location checks
- Essential gardening equipment | Basic gardening tools
- Where to purchase gardening equipment, plants & seeds
- Where to buy organic seeds and soil in Tokyo
- Sustainability options
- How to identify the correct soil for your needs
- What can you grow? | What should you grow? | When to grow?
- How to gain access to growing space if you don’t have any
Why grow your own food?

Growing plants from seeds is one of the easiest and cheapest ways to grow fantastic food and create a beautiful garden. It is very satisfying to do and you will see the plants grow from seed to salad.

Modern commercial farming methods exacerbate climate change and poison soil, waterways, and consumers. There has got to be a better way – and there is. Business Grow is helping power the worldwide movement of people who grow their own food in cities by promoting, incorporating and using ‘no-spray’ gardening techniques, water, recycled materials, and little else.

It’s simple, healthier, cheaper, and the food tastes amazing. It also:

- Teaches critical food production knowledge and skills
- Promotes good health by showing people how to reduce intake of toxic chemicals
- Reduces costs and waste production
- Boosts personal, family and group/school self-sufficiency
- Reduces environmental pollution and energy usage
- Boosts food security and disaster preparedness.

Notes about chemicals and artificial fertilizers

Spraying chemicals on food creates a whole host of problems.

Every season, commercial farmers and hobby gardeners spray and poison their fields and food. More spray equals more poisoned food, which leads to more poisoned and sick people. Agricultural sprays are known by a number of names – insecticides, pesticides, chemical fertilizers; all these labels obscure the fact that these products are poisons that have been linked to a wide range of human health hazards ranging from short-term impacts such as headaches and nausea to chronic impacts like allergies, reproductive harm, endocrine disruption, and cancer.

If we use chemicals, we will be poisoning the plants and soil, and if we do that and feed vegetables grown in poisoned soil to our families, we will be poisoning them. Who would want to do that? It is therefore best to try not to use any artificial chemicals or sprays in the food growing process.

What flavor toxic chemicals would you like sprayed on your food?
Getting started

To get started, you will need to locate an area that receives ample sunlight – 6 hours a day is sufficient, however, it is possible to grow many vegetables with less, even 2-3 hours a day.

Next, decide where you want to grow. Planter boxes come in a wide range of shapes and sizes (containers can even be recycled into planter boxes) and can be placed in, under, or beside many existing objects and areas.

Besides the ground and planter boxes, food can also be grown in:

<table>
<thead>
<tr>
<th>Pots</th>
<th>Grow bags and shopping bags</th>
<th>Crates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tins</td>
<td>Metal and plastic containers</td>
<td>Buckets</td>
</tr>
<tr>
<td>Recycled containers</td>
<td>Hanging baskets</td>
<td>Stone pots</td>
</tr>
<tr>
<td>Wine boxes/barrels</td>
<td>Terracotta pots and containers</td>
<td>Shoes.</td>
</tr>
</tbody>
</table>

Before using any of the above, be sure to make, cut or drill water drainage holes in the base and ensure they are clean, and, in particular, do not contain any toxic or poisonous substances.

A 20 x 60 cm planter box containing lettuces

Why not?
A: Virtually anywhere that is exposed to sunlight, including:

- Unused driveways
- Car parks
- Decks

- Verandahs/balconies
- Patios
- Rooftops

- Empty properties
- Unused swimming pools
- Steps.

There are many other places that can be used to grow food with a little (or a lot of) effort, including:

**Footpaths** – Raised gardens could be installed on city sidewalks

**Building rooftops** – Could be converted into vibrant community food centers

**Power poles** – Could be grown on using vertical gardening techniques to help feed entire streets

**Sunlit walls** – Could be turned into mini farms

**Buses** – Could be converted into mobile greenhouses that produce and take food anywhere.

Virtually any sunny location where a planter box or pot can be stably placed could be considered. Also, think vertical: containers and pots can be attached to walls, fences and gates, and suspended under verandahs and other outcrops.

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 grow food.

**Ideal places for plants to grow food are locations with:**

- **Maximum sunlight**
- **Elevation** (to maximize sun exposure)
- **Are they easy to water?** – this is very important because if you want to build a rooftop garden and your nearest water supply is at ground level, you may have to reconsider options.
Sustainability options

To make a container garden more sustainable and environmentally-friendly, consider the following options:

- **Try to use recycled planters and pots** whenever possible. Planters made from recycled paper are ideal, although these do have a limited life, usually 1-2 years if used outside. See [www.ecoforms.com](http://www.ecoforms.com)
- **Buy locally** where possible and practical. Consider how far products have to travel to get to you, especially if they are imported.
- **Look for heirloom seeds** (can be saved from the current year's plants to be grown the next year) over **hybrid seeds** (may not be able to be grown the following year).
- Try to use **organic** soil, fertilizer and compost.
- **Set up a system to capture rainwater** to use on your garden. If you would like a step-by-step guide, please ask Business Grow about their **How to Set Up a Rain Collector** guide.
- Shop around for watering nozzles that can be screwed to 500ml or 2L plastic bottles to convert them into watering bottles.

