

Discover the 7 proven advantages of compost use, written by Elke Vandaele (VLACO) for the International Compost Awareness Week (ICAW), 3-9 May 2020

Get more out of the organic cycle is the motto of Vlaco. Vlaco is convinced that quality compost adds a lot. Literally and figuratively. Sufficient organic matter is essential in maintaining or obtaining a fertile soil. Compost as an organic matter source is also useful in preventing and mitigating the consequences of climate change, long-term drought and erosion. During the Compost Awareness Week from 3-8 of Mai, this crucial role of compost is highlighted.

Vlaco demonstrates the benefits of compost use by research, lab experiments, simulations and short- and long term field trials. The results apply to use in agriculture, fruit and horticulture as well as to private and public space.

Discover the 7 advantages of compost as demonstrated in the long term field trial that has been running since 1997. And is monitored by the 'Bodemkundige Dienst België'.

Advantage 1: Compost improves the soil structure

Compost provides stable organic matter to the soil, resulting in solid soil aggregates. Compost is so to speak the good glue, to hold the sand, clay and loam particles together. Research results show that a good soil structure protects the soil against compaction, dampening and erosion.

Advantage 2: compost activates the microbiological soil life

Soil is full of life. Part of this life is microscopically small. Other soil life you can see perfectly. This soil life is necessary for many functions in the soil. Compost is food for soil life. We know that for ages. This field trial shows the stimulation of a large variety of organisms by applying compost to soils. This results in an extensive and more balanced soil life.

"Compost makes the soil fertile and provides a strong natural defence against pests and diseases" Elke Vandaele, Vlaco.

Advantage 3: compost provides sufficient soil humus

Sufficient organic matter is essential to have or maintain a fertile soil. Compost enriches your soil with a large dose of stable organic matter. This gives the soil the typical dark colour. The amount of organic matter that is ideal for your soil depends on your soil texture. Sandy soils need more organic matter than for example loam soils. The field trial mentioned in this article demonstrated shows that 20 years of compost application significantly increases the organic matter content of the soil compared to only using fertilizers.

Advantage 4: compost facilitates water infiltration and thus reducing erosion

Adding compost results in soils with firmer soil aggregates. Raindrops have less grip on these aggregates. Compost use leads to improved porosity and the rain water penetrates more easily into the soils. This results in reduced running of the water. Research shows that this is especially a big advantage on loam and clay soil. Firm soil aggregates significantly reduce the risk of erosion.

Advantage 5: compost prevents dehydration of the soil

A soil with a good soil structure contains both small and large pores. The large pores ensure better infiltration of the water. The small pores are responsible for retaining water in the soil. This works as a sponge.

Also the long term field trial mentioned here, shows that especially on the lighter sandy soils, application of compost improves the water retention and plants will therefore survive periods of drought.

Advantage 6: compost counteracts soil acidification

The acidification of the soils is a natural process. Human influences like acid rain, land use or fertilization with acid acting fertilizers enhance this acidification. Sometimes it is necessary to restore the acidity of pH of the soil. This can be done by liming. Long-term research of compost shows that compost has a neutral to basic pH and counteracts soil acidification.

Advantage 7: compost provides slow releasing nutrients

In addition to organic matter, compost also contains nutrients such as nitrogen, phosphorus, potassium but also calcium, magnesium, sulphur. The 20-year trial also demonstrated that nutrients are bound to organic matter. As a result they are less likely to be lost by washing out. Compost also increases the capacity of the soil to retain nutrients. By using compost, nutrients from fertilizers are less likely to be lost. Twice profit!

“Compost has great potential for long term carbon storage. Several international long-term studies show that after a period of 4-12 years, 11%-45% of the organic matter coming from the compost is still present in the soil. Source: ISWA Report: Benefits of compost and anaerobic digestate when applied to soil.

Source of the article: Vlaco, Elke Vandaele.

