

SOPHIE 2 - 2nd Summit of the Organic and Organo-Mineral Fertilisers Industries in Europe

Challenges and opportunities for CE marked compost and digestates produced from biowaste according to Regulation (EU) 2019/1009

Presented by
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17-18/01/2023 SOFIE2 - SUMMIT

www.compost-digestate.eu



ECN

Compost and Digestate
for a Circular Bioeconomy



European Compost Network



@ECNnetwork

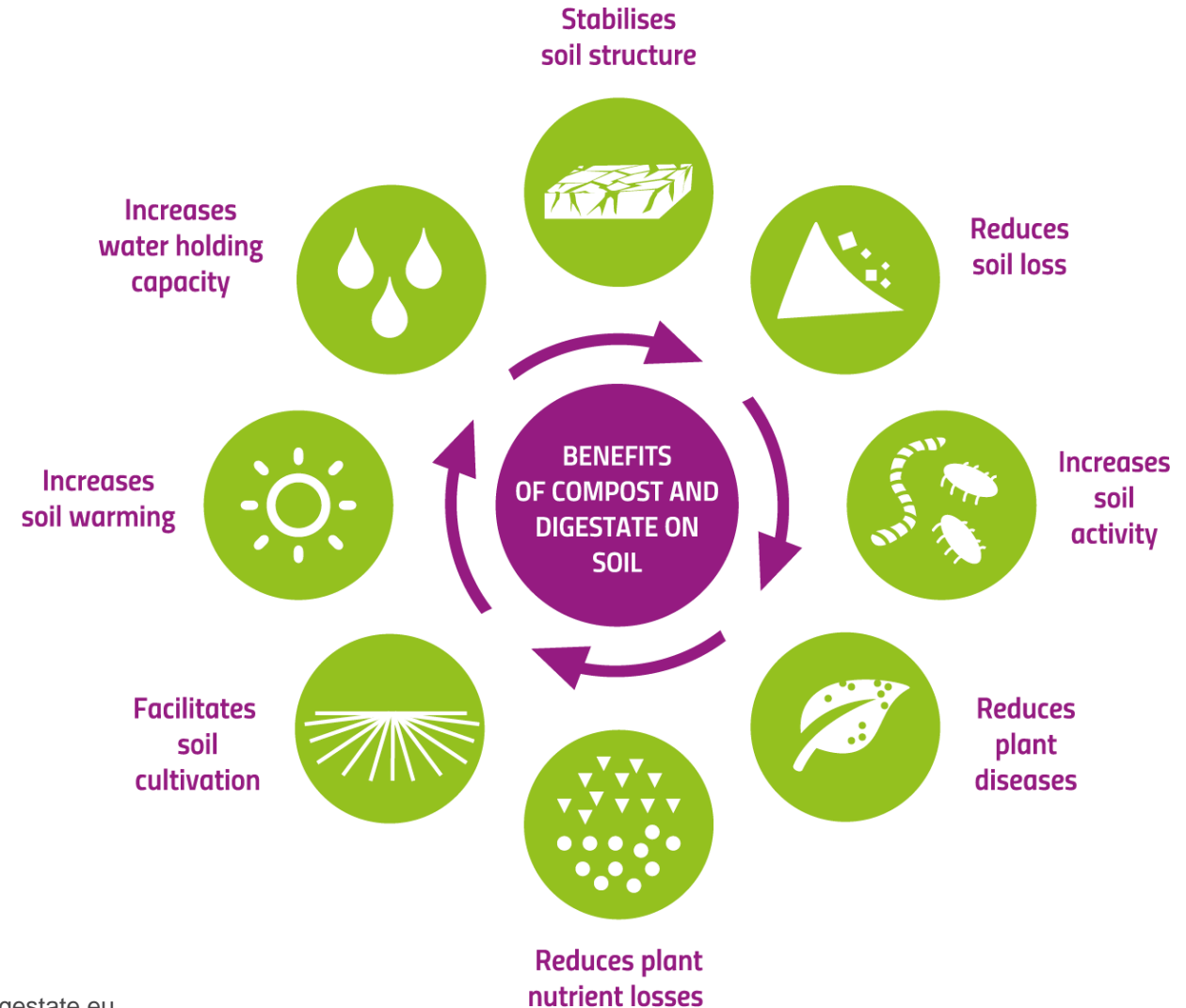
European Compost Network

ECN is the leading European membership organization promoting sustainable recycling, practices of separately collected biowaste and organic resources through composting & anaerobic digestion.