Simple screw-on sprinkler and pouring caps like those shown above can be purchased from Daiso and some home stores in Tokyo.
What can you grow?

Virtually anything that can be grown in the countryside can be grown in the city, even rice. Planter boxes can be used to grow a huge range of vegetables, fruit and herbs, including:

### Vegetables
- Beans
- Carrots
- Kale
- Leaks
- Mizuna
- Onion
- Peas
- Potatoes
- Spinach
- Squash

### Fruit
- Apples
- Berries
- Guavas
- Limes
- Mikan
- Peaches
- Plums
- Strawberries

### Herbs
- Basil
- Bay leaf
- Chamomille
- Coriander
- Fennel
- Lemon balm
- Mint
- Oregano
- Parsley
- Rosemary
- Sage
- Thyme

and more.

What should you grow?

Here are a few tips for deciding what vegetables to grow:

- If you are currently eating a certain selection of vegetables, try growing them.
- Try growing some vegetables you haven’t eaten before.
- Mix them up! Micro greens are generally very fast growing and in some cases will be ready to eat in just 2-3 weeks after seeds are sown. Sowing a mixture of micro green seeds in a planter box will produce a veritable smorgasbord of delicious salad leaves.
Part 2

Sowing Seeds

Find out

- What do seeds provide us with?
- Important points to note when sowing seeds
- Basic seed sowing information
- How do seeds grow? | How to grow vegetables from seeds
- FUNDAMENTAL SKILL #1: How to sow seeds
- 3 seed sowing mistakes and how to avoid them
- 4 ways to sow seeds and maximize yield
- Size matters: The bonsai effect
Having some basic gardening information before you start planting will have a big pay off. The following is a shortlist of basic seed growing information. Be sure to check seed packets and other information resources for specific seed and sowing information. Learn more here: [A Crop-by-Crop Guide to Growing Organic Vegetables and Fruits](#)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Type of soil</th>
<th>Watering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus</td>
<td>Sunny but sheltered</td>
<td>Compost or fertilized soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Aubergine</td>
<td>Sunny but sheltered</td>
<td>Compost</td>
<td>Regularly</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Sunny</td>
<td>Compost or fertilized soil</td>
<td>Regularly</td>
</tr>
<tr>
<td>Brussel sprouts</td>
<td>Sunny but sheltered</td>
<td>Compost or fertilized soil</td>
<td>Regularly</td>
</tr>
<tr>
<td>Carrot</td>
<td>Sunny or partial shade</td>
<td>Any soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Chingensai (Pak Choi)</td>
<td>Sunny or partial shade</td>
<td>Any soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Climbing beans</td>
<td>Sunny</td>
<td>Compost or fertilized soil</td>
<td>Regularly</td>
</tr>
<tr>
<td>Cucumber</td>
<td>Sunny but sheltered</td>
<td>Compost</td>
<td>Regularly</td>
</tr>
<tr>
<td>Lettuce</td>
<td>Sunny or partial shade</td>
<td>Any soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Onions</td>
<td>Sunny or partial shade</td>
<td>Compost or fertilized soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Peas</td>
<td>Sunny</td>
<td>Compost or fertilized soil</td>
<td>Regularly</td>
</tr>
<tr>
<td>Potatoes</td>
<td>Sunny or partial shade</td>
<td>Any soil</td>
<td>Regularly</td>
</tr>
<tr>
<td>Radish</td>
<td>Sunny or partial shade</td>
<td>Any soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Spinach</td>
<td>Sunny or partial shade</td>
<td>Compost, fertilized soil</td>
<td>Regularly</td>
</tr>
<tr>
<td>Spring onion</td>
<td>Sunny or partial shade</td>
<td>Compost, fertilized soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Sweetcorn</td>
<td>Sunny but sheltered</td>
<td>Compost or fertilized soil</td>
<td>Regularly</td>
</tr>
<tr>
<td>Sweet potato</td>
<td>Sunny but sheltered</td>
<td>Compost or fertilized soil</td>
<td>Every few days</td>
</tr>
<tr>
<td>Tomato</td>
<td>Sunny</td>
<td>Compost or fertilized soil</td>
<td>Frequently</td>
</tr>
</tbody>
</table>
Does pot size have any effect on plant growth? Yes. The more space a plant’s roots have to grow, the larger the plant is likely to grow. Bonsai trees do not grow big because the containers they are grown in are always very small.

