

Soil Building – What to Feed the Soil

Information has been adapted from Greenlife Soil Companies great website info.

CLAY/BENTONITE - High Priority. Clay is of interest to gardeners due to its water holding ability. It is useful in binding soil particles together to create a crumb structure. Bentonite is one of the readily available forms now, replaces soil wetting agents as it coats the sand and organic particles with the minute clay particles that are highly charged and attracted to both water and soil minerals. Use at a minimum rate of 1kg per 10m² on coarse sandy soils, and ½ kg per 10m² on finer soils or soils with a higher humus content.

COMPOST- High Priority. is organic matter that has been decomposed and recycled as a fertilizer and soil amendment. At its most essential, the process of composting requires simply piling up waste outdoors and waiting a year or more. Modern, methodical composting is a multi-step, closely monitored process with measured inputs of water, air and carbon- and nitrogen-rich materials.

ROCK DUST - High Priority. Rock dust is a powder made from finely ground up rocks; it is a by-product of rock crushing and polishing. It is usually a mixture of granite and basalt rocks, which are high in iron, boron, manganese, copper, zinc and molybdenum. The benefit of having such a fine powder enables soil microbes and chemicals to break the minerals down, meaning faster availability for plants.

KELP - High Priority. Kelp and good seaweed solutions add micronutrient to the soil that may not be found in the land based rock dust.

LUCERNE/ALFALFA - High Priority Primarily they are used to increase organic matter in the soil, high in nitrogen and it does offer nutrients and a high availability of trace minerals. They contain trianconatol, a natural fatty-acid growth stimulant.

BLOOD and BONE - Low Priority Similar to Lucerne above, source of natural NPK and minerals, however given its from animals and of unknown sources (unless your own animals) Lucerne is the preference for this boosting 'fertiliser'.

COURSE MULCH – High Priority – Street tree mulch and other course mulches all for slow and steady feeding and water conservation in the soil. A combination of feeder mulchers (alfalfa and water wise mulchs good.

FISH HYDROLYSATE - 100% pure liquid fish. from the waste product of the tuna fishing industry. The difference between fish emulsion & fish hydrolysate is the fish oil. Emulsion has been put through a process to remove most of the oil, which is used in other products, like cosmetics. Fish Hydrolysate still contains the oil and is undiluted, and so is a richer food source for beneficial microbes and especially beneficial fungi in the soil.

DOLOMITE -Low priority Calcium magnesium carbonate (calmag), Dolomite occurs as a type of limestone. It is widely used in industry and horticulture. Dolomite will supply calcium and magnesium to your soil, and will increase the alkalinity (raise pH) of acidic soils.

BIOCHAR - Low priority Biochar is made from carbon sources put through a special pyrolysis burner, which keeps the waste at a very high temperature for an extended period. Carbon produced in the process is captured and stored in the biochar (it is a carbon negative (sequestration process). Biochar

provides large amounts of carbon, which won't break down is highly absorbent, and provides a habitat and food source for beneficial microbes.

ZEOLITE - Low priority. Produced through volcanic activity, Zeolite is a very porous mineral. Due to its porous nature, each particle has a large surface area, enabling what is known as 'cation exchange' to take place. This means that Zeolite can hold and exchange nutrients required by plants, making nutrients readily available. This sounds good but compost and humus do much the same thing and you need them anyway.

GYPSUM - Don't use. Hydrated calcium sulfate. Gardeners are often told to use it as a clay breaker. The issue here is treating the symptom rather than the cause, addressing your calcium and magnesium ratios is recommended rather than using gypsum and risking sulphate concentration.

SULPHUR - Sulfur is used to temporarily raise the acidity (lower pH) of a soil. You can not change your backyards entire pH, concentrate efforts around specific areas ensuring that lots of clay, compost and acidic mulch (pine needles) is used first.

EPSOM SALT (Magnesium Sulphate) Magnesium deficiency is normally caused by too alkaline a soil rather than lack of Magnesium, so conduct a pH test, first.

Magnesium is essential for photosynthesis in that it is an important element in chlorophyll production. Deficiency symptoms generally become evident in older leaves first and are indicated by a yellowing of leaf tissue between the veins, sometimes accompanied by orange tints. Affected plants deteriorate rapidly, losing leaves and eventually dying.

If you suspect a magnesium deficiency, it is a good idea to conduct a pH test on the soil, as it can be a symptom of too alkaline conditions.

POTASH (Potassium Sulphate) - Potassium is one of the three 'macronutrients' essential for healthy plant growth. It is used in chlorophyll formation and plays an important part in strengthening cells and the movement of water throughout the plant. This strengthening effect helps prevent damage and disease and improves the quality of flowers, fruit and seeds. Sulphate of Potash also contains sulphur.

SPONGOLITE (Silicon dioxide) - Spongolite is actually ancient, fossilised sea sponges and is almost 99% silica, Silica plays a very important role in strengthening cell structure in plants, making them less susceptible to pest and disease attack. It also aids in healthy flower and fruit production. The sponge structure is silica based and very strong, which means it does not tend to break down quickly.

POTASSIUM SILICATE - Potassium silicate is sourced from naturally occurring rock. It supplies a consistent source of potassium and has a high available silica content, which can help neutralise the effects of sodium on plant growth. Potassium aids flower and fruit production, and gives better taste to fruit and vegetables.

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