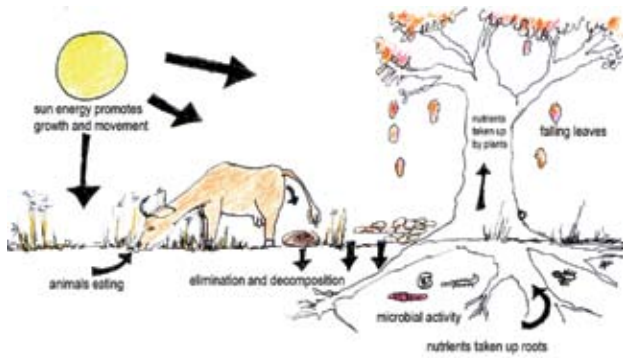


The nutrient cycle

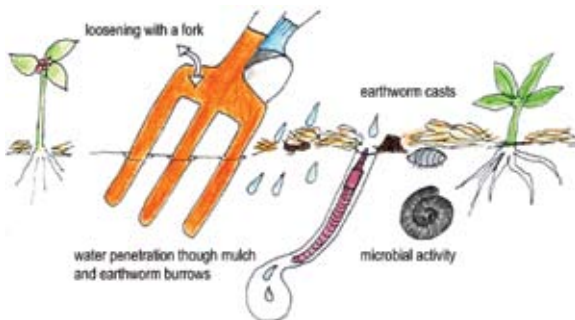
Soil is made up of minerals (from ground rock), rotted organic plant & animal matter (humus), living organisms (insects & worms), air and water. The mineral subsoil cannot be taken up by plants alone until it interacts with the micro-organisms closer to the surface. This happens over time. As these minerals are brought to the surface by micro-organisms, they become topsoil.

Topsoil is your most important layer of soil, which will be about 30cm deep. We can help this happen by adding humus in the form of compost.



We build strong soil to feed the plants.

Disturb the soil as little as possible. The micro-organisms are carefully ordered to make the soil fertile. Gently forking the soil is good to allow the mix of humus & water to penetrate. Turning & exposing the soil to sunlight kills these micro-organisms and the soil becomes fine dust which cannot absorb water or nutrients.



Avoid soil loss in heavy winds & rain, by mulching, creating swales to divert water, & planting natural barriers.

Your soil is the LIFE of your garden, so feed it and treat it with care. It will repay you in abundance.

What kind of soil do I have?

There are 4 main types of soil – each soil type is able to absorb and hold air, water & nutrients in different quantities. You can try this simple test.

Put a small amount of your soil in a bucket, and add a little water until it sticks together and can be picked up. Roll it out like a sausage, and slowly bend it. This is what you will find with different soil types:



Sand – grains will feel rough & hard in texture. Sand increases drainage, but will retain no nutrients or moisture. If you can roll into a sausage, you will not be able to bend it.

Loam – feels slightly rough, with more organic matter in it. Can be bent into a gentle curve.

Silt – feels like mud, with fine granules derived from rock. Can be bent half way.

Clay – feels smooth and sticky. Can be bent around into a circle.

Loam consists of sand, silt and clay, and is ideal for gardening.

Tip: The soil colour varies depending on its mineral content – from very pale (almost white), to brown through to orange, becoming almost black in colour. Poor soil is lighter in colour.

Test your soil regularly. You will have a better idea of what you need to add to build the ideal soil.

See the colour of your soil change over time as you improve it.

Clay & silt have many important minerals, but alone will get waterlogged, and not allow air to the roots. Adding organic matter will help your soil to keep in moisture & nutrients, or help to break up heavy soils. (growing lupins helps clay soil.)

How can I improve my soil?

Earthworms

Earthworms are a gardener's best friend. The small red variety, called 'red wigglers', are nature's ploughs, Create conditions which they like – moist organic matter under layers of mulch to keep them cool. Add earthworms to your compost once it has cooled to increase the speed with which your organic matter can break down.



You can add earthworms to your beds, or breed them in an old bath in the shade. They will merrily eat your kitchen waste, leaving liquid manure and 'casts' which are worm manure (humus). Casts have a balance of minerals and hormones, producing healthy soil for healthy plants.

Earthworms burrow bringing minerals upward, allowing water and air to reach plant roots and collect organic matter from the surface, creating deeper topsoil.

Balancing and protecting your soil

Different elements (minerals) can be found in soil. Plants give off and take elements from the soil. If your soil is lacking in any elements, these can be added by composting or green manuring. Some of these elements can be released by plants. When the green manure plants are about to seed or fruit, they can be cut back. Put mulch the green manure on your beds to increase the mineral content.