



The Rooftop Garden Project
liberating new spaces for healthy cities

www.rooftopgardens.ca

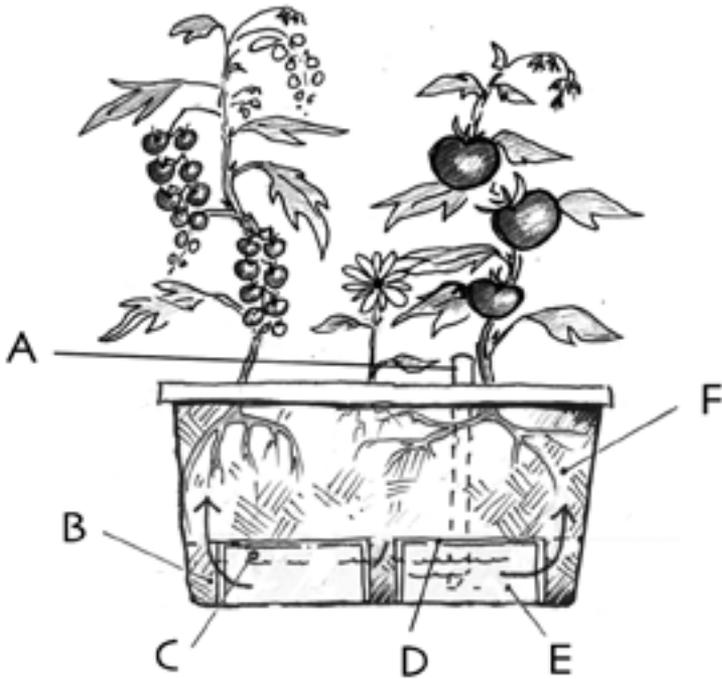
“Ready-to-grow” for the future!
Guide to set up and use your grower

Ecological grower with water reservoir
Grower designed for low maintenance
vegetable gardening.



The First Spring

Get prepared to start your grower!



A: Filling tube

D: False bottom

B: Submerged strip
(Underground irrigation by capillarity)

E: Water reservoir

C: Overflow hole

F: Soil mixture

The principle of irrigation by capillarity creates an ideal environment for growing healthy vegetables! You can also explore this growing technique with other types of recycled containers. For ideas, check out our "Guide to Setting up Your Own Edible Rooftop Garden", come and visit us in our gardens or simply visit our website www.rooftopgardens.ca

Steps to follow

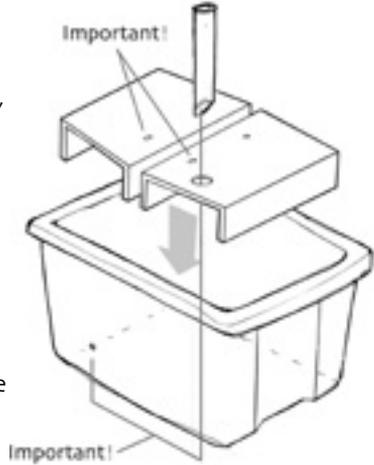
1. Assemble the components according to the diagram. (Important: filling tube must be on same side, but opposite overflow hole. Drainage holes must be in center of grower. See diagram.)

2. Purchase:

- a. a 30 to 35-litre bag of growing mix, also sold as:
 - flower box mix
 - potting soil

Avoid:

- garden soil or humus
 - peat moss
- b. 25 to 30 litres of compost, such as:
 - balanced and mature homemade compost or vermicompost
 - commercial compost



Growing Mix and Compost

Growing mix is a lightweight alternative to soil that is sold in the springtime in garden centres, hardware stores and supermarkets. It is divided into two categories: garden soil and potting soil.

Garden soil is mainly composed of dark soil and is not recommended in a container, since it has the tendency to get compacted. It is also sold under the names black soil, miracle soil and peat moss.

Potting soil is a mix of peat moss, vermiculite, perlite and compost that is specially formulated to ensure good water retention and good drainage in pots and containers. This product is also sold under the names potting mix, starting mix or transplanting mix. Prioritize mixtures that are very lightweight and do not include chemical fertilisers.

Compost is a fertiliser made from the decomposition of organic waste. Homemade compost or vermicompost is the ideal addition to your new grower, since it will allow you to complete the food cycle at your own home. Make sure that the compost is ripe, since a young mixture will absorb nitrogen that is necessary for good plant growth. Many commercial varieties are also available (shrimp, sea weed, sheep, cow manure and many more) that also work quite well.

3. Fill the container's three submerged strips with moistened growing mix (perlite or vermiculite are recommended for better wicking) and compact it. Make sure the false bottom's walls are fully vertical.
 The growing mix must rest at the bottom of the container and spill over the false bottom to ensure the upward movement of water.
4. Add the growing mix and compost to the grower, and mix well.
5. Moisten until a teaspoon (5 ml) of water flows out of a pressed handful of the soil mixture.
6. Lightly compact the mixture in above the three strips to improve capillarity.
7. Spread organic fertiliser (see fertilisation chart for quantity and frequency) on the surface of the growing mix and mix throughout the top 10 cm.

