

TRAINING MATERIAL

Title:

Compost from green waste and pre-digested vegetable, fruit and garden waste by "IOK Afvalbeheer" process (ID: 272)

Training:

What is the product?

IOK Afvalbeheer's vfg-compost is an organic soil improver with fertilising characteristics. It has a loose structure, an average moist content of 35% and particle size up to 20 mm (post-screening). The composting process is assessed to guarantee a full level of stability achieving a soil-like texture with a brown to dark colour due to the formed humic acids. Due to monitoring of the temperature during the composting process, the material is sanitised and guaranteed free of pathogens and weeds.

Who is the vendor of the product/technology?

IOK Afvalbeheer (<http://www.iok.be/compost%20en%20co/default.aspx?id=4>) provides integrated waste treatment in 29 Kempen municipalities. The focus is on waste prevention and sustainable materials management. IOK's extensive range of tasks includes activities such as industrial land and social policies and a whole range of support services within the framework of local government.

Which other product/technologies are provided by the vendor?

IOK Afvalbeheer is developing a wood waste-based compost (lower EC and higher organic matter levels).

Which are the advantages of the product and the problems addressed?

Vfg-compost is a multi-nutrient, high carbon soil improver, with a pH between 8,7 and 9, 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. Vfg-compost is particularly in Flanders subject to a high quality standard including amongst others a process of inspection on visual contaminants (input/output) and sieving before maturation period. 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.

Which is the nutrient content of the product?

The nutrient contents of green compost (dry matter content of 57-74%) oscillate between 1,7-2,5% N (TN dm), 0,8-1,2% P₂O₅ (dm), 1,1-1,8% K₂O (dm), 2,5-4% CaO (dm), 0,5-0,8% MgO (dm), and 0,5-0,8% SO₃ (dm). The nutrients in vfg-compost are mainly structured in an organic matrix and are slowly released according to the nutrient. Plant available nutrient contents are 10-15% for N, 50% for P₂O₅, and 80% for K₂O.



Which equipment and methods can be used to apply the product?

Vfg-compost can be used in arable land farming, horticulture, floriculture, arboriculture and greenhouses on all crops mainly as a soil improver, to maintain or improve the organic matter content of the soil (thereby preventing soil degradation, structural degradation and nutrient leaching) in combination with a basic fertilisation. Compost in other words resupplies a soil that is exhausted by use in organic matter and nutrients. On fields the application is usually done with a manure/compost spreader with horizontal/vertical rolls (open field) or via a side discharge spreader (fruit cultivation).

How to use the product?

The application dose depends (in general & in particular in Flanders) on type of farm, region (N), soil (P), crop, etc.. Also elements such as application season and the cultivation of catch crops influence the application.

IOK Afvalbeheer's vfg-compost is considered as 'other organic fertiliser' (not as manure). In Flanders each fertilising product has a specific composition, and therefore normally its own manure code (Flanders). Because of a high level of standardisation though vfg-compost has a fixed nitrogen and phosphorus content (standard manure code possible) for each application. Being a slow release N-fertiliser, only 15% of the nitrogen must be taken into account for the fertilisation plan. Secondly, due to its specific soil organic matter improving capacities, only 50% of the phosphorus needs to be counted.

As an 'other organic fertiliser' the application is technically not limited to the EU imposed maximum level of 170 kg N/ha/y for animal manure (for non derogation farms). Generally a system of counting the available nitrogen is in place (e.g. in Flanders) taking into account only the amount of nitrogen that is available to the crop during the first cropping season. The available nitrogen fraction is 15% of the total N applied with certified vfg-compost. In many EU-regions though what ultimately defines the maximum allowed dose is the P-fertilisation norms – e.g. in Flanders for most soils (phosphate class III or IV) the maximum dose allowed will vary between 45 and 70 kg P/ha/y (except higher kg P for grass).

Typically (in Flanders) the doses would be 10-15 t/ha.

Which are the authority permits and in which EU countries?

Vfg-composting installations always need an environmental permit. The vfg-compost in Flanders needs to have quality certification - frequency: 1/y (by Vlaco) - and a derogation: Federal Public Service Health, Food chain safety and Environment (FOD) (validity: 5y). In line with the specifications of the EU Fertilising Products Regulation, vfg-compost from IOK complies with the requirements of CMC3 (compost), and can integrally be designated as PFC 3 A 'Organic Soil Improver'

How much does it cost?

The cost of (IOK's) vfg-compost in Flanders would vary between 2€/t and 12€/t.



For more information: https://nutriman.net/farmer-platform/product/id_272