

# How to enhance the soil biome

Last week you got a fair idea how to cultivate the soils at this time of the year?

If you found that your soil is one-sided; either too light or heavy in texture; humus and the life in the soil will help to ameliorate or balance this.

We hear a lot these days about no-dig and not to disturb the soil-biome. It has almost become a panacea for regenerative agriculture and gardening.

I believe and know from my investigations and experience that there is a time to let the soil rest and a time to move the soil.

In the biodynamic approach to gardening, we work with building up organic matter and breaking it down again and again. We could also say we create a store house of organized and enlivened soil gathering new life and formative forces for the following year. Then in spring we create chaos, from which new life can spring forth.

The soil is our bank, where the life-energy for the future is stored, and is the intelligent organ which organises itself with the help of compost, green manures and the application of the horn manure and cow pat pit preparations in the autumn and winter months. The longer and colder the winters the more humus is being accumulated over the years. Hence, we have huge problems in the UK to raise our humus content, as the winters have become so much milder and also, we don't build compost with woody or cellulose rich materials enough, when quick return compost has become the fashion.

**The autumn and winter** are the time of year when the organic matter content builds up and the soil life creates stable humus clay-silicate complex, which will be the store of nutrients, hold water and of any surplus of substances which might be harmful, like heavy metals or chemicals. In the yearly cycle, it is the time of year when the Earth breathes in, and when all life forces work in unison under the Earth in the soil to create huge root mass.

The earlier we get our soil covered with green manures and prepared with the biodynamic preparations the more we are able to build up our life store, and we could also say enhance the memory in the soil, in this way we can help, as gardeners, to make this available in spring for the new growth.

## How do we do this?

In heavy soils we have the challenge that they take a long time to warm up in spring. To mitigate and improve it we make sure that they are well drained either by putting drainage underneath our garden, by using deep rooting green manure plants, and by cultivating the soil deeply in the beginning with double digging without inverting soil layers, (which we practice in French Intensive Biodynamic Gardening). We need to bring warmth, light and air into the soil, by whatever means is best.

We also have now the opportunity to dig in our autumn sown green manures, now if grown enough or come the spring. This will increase the soil-biome activity, breaking down the

green manure and also organic matter or effective humus present in the soil. We could add (dig in) a younger compost, that is still in its breakdown phase. This will in turn assist the breakdown of existing of more organic matter.

If we need to speed this up for heavy feeders like the brassica family or fruiting vegetables, we could add lime (fresh woodash or quicklime [CaO]) liberally which bio-chemically will raise the temperature and help us create a beautiful crumb structure in spring. This will help the soil life and the plants via their root exudations to release more nutrients, water and life-forces to accelerate plants in the young state of growth, which is essential for high yields and resilient plants.

We need to add the horn manure preparation to direct this breakdown process in the soil in spring for it not to go too rampant.

If you follow this rule of thumb of working these two rhythms of build-up and break down process you will have abundant and nutritious crops.

Happy gardening

Hans-Günther



