

# Growing Food on Your Dinner Table: The 100 Centimetre Diet

June 18, 2007

By Rebecca Dunsmuir

**Picture yourself** gazing over a jungle of green. Bean plants rise a meter in the air; peas climb up beside them. The leafy stems of carrots and onions spring up from dark soil. Pink blossoms grace the stalks and will soon turn into food. All of this green lies before you. And you're not standing in a farmer's field. You're not out at the community garden. You're not even in your backyard, because you don't have a backyard. You live deep in the city and you're growing food inside your home.



Think you're dreaming? This could be reality. It is possible to grow food inside, with very few inputs and limited space. With a few containers, some soil and some seeds, you can grow a garden on your dinner table and harvest vegetables 100 centimetres from your plate. Many different plants can grow indoors; all you need is water and sunlight. Many vegetables thrive in confined containers and take up little space, growing well as long as their roots are not too crowded.



I started my dinner table garden after hearing about my parents' school garden project on the island. They were building a garden at their school to get all the kids involved in growing their own food. They wanted to teach them about plants, food, and ecosystems. I visited their garden in the summer and got a taste of fresh carrots and peas. Crunching on a carrot right out of the ground, I asked myself why I wasn't growing my own food. Back in the city, where I don't have a backyard or much space, the answer became a little clearer. However, I challenged myself to find a way around the space and land issue. And now I'm growing beans, peas, carrots, tomatoes, and onions in milk jugs on my dinner table!

## Why grow your own food indoors?

Growing food in your home is a way to bring food closer to yourself, both physically and mentally. You get to see it grow and experience, as I did, the excitement of your blossoms turning into vegetables. Not only will it be fresher, as you can pick it a few minutes before you eat it, it will also be more environmentally friendly, as it won't have to travel thousands of miles on a fossil fuel burning truck to get to you. And no more worrying about what the farmer was spraying on your salad greens – you know all your veggies are organic, because you raised them.

### Some vegetables that grow well in containers:

Beans	Herbs
Beets	Kale
Carrots	Lettuce
Chard	Peas
Chives	Peppers
Cucumbers	Radishes
Eggplant	Squash
Green onions	Tomatoes

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**Of course**, growing a few vegetables in your living room won't keep you out of the grocery store, but it will give you a few snacks and some salads. Also, growing your own food is cheaper, after the initial costs of starting up your garden are taken care of. And starting your garden doesn't have to be expensive. You can use reused containers such as milk jugs or ice cream buckets for pots, and you can make your own soil conditioner by composting your food waste.

I can do all of this in my backyard or the community garden, you say. Fair enough; indoor growing could simply be for those people who don't have access to land or gardens. But think about this: no pests, no weeds, and no bad weather. Indoor growing has many benefits over outdoor growing. House plants are vulnerable to pests that do get inside your home because they're living in an artificial environment,<sup>3</sup> but because your soil is confined in a container there's much less risk of pests getting to your plants. It's the same with weeds. If you use potting soil free of weeds and pests, you won't have a problem. As well, growing indoors means you don't have to worry about bad weather harming your plants – you get to control the weather. As Van Patten points out in his book, *Gardening Indoors*, you essentially play Mother Nature when you garden inside.<sup>4</sup> Using lights you can even imitate different seasons and times of day for your plants, as well as prolong their growing season.



***“Indoors, the horticulturist assumes the cherished role of Mother Nature”***

***- George Van Patten***

### **Why is growing food indoors important?**

Everything you grow that you can eat is one small step toward food security, which means having access to affordable, nutritious, and culturally appropriate food. Growing food within cities, called urban agriculture, is a viable way of supplementing your personal food supply toward this goal. It may not lead to mass yields of food feeding the city, but at least it's a step. People in developing countries with no land are already using container growing techniques to feed themselves. For example, ANADEGES, a group of about 20 NGOs, started a container gardening project in Mexico for people below the poverty line.<sup>5</sup> The group helped these people “develop their own autonomous capacity to produce food organically in small backyards or patios, balconies, rooftops.” This project could easily be extended to growing indoors, as well. Overall, container gardening, whether outdoors or indoors, is a low-input way of growing food and that doesn't require land.

In North America, as populations rise and urban densities increase, growing food inside our buildings may gain importance. In Vancouver, something called EcoDensity is starting to rule city planning. This initiative is a response to the need to manage our growing population in a sustainable way. It is “designed to create greater density throughout the city, and do it in a way that lowers our impact on the environment; ensures the necessary physical and social amenities; and supports new and different housing types as a way to promote more affordability.”<sup>6</sup> EcoDensity is basically a way to achieve greater city density while staying green. This means we're going to have to be more creative about where we put our green space, including gardens.

