

# Trench Gardening



## Making a trench bed

### What do you need to start a garden?

- Lots of enthusiasm and, in the beginning, some hard work.
- A piece of ground as little as twenty square metres will ensure that your family always has something fresh to eat; a larger area makes it possible to grow enough vegetables to sell. If you do not have this much space, speak to the people who live around you, find some vacant land and start a community garden. And, if this is not possible, you can try growing vegetables in containers. A few fresh vegetables are better than none at all.
- Some tools. The most important are a spade, fork, rake and a bucket. If your soil is very hard you may need a pick. A wheelbarrow is very helpful but it costs a lot of money.
- A measuring stick made from a straight piece of wood – one metre long and about 3cm in width. Make lines across it with spacings of 5cm, 10cm, 20cm, 30cm, 40cm and 50cm. This stick can be used to measure out the length and width of a bed and to mark out the rows for seeds and seedlings. If you do not have a measuring stick, use a spade which is usually about one metre long.
- A dibber which is used to transplant seedlings and to plant big seeds. You can make your own from a broken spade or fork handle, or a piece of stick, cut to 30cm and the end shaved to a point.
- A garden line is used for marking lines and areas for digging. It is made of two sticks and a length of string. Have at least two garden lines.

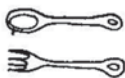
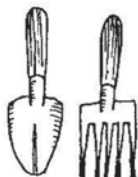


## Tools you will need

You may need a pick. A wheelbarrow is very helpful but it costs a lot of money.



Hand tools:

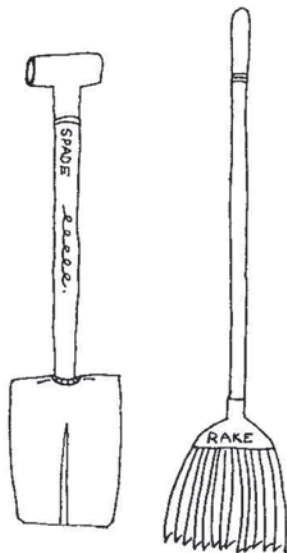


An old kitchen spoon or fork often prove to be useful in the garden—especially when transplanting seedlings.

and  $\frac{1}{2}$  a "44 gallon" drum.....



.....makes a good wheel-less wheelbarrow! (Cheap too!)



There are a lot of other garden tools and equipment that you can make by re-using 'rubbish'. You will save a lot of money by doing this.

### Some ideas are:

- Watering cans made out of jam tins or plastic bottles with small holes punched in the bottom.
- Shade cloth made by cutting open old orange bags and sewing them together to form a cover for the vegetable beds.
- A wheel-less wheelbarrow, made from a drum cut in half lengthwise and nailed to two pieces of wood.
- Old kitchen forks and spoons for transplanting seedlings.
- Hard plastic bottles can be used for spray bottles, or cut to make scoops for compost.



You need to look at your 'rubbish' before you throw it away. A little bit of imagination can help you turn it into something useful for your home or garden!

*A little bit of effort will give you large rewards and loads of fun.*

*Your vegetable garden could be the start of a great new life for you and your family.*

## Planning your garden

If you plant only one or two types of vegetables in your garden, you will find that there are long periods when you have nothing to eat from it, and short periods when you have too much! So it is important that you:

- Plan what you are going to plant
- Plant a big variety of vegetables at the same time, and in the same bed – interplanting or mixed cropping.
- Space the plantings so that you have a continuous supply of food – succession planting.
- Make separate beds in the garden – not just one big bed.

## Choosing a site

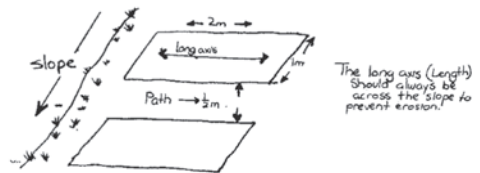
- Vegetables need a lot of sun. Choose a sunny spot. If your garden does not get sun all day, make sure that you put the garden where there is morning sun. Trees, hedges and buildings may cast shadows on your garden and so your plants will get less sunlight.
- The vegetable garden should be close to your house so that it is easy to look after it.
- It should be close to water.
- Choose a place with the best possible soil (but even if you have poor soil, it is easy to improve it by working in plenty of organic matter (compost and well-rotted manure).
- Once you have chosen the site, remove all grass, bushes, trees and their roots. Keep all this plant material for composting, mulching and filling trench beds.



