

## TECHNOLOGY FOR N&P RECOVERY AS GREEN COMPOST STARTING FROM GREEN WASTE WITH "IMOG" COMPOSTING WINDROW PROCESS



**Keywords:** • green waste • composting • hygienisation • recuperation NPK and C

### Key facts:

- **Category of the technology:** composting
- **Input:** green waste (from parks, public domain, gardens,...)
- **Output product(s):** green compost
- **Available capacity:** 12.000 ton green compost/y
- **Focusing geographical areas:** EU28
- **Technology status:** TRL9
- **EC/MS Authority permits:** 'omgevingsvergunning'



### Summary of the technology:

Green composting refers to the biological aerobic breakdown and stabilisation of organic matter, i.e. green waste, using a variety of microorganisms. Moreover it is a controlled (= measuring temperature and moist, turning, forced aeration, and/or increasing water content) transformation process in, an open or closed environment, that mimics the natural conversion process from organic matter to humus in the soil, humification. At the end of the maturation phase about the compost represents about ½ of the weight of the treated inputs. The temperatures achieved by the microbial activity allow for the hygienisation of the end product. Composting/compost in Flanders is among the most highly monitored and appreciated in the EU. 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

Technological elements of the recuperation process at IMOG site are:

- chipper (Doppstadt AK560) and crane (Komatsu PW180)
- wheel loader (Case 1021F) and turning machine (JENZ MU200)
- windrow machine (PWM13) and membranes
- sieving machine (with 2 sieves : 0-15mm; 15-40mm)

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.



### Competitive position and advantages:

- Robust technology leading to hygienised and stabilized end product
- Certified high quality soil improver with slow release of nitrogen and other macro- and micro nutrients
- Even finer composts are made on demand via a star sieve sieving off a 0-10mm compost
- End product scoring negative footprint (CFP)

### Contact

**Name:** Johan Bonnier

**Company:** IMOG

**Web:** <https://www.imog.be/over-imog/activiteiten/in-moen/>

**e-mail:** [johan.bonnier@imog.be](mailto:johan.bonnier@imog.be)

