Welcome to vegetableseeds.net.au

September 2015 Newsletter

MINERALS

I wandered lonely as a cloud

That floats on high o'er vales and hills,

When all at once I saw a crowd,

A host, of golden daffodils;

Beside the lake, beneath the trees

Fluttering and dancing in the breeze.

The more I know about plants the less I know.

I remember vaguely, from my childhood, a UK science programme called Horizon.

My recollection is not exactly accurate but basically, in one episode a very famous scientist was interviewed about his work and just before the end of the programme he was asked by the interviewer what he thought was an exciting event in science.

I guess most viewers thought he would say splitting the atom or some such discovery.

He sat in his chair and looked at a red rose in his garden and said ‘The perfection of that rose is a beautiful scientific event and I can’t explain it ’.

I would love to see that episode again but would not know where to look.

William Wordsworth’s daffodils overwhelmed him euphorically and they flourished for a reason. They needed minerals.

Welcome to the first vegetableseeds.net.au newsletter of Spring 2015.

As we leave a long, cold winter behind, 51 frosts in Deloraine and 33 in the Tamar Valley - customers tell me - we welcome the Spring.

Soil science is a huge subject that is gaining momentum as an area of study.

It involves Mathematics, Chemistry, Physics, Biology, Geology, Geography, Plant Science, Environmental studies, History, and probably a few other disciplines.

It takes a clever mind to combine all that knowledge and relate it to others, I certainly can't do that but these are some of the basics for home gardeners.

Minerals found in plants

Depending on the plant some may be used more than others. In the right amounts they promote growth, out of balance they could be toxic. There may be more minerals than these, for example even gold has been found deposited in plants, some early prospectors looked for gold by examining plants.

> *Nitrogen, Potassium, Phosphorus, Ammonium, Sulphur, Calcium, Magnesium, Iron, Manganese, Zinc, Copper, Boron, Molybdenum, Chlorine, Silicon, Vanadium, Iodine, Selenium, Aluminium, Thallium, Nickel, Cobalt, Chromium, Sodium, Carbonate.*

Your subsoil could be gravelly, sandy, silty or clay, and there may be a few larger rocks which may be of igneous, metamorphic or sedimentary origin.

There really is not a lot you can do to change the subsoil in your garden, it takes geological time not a human life time. The sub soil where you live is what you've got.

Why is this important?

Everyone's soil is different. If we observe our own soil texture and structure and begin to understand it, we can work out how to grow better crops.

See what is growing on it before cultivation; are there grasses with good strong green colour? Are there certain weeds or native plants? Is it waterlogged in winter?

Dig a soil sample at least two feet down and look at the soil profile. Is your garden near the coast, on rolling smooth hills, near mountains, on flood plains?

Permanent grass pastures are good, the roots penetrate the soil and aerate it making microbes and worm activity possible, as well as water penetration.

Clay or sand?

If you are not blessed with deep, fertile, volcanic, loamy soils or rich alluvial deposits of equal amounts of sand, silt, and clay with ample minerals, the best thing you can do is to increase the topsoil to 45cm by adding organic matter or good top soil.

By doing this you will gradually open up heavy clays to make nutrients more available or increase nutrient availability of sandy soils. You'll encourage many soil organisms, worms and smaller animals to break down tiny rock fragments into minuscule fragments for nutrient availability.

There are billions of bacteria in 1cm cube of soil, and many fungal organisms. Plant roots take up nutrients in solution through their root hairs, the root hairs have carrier molecules on their surface which pick up mineral ions and move them into the cells in the root hairs against a concentration gradient. This is called active transport and requires energy from respiration.

Clay soils need about 9% organic matter, and sandy soils need about 4% organic matter to grow decent vegetable crops. One bag of mushroom compost, approximately 25kgs, covers about 1 square metre of vegetable garden spread uniformly. This is enough to feed your plants for one season.

Sheep manures and cow manures are often low in phosphorus, calcium and copper because the land the animals graze on are also low in these minerals in Tasmania.

Some soils on sandstones lack all elements especially iron. These manures do make good soil conditioners though, improving texture and structure.

Note where many native plants grow on your land, these plants don't like high phosphorus levels. Be wary of adding too much copper, soils can go from copper deficiency to copper toxicity very quickly. Soft rock phosphate is the quickest way to add phosphorus to your soils for plant uptake.

Don’t forget to use Complete Organic Fertilizer and Bio Char.

Dolomite

Dolomite leaches magnesium into the clay sub soil and makes conditions worse. It locks up a lot of nutrients. Fine ag lime is better and opens up clay, slowly. Ag lime and gypsum open up sandy soils.

Carrots, parsnips, beetroots grow and taste better because they can feed deeper in the subsoil. Dolomite can be more useful on sandy soils than clay.

pH

On their own pH values don’t mean a lot, and the colour chart with a pH test kit only confirms a pH value indicating acid or alkali but not a lot else.

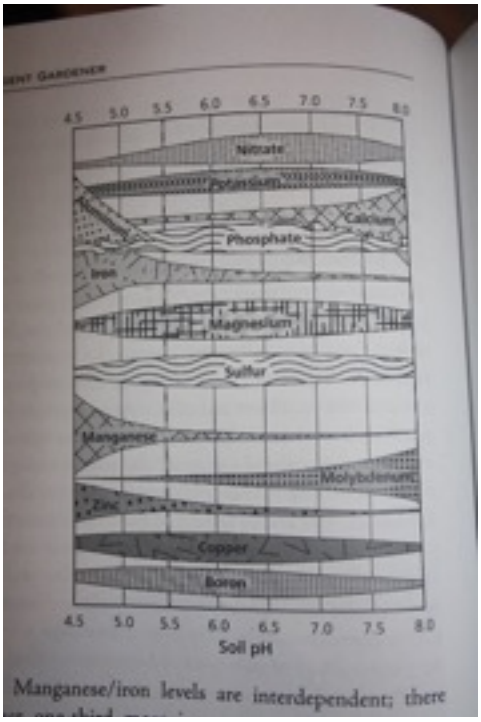
I think the most important and interesting part of looking at the pH values is seeing on a diagram which minerals are available at which pH value.