**Here’s the maths:**

Small pot ➔ small plant ➔ small harvest.

Big pot ➔ big plant ➔ bigger harvest.

If you want a larger plant and bigger yield, use a larger pot or container.
Part 5

The Garden Section

Find out

- How to set up a planter box/balcony garden
- **Promotion:** Urban Farming Starter Packs
- Raised gardens
- How to build a raised garden
- Other food growing options
- Rooftop garden options for home and office
- For businesses: Use food to create a CSR program
- Urban gardens in Tokyo
- Know your Japanese food!
- Final thoughts from the author
Looking for a better way to grow food but don’t have any arable soil around you to do so? Why not grow your next plate of vegetables on concrete? Doing so is easier than many people think. Let’s find out how.

Why use a raised garden?

While there are many good reasons to utilize and grow food in this type of garden, one of the most attractive is that raised gardens let urban farmers grow greater quantities of food on virtually any sunlit surface including concrete, stone, sand, asphalt, gravel, wood, grass or plastic, even the insides of swimming pools. The cleanliness or arable nature of the surface a raised garden is built on or placed essentially ceases to matter.

Raised gardens present other benefits including:

- **Flexibility** – Grow food in areas with infertile, dead or otherwise unusable soil or surfaces
- **Low cost**, easy to install, compact, scalable (can be scaled up or down to meet food requirements)
- **Broad growing options** – Possible to grow a wide range of vegetables in just one raised garden
- **Easier on the body** – Raised gardens are ideal for people with stiff joints, back pain, or other mobility issues as the elevation of this type of garden provides easier access compared to a garden in the ground
- **Produce safer food** – If you choose not to use any poisonous chemicals, you will produce healthier food.

An ideal initial size to make a raised garden is 1 x 1 meter with a depth of 15-18 cm. This minimum soil depth will enable you to grow most small and medium-sized vegetables. If they are deeper – ideally 1-2 feet (30-60 cm) – climbing vegetables such as tomatoes and cucumbers should be able to be grown depending on available sunlight and other factors. In addition, raised gardens, or groups of them, can be as big as space and requirements permit.

What are the best crops to grow in a 15-cm deep raised garden?

- **Vegetables**: Lettuces and other salad vegetables, strawberries, beans, onions, oriental greens: mizuna, komatsuna, pak choi, etc., peas, radishes, spinach, climbers (tomatoes, cucumbers, etc. depending on soil depth), eggplants, paprika, carrots, daikon, cabbage, broccoli, potatoes, and more.
- **Herbs**: Basil, chives, coriander, oregano, mint, parsley, thyme, and more
- **Flowers**.
Final thoughts from the author.....

⇒ Back to Contents

Reflecting life
Planting seeds and gardening has made me aware of two key ways that gardening reflects life:

1/ The weather and seasons, and
2/ Life in general, including successes and failures.

When seeds are planted, some will survive, thrive and grow strong, others will survive but remain weak, some will grow and then die, and others won't grow at all. This is a very humbling aspect of gardening and farming that closely reflects life.
It sets us in our place because, similarly, some people, businesses and ideas just don't make it or survive. But when you grow a bumper crop, you feel on top of the world – you really can do anything.

Connection with the past
On a personal note, I find a very comforting aspect of gardening is the connection it creates to our past, our ancestors, and our species. My mother and all my grandparents were gardeners, and although they have all died, I find it very comforting to know that I am doing exactly what they did: dropping seeds in soil, nurturing plants until they are ready to harvest, and immensely enjoying the natural bounty on my plate.
This is not just a connection to my immediate family, but to my and our ancestors, in fact, to all of humanity, as growing food is what every generation has done since time immemorial.

First steps.....

One of the keys to starting any new activity, exercise or venture is simply to take the first step.

If you have never grown anything before, I encourage you to give urban farming a try.
Start small if you like – with just one pot or planter box – and expand onward and upward from there.
You will make mistakes and have seeds not sprout and plants not grow but don't let mistakes or failure stop you from trying. With practice comes experience and with experience comes confidence.
Take these events in your stride and aim to come back stronger, more experienced and more confident next season.

I hope this guide has given you a basic idea of how to grow good food.
Please use what you have learnt to show others how to grow their own food.

If you have any questions or feedback about this guide, or you simply want to share your gardening successes, feel free to contact me at: info@businessgrow.net

To good health and great taste,

Jon Walsh