If we're going to have more and more buildings to house our population, why not take advantage of this and use them to feed the population as well? Picture green roofs and greenhouses on top of highrises, and container gardens in every window.

### How can I grow my own food indoors?

Growing food inside can be really easy. Of course, the more you put into it, the more you will get out, but it doesn't have to be hard. Methods of growing food indoors range from planting a few seeds in containers on your table to hydroponics systems (Box 1) to whole farms inside high-rises (Vertical Farms in Box 2). A continuum of technology exists, but the basic idea is the same: "with indoor horticulture, light, air, temperature, humidity, ventilation, carbon dioxide, soil, water and nutrients may be precisely controlled to yield a perfect environment for plant growth."<sup>7</sup>



The simplest way to grow food in your home involves just containers, soil, and seeds. Re-used containers work great, and make your garden even more environmentally friendly. Simply poke some small holes in the bottom for excess drainage, fill the container with potting soil, and plant your seeds. Your plants will need sunlight, so place the containers anywhere in your house or apartment that gets sunlight. You could have containers on your bathroom counter, on your bedroom window sill, in your kitchen, or on your dinner table – as long as they get light. Many books and online guides will tell you how much light different plants need, and, if you really want to get into it, you can get yourself a High Intensity Discharge lamp so you can supply your plants with the optimal amount of light and prolong their growing season.<sup>8</sup> Next, all you need to do is water your plants: the general rule is water whenever the soil feels dry, and then stop pouring when water starts to drain out of the bottom of the container. For better yields, you can feed your plants as well – use soil conditioner or fertilizer. Make your own soil conditioner by composting your food scraps, or buy some organic fertilizer at the garden centre. And then you just wait for your food to grow...

For more tips, suggestions, and how-to guides check out the resources in Box 3!

### Box 1: Hydroponics – Just Add Water!

Hydroponics is a method of growing plants that uses a mineral nutrient solution instead of soil. "Hydro" means water and "ponos" means labour, so the word describes putting your water to work. Plants don't absorb nutrients directly from the soil; these are first dissolved by water. "As far as the plants are concerned therefore, the soil is only a storehouse for nutrient salts and water and the anchorage in which they fasten their roots."<sup>9</sup>

So, hydroponics works on the idea that plants don't need soil and can grow in nutrient water alone, or in a porous growing medium such as gravel, which anchors the roots and allows them to breathe. Hydroponic plants have their food and water delivered right to their roots which means they can put their energy into growing more plant instead of longer roots.<sup>10</sup> The benefits of hydroponics include higher yields than conventional growing; being able to grow food where the soil does not support crops; and less pesticide use, as most pests live in the soil.



### Box 2: More resources for your gardening information!

1. Gardening Indoors by George Van Patten – a great book with everything you need to know to create your own Garden Room at home.
2. Hydroponics Overview: [http://www.growingedge.com/basics/tutorial/01\\_history.html](http://www.growingedge.com/basics/tutorial/01_history.html) - more information on hydroponics and how to use this technique at home
3. Vertical Farm Project: <http://verticalfarm.com/> – check out this wild idea for growing food in the city!
4. Worm Composting: <http://www.cityfarmer.org/wormcomp61.html> and the Vancouver Compost Hotline: (604) 736-2250 – Information on composting indoors with worm bins, as well as other urban composting methods and advice.

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### Notes

1. George Sullivan, Understanding Hydroponics: Growing Plants without Soil (New York: Frederick Warne, 1976).
2. Linda Brandt, Gardening in Containers (Menlo Park, California: Lane Publishing Co., 1977).
3. Sonia Day, The Urban Gardener Indoors (Toronto: Key Porter Books Ltd, 2004).
4. George Van Patten, Gardening Indoors (Van Patten Publishing, 1995).
5. Rodrigo A. Medellín Erdmann, Container Farming: Organic food production in the slums of Mexico City (Journey to Forever, Undated). [http://journeytoforever.org/garden\\_con-mexico.html](http://journeytoforever.org/garden_con-mexico.html)
6. City of Vancouver, EcoDensity 101: Introduction (City of Vancouver, 2007). <http://www.vancouver-ecodensity.ca/content.php?id=2>
7. Van Patten, 12.
8. Van Patten, 19.
9. Gisela, Gramenz, Indoor Gardens and Window Boxes (London: Lutterworth press, 1971), 20.
10. The Growing Edge, History of Hydroponics (New Moon Publishing Inc, 2001) <http://www.growingedge.com/basics/start.html>



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