You are aiming to grow not only good strong healthy vegetables but also nutrient dense vegetables to eat.

Look at this chart.

If you do all these things you will create what farmers and gardeners call ‘tilth’ a beautiful easy to rake layer of top soil into which you can sow and plant seedlings which will thrive.

If you are local, pop into our shop and see our display gardens.



Manganese/iron levels are interdependent; there

The vegetable garden this month

Transplant our autumn sown red or brown onions when they are about 5cm tall and not quite pencil thickness, when the daffodils are flowering, to about 15cm apart; any closer and they will not form large bulbs.

Feed them with a sprinkling of COF.

This year they will have grown more slowly due to the cold weather, don't worry about this as this is good, if the seedlings are too big they would be triggered by the day length to bolt and go to seed.

There are many types of onions for different regions. We have been growing our cultivars with success for several years now.

Start a compost bin now. As the weather warms up the material will break down as microorganisms prosper.

The cold weather this winter should delay insect infestations, but keep an eye open for diamond back cabbage moth.

One way to observe its presence is by flicking the brassica seedlings to see if little moths like aphids fly out, and there will be small holes appearing in the leaves. Spray with Dipel or Success Ultra or use fine netting.

Mulches like straw used in early spring in cool climates can be ideal homes for slaters, slugs and snails which will thrive in this warm sheltered home and attack your young seedlings.

I'd suggest you remove these mulches and put them in the compost bin. Straw mulches could be used in the height of summer when plants like corn need to conserve lots of water.

You can still plant blue lupins as a green manure if you have vacant plots, this will flower a bit quicker than if sown in Autumn but is still a valuable crop.

Try not to locate your vegetable garden near eucalyptus trees; the roots are close to the surface and take out enormous amounts of water and put toxins in the ground stunting your vegetable plants.

Now is the time to check your vegetable garden fencing, to make sure it is rabbit, wallaby, and possum proof with no holes. These animals are quite capable of exploiting any weakness in your fencing and decimating your crops.

Cover vulnerable seedlings with bird netting in early to mid- spring, birds building nests, and later their off spring, will unwittingly damage seedlings by searching for insects and worms and in freshly dug soil.

They may find your pea and brassica plants and discover that they are quite tasty. Netting also discourages rats and mice, which also appear in larger numbers after rains in early spring, they can remove seeds without leaving a trace.

Use slug pellets, coffee grounds, grit slug traps now, and remove bricks, and wood where these can hide.

Remove weeds which will act as hosts for pathogenic fungi, bacteria and insect vectors for viruses.

Start tomato, capsicum and chilli seedlings now in punnets with seed raising mix.

Place the punnets on heat mats set at about 20°C with a cover on them.

When the seedlings emerge, they must be moved to a window for direct light or they become long thin seedlings.

Make sure you check them regularly for watering as the sun can dry the punnets out very quickly in early mid spring.

You can buy tomato seedlings now but be wary, air frosts in spring can severely damage tomato plants.

If you really are determined to purchase these plants please give them the warmest possible conditions for growth that you can provide, remember they are a sub-tropical plant and Tasmania has a cool climate.

The hot house

I think that this is a misleading term, a bit like global warming, as a term gets misinterpreted by folk.

A real hot house has heating for most of the day and night, often with supplementary lighting in the winter to trick plants into believing they are experiencing longer spring and summer days.

Most home gardeners have unheated glasshouses or poly tunnels, and this is where it gets difficult.

If you have an unheated glass house in a warmer microclimate then yes you probably could grow peas over winter for harvesting early spring or overwinter capsicum and chilli plants. If your unheated glasshouse is in a cooler microclimate your capsicum plant will not thrive and your peas will not produce any more than they would outside.

The main advantage though is that you can probably start seedlings off about two weeks earlier in punnets in late winter if you are in a cooler area, for example Mount Barrow, and grow summer crops that may be difficult outside.

Sow Broad beans; Paramo, Coles Dwarf and Aquadulce until second week of September.

Sow Peas; Meteor, Twinkie, Bounty, Purple Podded, Green Feast, Melbourne Market, Massey, Onward now.

Potatoes can be planted from early September. We have fifteen cultivars at our shop. Plant about 20cm deep or a bit deeper in soil, or use straw about 45cm deep.

This is different to mulching because the potato plant will grow strongly from mid spring and fast, unlike seedlings, so the insects find it harder to attack it.

It is important to realise that several ground frosts such as we get in late spring will severely damage potato leaves and tubers, but air frosts that we get in spring will damage the leaves.

So if you suspect a late Spring frost cover the potato plants with flower pots overnight. A couple of air frosts will probably not kill the plant but they will set the plant back and could reduce yield.

Frosts will kill capsicums, tomato plants, sweetcorn, cucumbers, squashes, dry beans, green beans plant these in mid late October or even November.

Plant and sow leeks, spring onions, chives now.

Sow Chinese cabbage, radishes, Asian greens now.

Sow or plant beetroot mid-September. If beetroot plants are planted too early, their leaves go a dark purple colour and you will notice very slow growth. They need warmer weather for the leaves to go green and growth to start, our variety does not bolt early or go to seed.

Happy gardening wherever you may be.