Welcome to our new plot holders. Just a few words of advice on starting a plot, before the main article.

1. Firstly do not try and do it all at once, instead do what you can manage and cover the rest of the ground with cardboard weighted down. This will slowly kill most of the weeds for you, making your life easier. The cardboard can be composted when you finish with it.
2. Prepare the ground well, digging out all the weed roots, you won't get them all! The soil when dug should be in the same place as before you dug, just mixed up. 90% of getting good results is looking after your soil.
3. Make sure that you do not mix the top and sub soil up. The sub soil is infertile and a different colour to the top soil and should be under the top soil.
4. You can burn your weeds and use the ashes as fertilizer.
5. If you want to use no dig then I would dig out the persistent weeds like docks, dandelions, bindweed and couch grass. Then lay down dampened non glossy cardboard with the cellotape removed. Top this with WELL ROTTED mulch and get planting. If the ground was not weedy to start with then use 5 cm of mulch. If weedy then use a 10 cm depth of mulch.
   Stables that will allow you to dig out free horse manure is displayed on the notice board. If it's not rotted then you need to stack it until it is rotted before use. There is no delivery service sadly.
6. One of the keys to successful growing is to look after your soil with organic matter. So a compost heap is a must. We have a free supply of grass clippings, and also green waste from a local grocery/ flower shop you can find it in the car park.
7. We have free woodchips found in the car park, most people use these to cover the permanent paths between the rows of their vegetables. This makes the ground less slippery especially when watering, easier to walk on in wet weather and cuts down on the weeding!
8. Read the Horticultural news found on our website under the newsletter section. There is also a web page on the website giving advice on starting a plot from scratch.
   Halls Farm Allotment Gardens LTD - Home (weebly.com)
   Your First Allotment - Halls Farm Allotment Gardens LTD (weebly.com)
9. Do not sow your seeds outside too early, they will just rot in the ground. Some plants will die if they get a frost, other plants are hardier and will tolerate a frost. Our last frost date is about the third week of May. Last things to plant out in May are Runner/French beans, peppers, tomatoes, pumpkins and squashes and cucumbers after the last frost date.
10. Net your crops, or you will just feed the squirrels, pigeons, caterpillers and many more pests without these. You need small hole netting to stop butterflies.
11. Some useful you tube channels.
    MuddyBootz - YouTube
    Green Side Up - YouTube
    Charles Dowding - YouTube The no-dig guru
    The Allotment Garden and Kitchen - YouTube

GrowVeg - YouTube
Castle Hill Garden - YouTube
Simplify Gardening - YouTube
If you want to understand what is happening in your soil then I recommend: 59degrees - YouTube

12 Water well and feed your plants in the summer.

Good luck and welcome, do not worry if you make mistakes in your first year, it's a learning process and even the most experienced gardeners make mistakes. Also because growing conditions change each year we are all still learning.

The main article for this month

We all try to supply our plants with water, nutrients and sunlight. However, there is another thing that is important for plant growth, something that we usually do not think about. It is freely available, all around us and present in the soil. Without it life on earth would cease to exist very rapidly. It's something that we do not notice and take for granted… air.

Plants use the carbon dioxide in the air, water and sunlight to make sugar. The process is called photosynthesis, the process uses a catalyst to aid the conversion, called chlorophyll found in the leaves. The energy from the sunlight is captured and stored in the chemical bonds of the sugar molecule, ready to be released when needed. The sugar can later be consumed to release the stored energy, breaking those chemical bonds, producing the raw material that we started with, carbon dioxide and water and energy. All life on earth needs these two processes, directly or indirectly.

This article however, is more concerned about air in the soil. Why it is needed and how it is stored in the soil, plus what differs in its composition, compared to the air we breathe.

As a child I can remember pulling up some of the soil in a pond. Full of dead and rotten plant material dark muddy and black, stinking awful. The stench was due to the lack of air encouraging bad bacteria in the soil. The dead plant material decomposes as we all know. However, to decompose the dead plants need bacteria to rot and breakdown the plant.

