Cover Crops and Green Manures

Yes, it is again this time of year.

Old crops are coming out of your garden, making space to sow green manure crops to improve and prepare your soil for the coming year.

In a previous post, you saw how we can inhibit certain weed growth by burning weed seeds or by making even more potent homeopathic remedies for the soil and our environment to curtail weed infestations.

How to alleviate one-sided soil conditions?

Today, we want to tackle the question of how to alleviate these one-sided soil conditions.

What are these one-sided conditions?

Soils lack nutrients and fertility.

Soils are too light, sandy and well-drained.

Compaction of heavy soils (clay and silty soils), either on the surface or in the different horizons below the surface, has caused waterlogging, lack of drainage or aeration, and putrefying, anaerobic processes.

Soils have lost their structure through over-cultivation and too much hoeing. They can become too powdery when cultivated while too dry, and when it rains, they become puddled on the surface.

Soils have lost their structure through conversion to organic or biodynamic methods. During the first two to three years, the soil structure has to realign and rebuild during that conversion period.

These are just some of the most predominant factors causing one-sided soil conditions.

What methods can we employ to heal these soils?

The most effective way is by having the soil always covered with living plants, which protect it from the impact of raindrops and the drying effects of wind, sun and cosmic radiation.

We want root systems that penetrate the soil deeply and create openings for drainage. They can also knit the soil together when it is too light, as in the case of sandy soils.

The best substance to co-create for the regeneration and healing of soils is humus.

Specifically, it is humus that is saturated with alkaline elements such as calcium, magnesium, sodium and potassium, which causes the rest of the soil to flocculate and creates a beautiful, living crumb structure.

Whenever a bed is free, we sow a green manure.

To improve fertility, we sow nitrogen-fixing legumes.

This is also known as sowing cover and green manure crops. It improves the structure and fertility of the soil for the crops that are sown afterwards.

In springtime, we sow mustard, phacelia and buckwheat, which enhance soil structure and raise minerals that have been washed out back into the topsoil. We also sow vetch, peas, fenugreek, Persian clover and field beans, which fix nitrogen.

You can also broadcast mustard or spinach, eat what you can, and dig in the rest.

In late summer and autumn, we sow winter vetch with oats, rye or Hungarian rye, which is dug under in spring, two to three weeks before planting heavy-feeder vegetables.

The discovery of green manure crops

The most effective plant farmers discovered in the Middle Ages, while leaving a field fallow to recover from two years of cropping, was wild vetch. Wild plants were left to grow — what we now call rewilding.

Wild vetch was subsequently developed into our cultivated green manure plant called vetch, or tares. In the locations where farmers remembered wild vetch growing, their grain yields improved greatly.

When farmers started to grow a combination of grains and legumes, which they needed to feed their animals, they realised that this combination of plants wasn't just nutritious for the animals but also doubled as a soil improver.

The cover crops were either cut to make a very rich hay or were sometimes used for restricted grazing to encourage extra-fast growth and milk production. This method further increased subsequent crop yields.

But nothing was as effective as using cover crops in combination with restricted grazing, adding extra manure to the soil to build its structure and fertility.

In some instances, farmers also mixed winter field beans and broad beans into the above mixes to further improve both the animal feed and the soil.

Try it out for yourself and let us know how you are doing. Send in photos of your beautiful cover crops.

Happy Equinox and Michaelmas

Hans-Günther