

TRAINING MATERIAL

Title:

Technology for N&P recovery as green compost starting from green waste with "IMOG" composting windrow process including membrane and forced aeration (ID:279)

Training:

What is the technology?

Green composting refers to the controlled, biological aerobic breakdown and stabilisation of organic matter, i.c. green waste, using a variety of microorganisms.

Who is the vendor of the technology?

IMOG (intercommunal waste management body in the west of Flanders):

<https://www.imog.be>

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

At the end of the maturation phase the resulting compost – representing about ½ of the weight of the treated inputs – is a stabilized and hygienised end product. More particularly a certified high quality soil improver with slow release of nitrogen and other macro- and micro nutrients. Fine, on-demand compost can be made with a finer 0-10mm star sieve.

How does the technology work?

Allowed input for green composting is selectively retrieved green waste (compostable, organic waste from gardens, parks and lawns). At IMOG the accepted green waste follows undergoes a 4-phase composting:

(a) reduce (chip) and mix the green waste, (b) 5 weeks : set up compost heap on windrow with membrane and forced aeration, (c) 3 weeks: converting windrow to a higher pile ('table'), (d) 3 weeks: conversion from table to table. Last stage is the sifting of the compost (0-15mm) with additional short storage (ad hoc maturation). Percolate water is collected and purified and afterwards partly reused.

How/where to use the technology?

With this green composting technology (inter)communal and private green waste streams (including occasional horticultural waste streams e.g.) are professionally revalorized (N & P, organic matter) rather than incinerated, piled up or incinerated. Through a regular set-up of open air batches several (tens of) thousands of tons can be turned within 12 to 15 weeks into a quality compost usable in gardening, (organic) agriculture, green spaces, etc.. On the other hand a local, 'farm' composting initiative can be considered if organic materials cannot be used as feed or stable litter, if sufficient 'brown' and 'green' material is available, and if sufficient plots and adequate machines are available.

Which are the authority permits and in which EU countries?

Typically an environmental license/permit for installing this technology will have to be asked & obtained from the local authorities. Environmental license categories classify green composting sites in class 3 (max 25m³ composting capacity), class 2 (between 25m³ and 2000 m³ capacity) and class 1 (> 2000 m³ capacity). In Flanders an 'omgevingsvergunning' will be required from the Department of Environment, taking into account BAT (best available technologies) guidelines and recommendations of other advisory bodies. On the other hand, in Flanders farm composting is not considered as waste transformation nor submitted to legal compliancies (licensing, emissions, certification.....) if only own company-generated organic streams are used and the compost is solely used on own plots. If on the contrary 'farm compost' is also used outside of company plots then not only will its composition need to be conform with maximum levels of certain contaminants (heavy metals, organic contaminants) but also will it need to undergo a quality certification process by an appointed quality organisation.

How much does it cost?

Capital Expenditure for economical industrial scale: 12€/ton. Operational Expenditure for economical industrial scale: 28€ /ton.





For more information: https://nutriman.net/farmer-platform/technology/id_279