63 members from 27 European countries

48 M tpa treatment capacity

4.500 treatment plants (composting & AD)



EU Green Deal & CE

- 65 % recycling target for municipal waste by 2035
- Mandatory separate collected or separated at source by 2023
- Ban on Mechanical biological Treatment from Recycling by 2027
- Landfill target Maximum 10 % of municipal solid waste by 2035

Waste Framework & Landfill Directives

Fertilising Products & Animal By-Products Regulation

- Boosting organic matter (biowaste) recycling from biowaste
- Integration of organic fertilising products into the scope of the new Regulation
- Introducing harmonised EU rules for products diverting from organic waste materials
- CE marking and free trade for organic fertilising products across EU
- Optional harmonisation
- End point in the manufacturing chain for ABP-derived materials

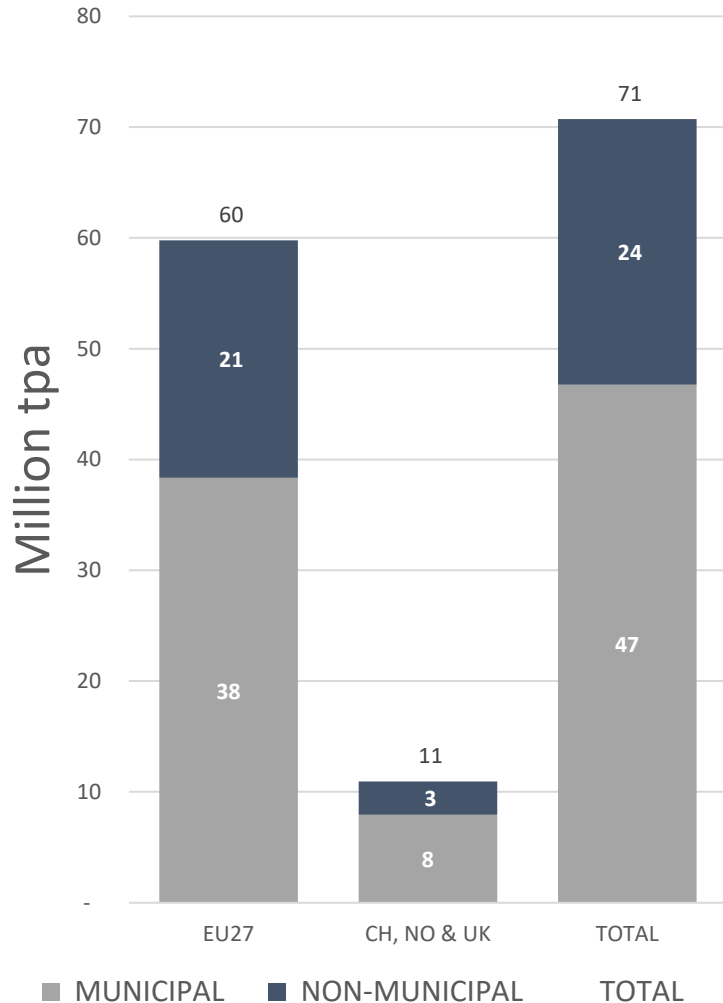
- Integrated Nutrient Management Action plan (INMAP)
- Reduce nutrient losses by at least 50 % without deterioration in soil fertility
- Reduction of fertiliser use by at least 20 %
- Carbon farming practises & carbon removal schemes

Farm to Fork & Sustainable Carbon Cycles

Soil Health Law & Biodiversity strategy

- Soils should be in a healthy condition by 2050
- 60-70 % of soil ecosystems in the EU are unhealthy and suffering from continuing degradation
- 12,7 % of Europe is effected by moderate to high erosion
- EU Soil Health Law by 2023
- Identifying Soil health indicators & Soil Health Certificate
- 30 % restoring land and increasing organic farming (25% organic farmland by 2030)