	Type	Variety	Plants / grower	Fertilisation
Fertilisation Chart	Fruiting plants	Determinate tomato	1 to 2	2/3 cup fertiliser at beginning of season + 1/2 cup every month
		Bell pepper	3	
		Ground cherry	2	
		Dwarf (string) beans	4	
	Non-fruiting plants	Basil	4	2/3 cup fertiliser at beginning of season
		Lettuce	6 to 8	
		Edible flowers	4 to 6	
		Fine herbs	4 to 6	

Calcium

For fruiting plants like tomatoes and peppers, an addition of calcium at the beginning of the season supports abundant fruiting and prevents blossom end rot. Dolomitic lime is a mineral and provides considerable amounts of calcium and magnesium to a garden, without destabilising the pH of the growing medium. In the spring, mix one cup of dolomitic lime for 25 litres of growing mix before planting and repeat once a year.

8. Plant your seeds or transplant your seedlings (refer to chart on p.3).

9. Water the surface of the grower abundantly.

This is to be done only when planting, transplanting or in case growing mix dries out during the summer due to prolonged lack of water in the reservoir.

10. To avoid washing away the soil's nutrients, water only through the filling tube, using a funnel. Keep watering the reservoir in this manner, until water flows out of the overflow hole.



In the Fall

With the cold coming, it's time to go inside

Here are some suggestions to help prepare your grower for the cold season.

1. Once the harvesting is done and winter is in sight, stop filling the water reservoir.
2. Once the reservoir is empty and the plants have dried out from a lack of water, simply cut the plants down to the soil and mix the dried plant material into your compost pile.
3. To reduce the weight of your grower and speed up the defrosting of the growing mix in the spring, empty the water reservoir by tipping it over on the side of the overflow. Next, put the grower upright again and cover the surface with plastic. Your grower is now ready to survive the winter!
4. The grower is at its lightest - if it need to be moved, this is the ideal time.

Next Spring

The beginning of a new season!

Here are some suggestions that will help you re-start your garden after the last frost.

After one growing season, the plants have consumed most of the nutritious parts of the compost that was added to the growing mix. Roots and accompanying microbial life have also started to degrade particles of the growing mix. Potting soil generally has a life span of two to four years, after which its capacity for water-retention and drainage is reduced, compromising plant health. To guarantee good results each year and to extend the life of the growing mix, we suggest fertilising it every spring.

To add fertiliser:

1. Mix what is in your grower to untangle and spread out the roots from last summer;
2. Remove 10 to 20% of your growing mix;
3. Prepare a mixture of compost and growing mix as follows:
75 to 80% compost
20 to 25% perlite (to improve drainage);
4. Fill the grower with the new mixture of compost and mix it in with the existing growing mix.
5. After two years of gardening, remove all the soil and take out all roots and stems, especially those in the three strips.



Some ideas for inspired gardeners!

After your first season of gardening, you might have the desire to try out other types of fertilisation than what we have suggested to you in this guide. Be creative, but don't forget the needs of plants! Many quality organic fertilisers exist on the Quebec market. In addition, you can make your own compost and organic liquid fertiliser at home. Here are some ideas that we have developed for edible plants:

- Diversify your sources of fertilisation! Ensure a basic fertilisation by regularly adding dry fertiliser and compost. Add homemade liquid organic fertilisers or compost teas during critical periods such as formation of flowers and fruits, etc. These can be mixed into the water that you pour into the reservoir or can be added to the surface of the substrate, as described in the manufacturer's instructions.

- Place mulch (straw, leaves, cardboard, plastic, etc.) on top of the soil to maintain humidity, therefore maximizing the plants' nutrient absorption.

- To better meet the needs of fruiting plants, you can add a fertiliser strip that will provide them with necessary quantities of nutrients throughout the season. Distribute 2 to 3 cups of organic fertiliser along a strip 3 to 5 cm wide that covers the length of the grower. Cover this lightly with a layer of soil mixture to maintain moisture. Next cover the surface of the grower with plastic mulch (garbage bag, lid, etc.) to prevent leaching of the fertiliser by rain. The plants should be at a distance of about 10 to 15 cm from the fertiliser strip. Thus, the roots can grow without risking direct contact with a large concentration of fertiliser that can cause burns.

- Check out the technical section of our "Guide to Setting up Your Own Edible Rooftop Garden" for more ideas!



The Rooftop Gardening Project

The Rooftop Gardening Project is an innovative partnership between Alternatives and Montréal community organisations, such as Santropol Roulant and the Maison de quartier Villeray. Together, we are making rooftop gardening a reality in Montréal and around the world. Our gardens empower urban residents to produce their own food, green their neighbourhoods and build healthy communities.



By purchasing a “Ready-to-grow” kit, you are contributing to the advancement of this urban experiment, which aims to develop an expertise that will help transform the city into a large garden.

To get involved in our gardens or to discover more about the project, please visit our website:

www.rooftopgardens.ca



Action and Communication Network for International Development.
www.alternatives.ca