# COMPOST FROM GREEN WASTE AND PRE-DIGESTED VEGETABLE, FRUIT AND GARDEN WASTE BY "IOK AFVALBEHEER" PROCESS

*Keywords: soil improver • carbon rich • hygienised • stabilised • slow-acting fertiliser*

## Key facts:

- → **Focusing geographical areas**: EU28
- → **Product category**: Soil improver (KB 28/1/2013). Within the fertiliser regulation all CE marked fertilising products must comply with a certain Product Function Category (PFC). VFG-compost with Vlaco-certificate is a PFC 3 A 'Organic Soil Improver'. Furthermore it is eligible to be categorised as Component Material Category (CMC) 3 'Compost'
- → **Product status**: available on the market
- → **Input material**: VFG-waste and green waste (incl roadside cuttings,..)
- → **General appearance**: VFG-compost is a soil improver with a loose structure, an average moist content of 30% and particle size of 12,5 mm or less (IOK) – as contrary to other VFG-compost using sieves of usually 15 or 20 mm. The composting proces contributed to achieving a soil-like texture with a brown to dark colour due to the formed humine acids.**Nutrient content N-P-K**: 1,79-2,1% N% (dm), 0,8-1,2% P2O5 % (dm), 1,1-1,8 K2O% (dm)
- → **Other micro elements**: 2,5-4% CaO (dm); 0,5-0,8% MgO (dm); 0,5-0,8% SO3 (dm)
- → **Permit availability**: Vlaco (validity: 1y) & Federal public service on Health, Food chain safety and Environment (FOD) (validity: 5y)

## Summary:

VFG-compost is the stable, hygienic and humus-rich end product of the composting of organic biological waste streams (vegetable-fruit-garden). It is a secondary raw material containing the stable organic material, called humus, and the inorganic mineral fraction (i.c. of the vfg-waste the composting process started with). The high temperature during the process means that compost is free of pathogens, insect larvae and weed seeds. This ensures that the use of pesticides and herbicides on compost-enriched soil will be limited. The amount of humus also increases and the cation exchange capacity of the material improves. The formation of humic acids from microbial degradation products also provides suitable properties for use of compost as a soil improver. Compost is often used as a soil improver in horticulture and agriculture, resupplying a soil that is exhausted by use in organic matter and nutrients. If this does not happen, the lack of organic matter would lead to soil degradation and structural degradation in the soil. Because compost contains – besides certain levels of nitrogen, phosphorus, potassium, calcium and magnesium – a lot of organic matter it is the ideal medium for this. The nutrients in compost are structured in an organic matrix and are slowly released (availabilities (1 y) vary according to the nutrient between 10 and 85%).

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Compost is in other words a multi-nutrient soil improver with a slow fertilisation effect. This, on the other hand, helps to prevent the leaching of nutrients through sudden abundance. The immobilization of the nutrients is especially pronounced for nitrogen. Only maximum 40% of this will be released in the long term.

## How to use:

- → **Type of farming**: organic, low input, conventional
- → **Cultivation methods**: open field, greenhouse
- → **Recommended crops**: potato, wheat, cabbage, pumpkin, cucumber, tomato, leafy vegetables, celery, leek and other crops in agriculture – also use in horticulture, floriculture and arboriculture
- → **Application doses**: 10-15 t/ha (depending on soil, season, crop,…)

## Key product features:

- → High organic carbon content: > 20% (dw)
- → Multi-nutrient (N- P2O5-K2O-CaO-MgO)
- → Plant available nutrient content %: N (10-15%), P2O5 (50%), K2O (80%), CaO (30%), MgO (10-20%)
- → DM: 57-74%
- → pH: 8,7-9
- → Conform strict requirement (ARC (Fl); Fertiliser (EU)) as to organic and inorganic/physical contaminants
- → Free of pathogens, insect larvae and weed seeds
- → Sieved and inspected (input/output) on visual contaminants

## Key product benefits:

- → Produced from selectively retrieved organic waste streams
- → Closing material and nutrient cycle: secure source of carbon, nitrogen, phosphor, and other macro-/micro-elements
- → Improves soil biodiversity by increasing microbiological fauna & flora
- → Increases soil fertility
- → Slow release of nutrients
- → Increases cation exchange capacity of soil
- → Reduces leaching
- → Increases water retention capacity and thereby decrease vulnerability to erosion and desiccation (droughts)
- → 25.000 tonnes/year IOK-compost available (total Flanders (B): 110.000 tonnes/y available )

## Competitive position and advantages:

Vfg-compost is a multi-nutrient, high carbon soil improver that not only supports soil fertility in a time where organic content of soils is under pressure but also slowly releases its nutrients, and thereby reducing risks of leaching of solely mineral fertilization of farmland. In Flanders the nutrient efficiencies of 10-15% (N) and 50% (P2O5) are taken in to account into the calculation of maximum applicable compost thus enabling a higher dosage of C to be brought per ha via compost. It is a stabilized and hygienised end product implying that, once applied, no temporary decrease of N-levels occur nor will it be required to contemplate use of herbicides nor insecticides. VFG-compost (and green compost) are generally low-priced (2-12€/T) and particularly in Flanders subject to a high quality standard.

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