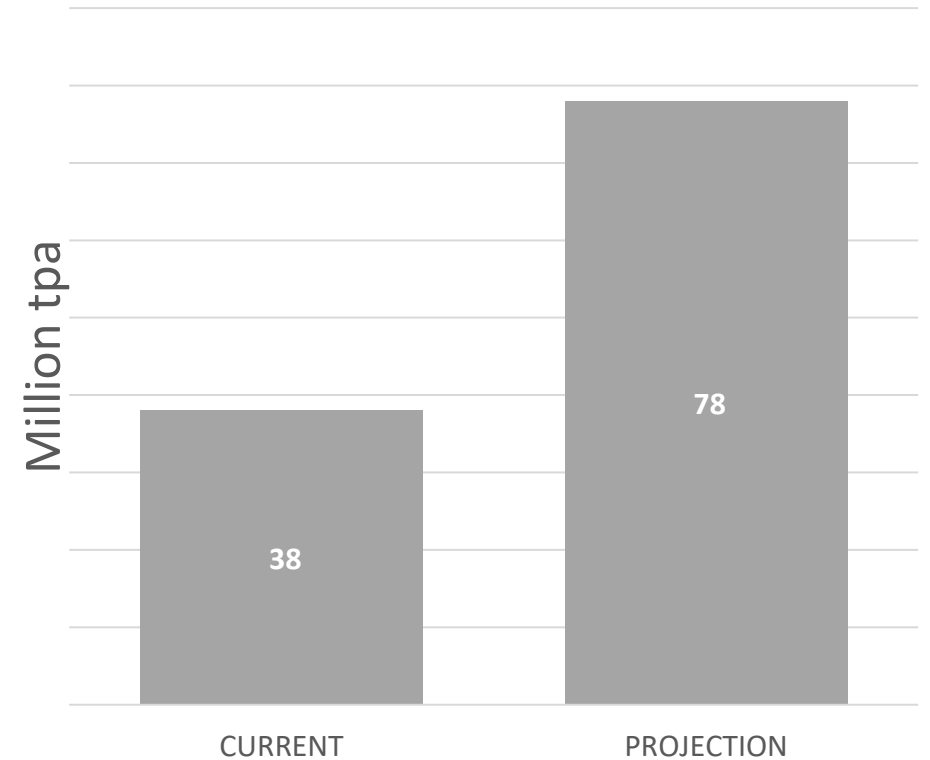
Municipal Biowaste – RECYCLING POTENTIAL



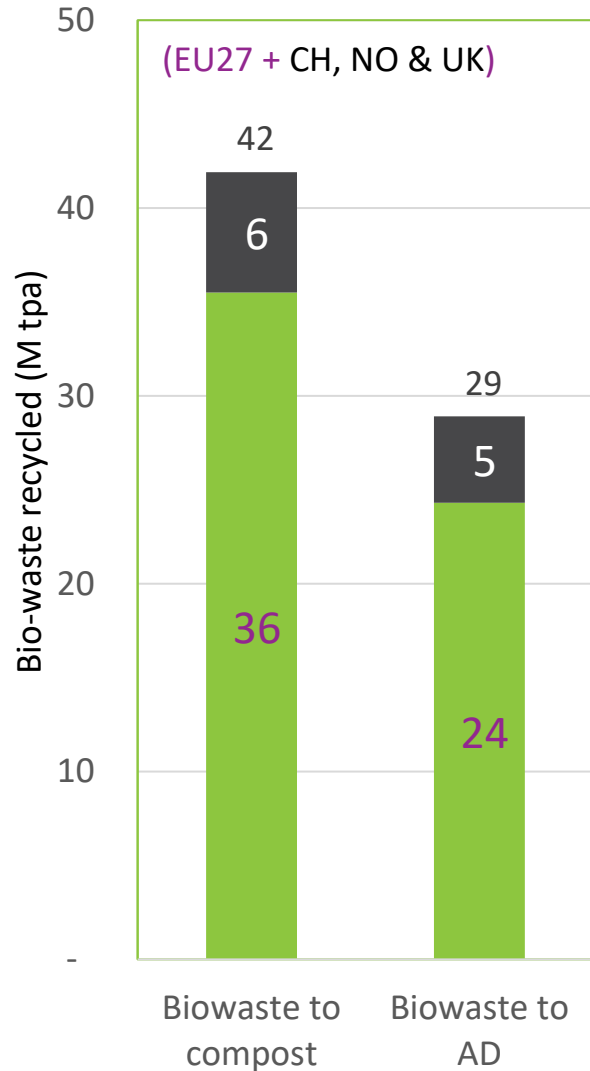
**EU TARGET TO
RECYCLE 65% MSW BY
2035**