## Laying out the garden

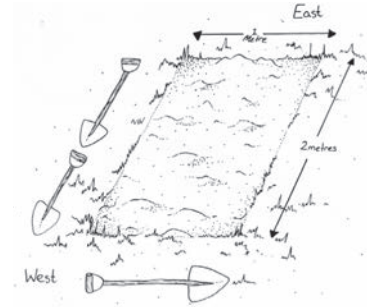
Three points to bear in mind when laying out your garden plot:

1. If your plot is on a slope, the length (long axis) of the beds should always be across the slope to prevent the soil from being washed away by rain.
2. The long axis of the beds should run from east to west if possible.
3. The width of the beds should never be more than one metre. All garden work should be done from the pathways so that the soil in the beds is never trampled and compacted.



Using a measuring stick and garden lines, or a spade, mark out the beds.

- The best size for each bed is one metre wide by two or three metres long.
- The pathways between the beds should be no more than  $\frac{1}{2}$  metre wide.
- Once your garden is marked out, start preparing the soil in the beds for planting.



## This is the hard work!

### Soil preparation – the most important part of gardening

Soil must have sufficient air, water and nutrients for the germination of seeds, and for the healthy growth and development of the small plants. Most soils have been compacted by feet and other traffic and this makes it difficult for the roots to grow down towards the nutrients.

### There are different methods for preparing the soil for planting.

**Single digging** means that the soil is loosened or turned to the depth of one spade-head (30cm). If your soil is deep and fertile, is not compacted and you have plenty of water, this method is a good one.

However, most soils are poor and compacted, and, sometimes, there may be a shortage of water. It is therefore better to use one of the following methods for the best results:

- Double digging
- Trenching
- Sheet mulching

**Double digging** - a good method for heavy clay soils where drainage is a problem. The soil is loosened to a depth of two spade-heads (60cm).

Having first marked out your bed, dig out all the soil to a depth of 30cm (topsoil) and put it to one side. Using a fork, loosen and turn the soil at the bottom of the bed (subsoil) to a depth of 30cm. Then add a 10cm layer of compost, well-rotted manure or any other organic matter in the bottom of the trench. Cover this with the topsoil.

**Trenching** gives by far the best results, especially in very dry areas and where there is little water and poor soil. It is hard work at first, but your efforts are well rewarded with bumper crops. It is particularly good in sandy and loamy soils. This is how you go about it:

## Digging your first trench

Before you start, collect about 12 bags of 'rubbish' (organic waste) which will provide food for the soil.

This is what you collect:

- fruit and vegetable waste from home and the supermarket
- pot scrapings
- egg shells, bones and feathers
- cardboard and paper
- lawn cuttings
- dry leaves
- all garden waste
- manure
- seaweed
- wood ash
- untreated wood shavings