Bacteria can be divided into two types, bacteria that exist in the presence of air, these are called aerobic bacteria. These are good soil bacteria that we find in our soil and compost heaps. That is when we make nice, non-smelly compost! Plants feed these bacteria with up to 80% of the sugars that they make, in exchange for the nutrients that the bacteria release into the soil by decomposing dead plants, converting nitrogen in the air to a form of nitrogen plants can use and releasing minerals from the rocks in the soil. It's a win, win scenario.

Then we have the bad guys, the bacteria that do not need air to live. These are called anaerobic bacteria. We get these in water logged soils and our compost when we have made it incorrectly, making a smelly sludge. These bad bacteria pass into the soil chemicals called organic acids. These are harmful for your plant, killing your plant.

The second reason that plants need air in the soil is the same reason that we need air, to breathe. Like us when they breathe they breakdown sugar to release energy, water and carbon dioxide. Its one of the things that roots do!

For the above reasons when I am sowing my seeds or potting up, I introduce air into the compost by rubbing the compost between my palms breaking up all the lumps of compost and making it into light fluffy compost. This can take several minutes to do well. It is important enough that the RHS include this in their horticultural exams!

Not surprisingly the composition of gases and water vapor is different in soil compared to air. The water vapor is higher in soils enclosed space. The gases of carbon dioxide and oxygen have different levels compared to air. Plant roots, microbes and other soil organisms need to breathe. Living things that breathe consume oxygen so the levels in soil are slightly lower than in air. They also breathe out carbon dioxide so these levels are higher.

The compositions of the gases are affected by the above, but also gases are exchanged with the atmosphere by diffusion. The rate at which diffusion occurs is limited by the ventilation in the soil. The soil structure, presence of organic matter and water content in the soil all will affect the ventilation in the soil.

If you rub soil through your fingers, when it's very wet, you get a muddy texture, with very little air in the soil. When the moisture content is much less you get a nice crumbly structure, enhanced more if organic matter is present. Organic matter forms aggregates in the soil enhancing the crumb structure. Air is stored in the soil between these crumbs of soil. Also inside the crumbs themselves are more air pockets.

Air in the soil is important to support all the microorganisms in the soil, which then support your plants and your plants need the air for support as well.

It is therefore important to maintain and improve the soil structure by adding organic matter and not compacting soil in wet weather by standing on it. This is why you may see people digging wet soil whilst standing on a board, e.g. a scaffold board.

No-diggers like me believe in not digging the soil so that the soil's, soil structure is not destroyed by digging, but allowed to develop by adding organic matter and leaving plant roots of our vegetables in the soil. The plant roots then rot and produce tunnels for air to penetrate into the soil.

Last year was a particularly bad year all across the country for blight which thrived in the humidity and wet conditions. Blight can only survive on living material and affected our tomatoes and potatoes.

We all have volunteer potatoes that grow the year after our harvest. These may possibly carry blight from one season to the next. It would be good practice to remove these as they shoot up and reduce the risk of them passing on blight this year. It is no guarantee that we will not get blight again as blight is windborne. I find that the potatoes are still edible and tasty, when taken out in the spring as they emerge. A welcome bonus when so little is coming off the plot!

Things to Do in March

At the moment its too cold and wet to sow outdoors. You can start things off at home on your window sill etc or you can wait.

Sow

Outdoors: Leeks, parsnips, peas, cabbage family, spinach, onions, spring onions, broad beans.

Outdoors under cover Beetroot, carrots lettuce, oriental leaves, radish, rocket, salad leaves, turnips, cucumber (late in the month)

Indoors sow tomatoes, aubergine, sprouts, celeriac, pepper, cucumber, florence fennel, globe artichokes, sprouting broccoli, sweet potatoes, kohl rabi, celery, chillies.

Plant Asparagus, broad beans, cauliflower, Garlic, Jerusalam artichokes, onion sets, peas, potatoes, Rhubarb, Shallots, spinach

Chit your potatoes before planting

Hope you all have a good season

Kevin