

Gardening on Clay – Some Notes for Guidance

This article is based on a talk given by Geoff Hodge to the St Ives Gardening Club on 15th April 2015. However, it also includes advice given to members of Hill Rise Allotments Association (HRAA) by a local soil expert and personal experience of members of its committee.

Geoff Hodge is a freelance journalist who lives in Peterborough and therefore has personal experience of heavy clay. He worked for the RHS for many years and can be heard regularly on BBC Radio Cambridgeshire.

First of all some good news. Clay is a very fertile soil. BUT as we know the down side is it can be very difficult to work during wet or after a hot dry period.

In general St Ives has heavy boulder clay with, in some places, chalk content. To make it workable a large quantity of organic material is required. Manure, compost, soil improver, composted bark and leaf mould will all do. A minimum of four inches (102mm) is needed. It may not be possible to cover an allotment plot at one go or in one season so do not be tempted to spread what you do get over the whole plot. Peat is not recommended because once it dries out it is not much use and, under EU rules, its use will be banned after 2020. You will need to top up the organic material periodically.

In addition, if possible, add sharp sand. Do not use builder's sand as it contains impurities unsuited to plant health .

Finally add a flocculating agent such as lime, calcified seaweed or gypsum.

IT IS IMPORTANT TO DIG ALL THIS IN TO GET THE FULL BENEFIT OF THE FERTILITY OF CLAY. ALSO RAINWATER AND ROOTS OF PLANTS CANNOT PENETRATE FAR UNLESS THE UNDERLYING CLAY HAS BEEN LOOSENEED. Most manures and composts have very limited fertility. However, if you can get it, mushroom compost does have it.

Geoff recommends using raised beds and this eliminates/reduces the need for digging and should minimise compaction caused by walking on the soil. What are known as pallet caps or old scaffold boards can be used and will help keep the cost down. If you can get them, pallet caps can be partly dismantled and added to so that they can be adapted to the required size. In raised beds it is possible to space plants closer together than they otherwise would be. He also recommended using water retention crystals in raised beds as even with mulches applied raised beds are water demanding.

Despite the fertility of clay Geoff recommends the use of a continuous feed. Liquid feeds are quickly exhausted and slow release ones, such as bone meal, take too long.

Good quality tools will make life easier. He reckons that clay tends to slide off stainless steel ones. A good quality hoe is essential and regular use of a sharpener is strongly recommended. A two to three inch (50 to 75 mm) mulch will reduce the need for weed control and help conserve moisture. Growing green manure over the winter will add further organic material to the soil and keep the weeds down. Alternatively if you are not using raised beds you can loose dig your plot and let winter frosts act on the clay like farmers do but do some winter hoeing as well to keep the weeds down.

The negative to this approach is that winter frosts are erratic. In 2013/14 we had only 2 recorded frosts during December to March whilst in 2014/15 we have to date had in excess of 20 none have been harder than -3C. Hard winters of snow and ice seem at present to be a thing of the past and thus relying on the weather to work our clay soils will likely be very hit or miss.

Everybody should know and check the PH level of their soil. The late Tony Sanderson of Hemingford Grey who won many prizes at the St Ives Flower & Produce Show in the 1980's and 90's used to send samples of his soil to analysts every year and seek advice as to what he needed to do to improve it.