

Urban or rooftop gardening

by Martin Price

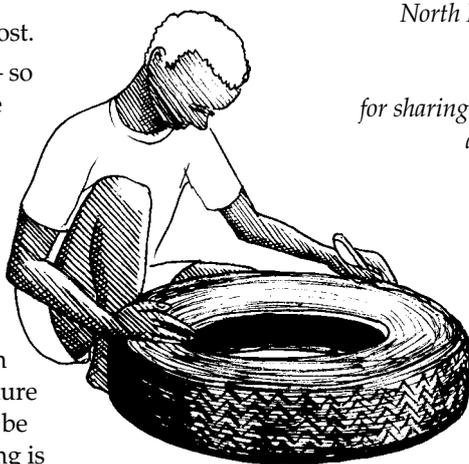
GARDENING IS POSSIBLE in small spaces as long as water (including waste water) is available. Grow vegetables that will add flavour and nutrients to the family diet. Herbs, onions, tomatoes, peppers and dark green leafy vegetables such as spinaches are ideal.

There are three essentials for roof top gardening:

- Gardens must be lightweight.
- Gardens should be low or no-cost.
- Methods must be dependable – so that people develop confidence in the method.

We have found that nearly anything can grow in a shallow bed. The depth of the bed determines how often it will need watering.

Fertiliser is a big problem in urban areas – there is unlikely to be manure available. Inorganic fertiliser may be more readily available. Composting is also more difficult on roofs – because of the smell, insect pests and rats.



*With thanks to...
ECHO
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for sharing these ideas
and photos.*



Tyre gardens

Tyre gardens are easy to make and move around. In most areas old tyres are easy to find. Lay a car tyre flat on the ground. With a sharp knife or machete, cut off the top rim. If you have some, place a piece of old chicken wire over the base (you can leave this out if not available). Cover with a piece of plastic large enough to cover the whole base and a little way up the tyre sides. Now turn the top rim (which you cut off) upside down. It will fit tightly over the bottom rim, holding the plastic firmly in place.



Triple-T Technique

One major concern which people have is the effect of possible leaks on their roof structure. ECHO have experimented with various options to avoid leaks and direct contact with the roof. Tyres can be used and raised off the ground with sticks or rocks.

With the Triple Tyre Technique (or 'Triple-T' for short), three tyres are supported one above another with wooden poles. The tyres are spaced about 50cm apart and the poles pushed through them (see photo). Wire mesh and plastic are placed in the base and a few small holes are made in the base, for drainage and for water to trickle down. Coconut husks are added to the compost for water retention. Banana leaves are used as a mulch.

A demonstration roof garden in Mexico City.

Planting medium

Any suitable soil or compost can be used for rooftop gardening. Soil is unlikely to be available. Compost is ideal but there will rarely be enough, so other alternatives are needed. Try using chopped up banana stem, covered with a layer of vegetable waste, weeds and a thin layer of compost. Cover it with banana leaves and this will decompose within just a few weeks in hot conditions. You can plant vegetables before the organic material has decomposed.

Reducing the weight

Soft drink cans have the effect of doubling the volume of the planting medium without adding to the weight. Once added to the soil mix, they remain there and can be re-used many times. The cans hold water and air and the roots often grow into them. Make cuts along the sides of the cans.

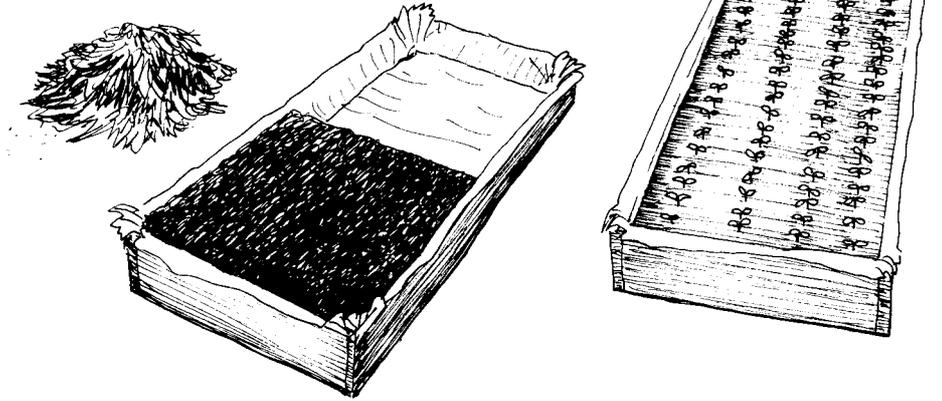
Instead of cans you can also use coconut husks, which are porous and lightweight.



Vegetables grow well in a mixture of soil and soft drink cans.

Shallow beds

These beds are built on plastic sheeting with a piece of wood 5–6cm in depth around the edges. Mulching with dried grass or leaves is very important in rooftop gardening to reduce the frequency of watering. Watering has to be done very regularly with shallow beds.



Door frame beds

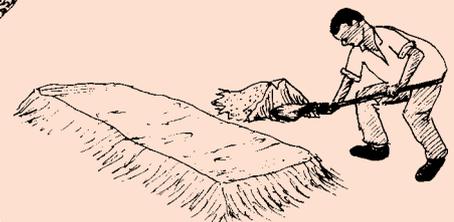
Many homes in urban areas have no room for gardens. The soil may be hard and infertile. But here is a practical idea which nearly every family could find space for. It works best if a number of families work together and build one garden each day or week.

1 Find a space the size of a door frame. Mark out a plot which is roughly the same shape as a door frame (about 1 metre wide and 2 metres long). Dig out the soil until it is nearly knee deep. Lots of people working together will manage this quickly, even if the soil is very hard and dry. Be careful to keep separate the top soil (darker colour) from the subsoil (lighter colour and more stones) by making two heaps.



2 All the families bring their organic household waste for that day and tip it into the hole – vegetable peelings and waste, waste paper, animal bones, egg shells. Also use any grass or weed cuttings.

3 When the pit is half full pour on water to soak the waste. Then add the subsoil, followed by the topsoil.



4 Plant rows of vegetable seeds and cover with grass clippings or banana leaves as a mulch. Keep well watered.

The editor isn't sure who to thank for this good idea but it comes from South Africa.

5 Now decide whose home will have the next door frame garden! If you have space you may be able to build several door frame gardens in succession.