

Crop Rotation and Plant Diversity – creating diverse garden habitats

In this day and age of talking about rewilding I would like to point out that one of the first premises of biodynamic gardening or farming that was stipulated in the original Agriculture Lectures by Rudolf Steiner, was that every living being and every invisible force / being has to be able to express themselves freely in our garden or farm organism or individuality. That means that there are not really any ‘weeds’ or ‘pests’ and ‘diseases’, only a predominance (or imbalance) of presence of a certain species, because the trophic chain – the food chain has been disrupted by our ignorance of not cultivating with all beings in mind.

Therefore, in my opinion it is essential that we are not so much thinking of setting aside areas for wilderness but rather creating habitats in our gardens and farms where all species of the flora and fauna can express themselves and be present.

That of course also means we can (when possible) restore wetlands, forests and most of all hedges with the highest diversity of species of trees, shrubs, bushes and perennial climbers, etc, to provide the place for birds of prey and other animals of prey and create planted continuous corridors for our natural fauna to move freely and restore other habitats that have been destroyed by modern, industrialised agriculture. (Obviously this is not easy to do at garden scale, yet we can be part of it with hedgehog corridors and our choices of plants and trees.)

As you can see it will take a major concerted community effort to break down all the barriers we have created with modern housing estates and our “departmentalised” way of living.

At the same time, we need to return to the understanding that each soil also is a living being with its one ton/acre of soil life in the thin layer of the topsoil, and its water holding capacity of 140,000 kg of water per hectare per 1% of soil organic matter – 10-12% is easily achievable and more is possible.

These living beings called micro and macro-organisms don’t just want to be fed with the best biodynamic compost, green manures and our biodynamic preparations but every soil and environment has a need to express itself in the totality of its potential, wanting to manifest the 4 elements through the different fruiting parts of the vegetables, grains, flowers and herbs, ornamentals and also the natural fauna. That means it would be wise to always leave some “wild”, natural herbs growing amongst our vegetable, flower or herb patch to make sure the trophic chain and the soil’s full expression is guaranteed.

We can encourage the diverse expression of our soil also through practicing dynamic crop rotations as outlined below by creating the crop rotation based on the main crop and then have successions, catch crops. We can practice intercropping and companion planting and thereby mixing vegetables with different requirements and manifesting the 4 elements, as expressed by rooting, leafing, flowering and fruiting vegetables/plants which also have different feeding requirements, at the same time.

Having vegetables present in your garden plot with distinct qualities following each other is the way forward.

To summarise the dynamic crop rotation

In biodynamic gardening we can use different criteria and considerations for creating biodiversity in our garden through crop rotation, companion planting and catch and intercropping:

- different feeding requirements of distinct fruiting parts in vegetables
- association of different insects with distinct plant families
- distinct characteristics of the families and diverse expressions of the different plant families.
- length of growing periods

- size of plants and roots
- habit of leaves and root development (cosmic and earthly)

Successions, inter- and catch cropping or companion planting

Roots as main crop in the rotation

<i>Early</i>	<i>Main crop</i>	<i>intercropping</i>	<i>Late crop</i>
Kohlrabi	Celery (blanched)	-	Endive
Early carrots	Leeks	-	Endive
Radish	Carrots	Head lettuce	
Early lettuce	Celeriac	-	
Early kohlrabi	Celeriac		
Spinach	Celeriac		
Early carrots	onions		Corn salad

Leaves as maincrop

<i>Early</i>	<i>Main crop</i>	<i>intercropping</i>	<i>Late crop</i>
Early peas	Cauliflower (flower too)	-	Endive
Radish	Broccoli	Radish	-
Head Lettuce	Lettuce		Sugar loaf lettuce
Early kohlrabi &	NZ spinach		
Lettuce	Brussel Sprouts &		
	Other late cabbages		Corn salad

Fruiting vegetables as maincrop

<i>Early</i>	<i>Main crop</i>	<i>intercropping</i>	<i>Late crop</i>
Radish	French beans		Corn salad
Early kohlrabi	French beans	Lettuce	Corn salad/ Sugar loaf lettuce
Head Lettuce	Peas	-	Fennel
Head Lettuce	Cucumbers	Leaf lettuce	Corn salad
Radish	Green peppers		Spinach
Leaf Lettuce	Runner beans		Kale
Head lettuce	Runner beans		Corn salad
Head lettuce	Tomatoes	Radish	

Enjoy your garden rotation planning and gardening with flowers and herbs everywhere

Hans-Gunther Kern