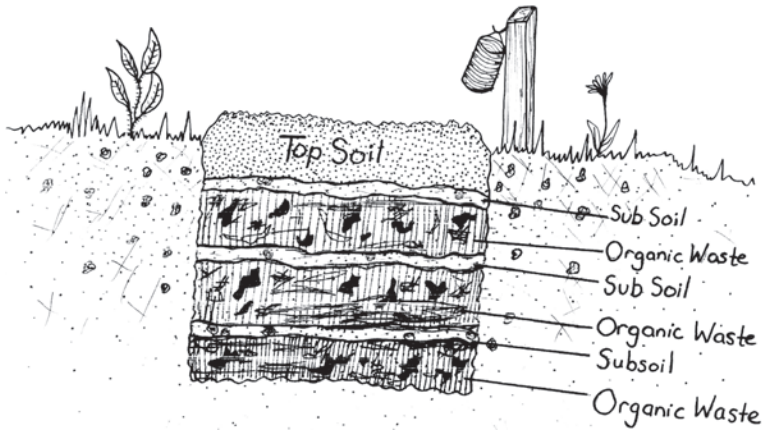
**What else can you think of?**

*In fact, if it will rot, bury it. It is food for the soil.*

## Having marked out the first bed ...

1. Dig out the top soil (one spade-head or 30cm deep) and place it to one side of the bed.
2. Dig out the bottom soil (subsoil), also to one spade-head deep and put this soil on the opposite side of the bed. Remove all large stones and boulders.
3. Loosen the soil at the bottom of the trench with a fork and cover with a layer of cardboard and newspaper.
4. Put a layer (about 20cm deep) of coarse rubbish at the bottom of the trench and cover it with a 10cm layer of subsoil. Water both layers well.
5. Now make 20cm layers of brown, dry and green, wet organic waste, sprinkle with manure and water and add another 10cm layer of subsoil.
6. Continue with these layers, removing any tins, bottles, plastic, synthetic (man-made) materials and rubber, until the trench is full. Water each layer well as you go.
7. Place a ½ m stake in each corner of the trench as a bed marker.
8. Now replace the topsoil that you removed from the trench. Add some topsoil from the paths to the top of the bed as well. The surface of the bed will be about 15 – 25cm higher than the path when you have finished. The bed will slowly sink as the rubbish rots.
9. Spread one bucket of compost (if you have it) over each square metre of bed. Work it in and level the bed using a rake or a flat piece of wood.

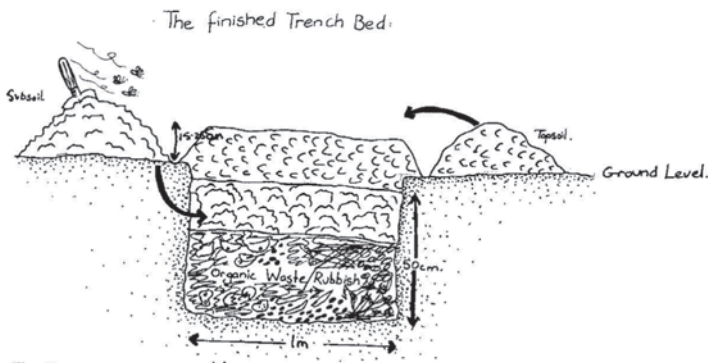




10. Remember never to walk or stand on the bed.

11. Cover the bed with a layer of mulch (a protective blanket for the soil and for the delicate roots of your plants). Dry grass, straw, leaves, even newspaper and cardboard can be used as a mulch.

**NB: It is not necessary to layer the organic materials with the sub-soil when filling the trench.** Simply layer the brown, dry and green, wet materials with manure and fill the trench to the top before adding the sub-soil, followed by the top soil, as in the following drawing.



It is best to leave your bed for about a month before planting to allow the composting process to start below the soil. However, if you have added compost of manure to the top layer, you may plant immediately.

Once you have planted the first bed, dig and prepare the second one which you can then plant a month later (succession planting).

## For more information contact:

Soil for Life  
PO Box 31358  
Tokai, 7966  
South Africa

Tel: +27 (0)21 794 4982

Fax: +27 (0)86 566 3824

Email: [info@soilforlife.co.za](mailto:info@soilforlife.co.za)

[www.facebook.com/soilforlife](http://www.facebook.com/soilforlife)

[www.twitter.com/soilforlife](http://www.twitter.com/soilforlife)

<http://soilforlife.co.za>

Text and illustrations © Soil for Life (<http://soilforlife.co.za>)

---

The ACP-EU Technical Centre for Agricultural and Rural Cooperation (CTA)

P. O. Box 380, 6700 AJ Wageningen, The Netherlands

Tel: +31 (0) 317-467100, Fax: +31(0)317-460067

E-mail: [cta@cta.int](mailto:cta@cta.int), Website: [www.cta.int](http://www.cta.int)



CTA is financed by the European Union.



© CTA 2013 - ISSN 1873-8192