**17% to 35% needed
through bio-waste**

**Extra 40 M tpa
MUNICIPAL BIOWASTE
has to be separately
collected!**



Biowaste Collection – COMPOST & DIGESTATE PRODUCTION



71 M tpa
BIO-WASTE RECYCLED

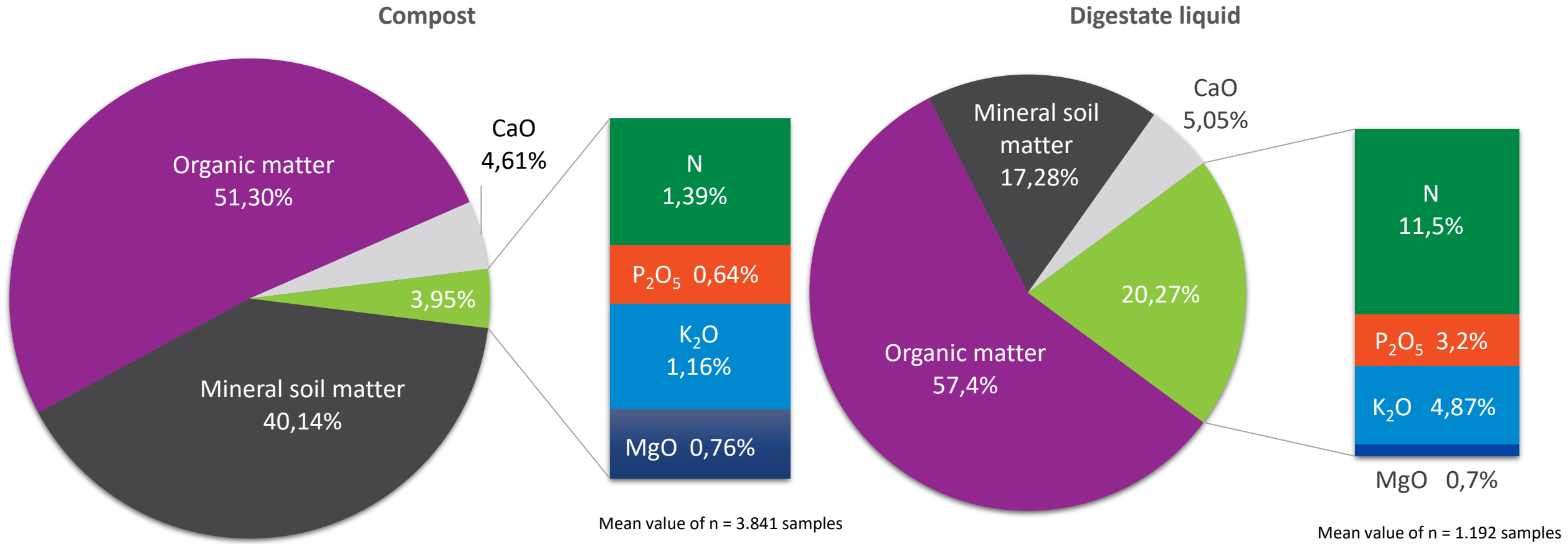
21 M tpa
COMPOST PRODUCED

Surface area (million ha)	Fraction of Arable Land	Fraction of Mod./ Severely Eroded Land
2.1	2%	16%

ESTIMATION FOR 2035

46 M tpa
COMPOST PRODUCED

Compost & Digestate – NUTRIENT COMPOSITION



DM 70,9 %; pH 8,6; Salt content 4,4 g/l

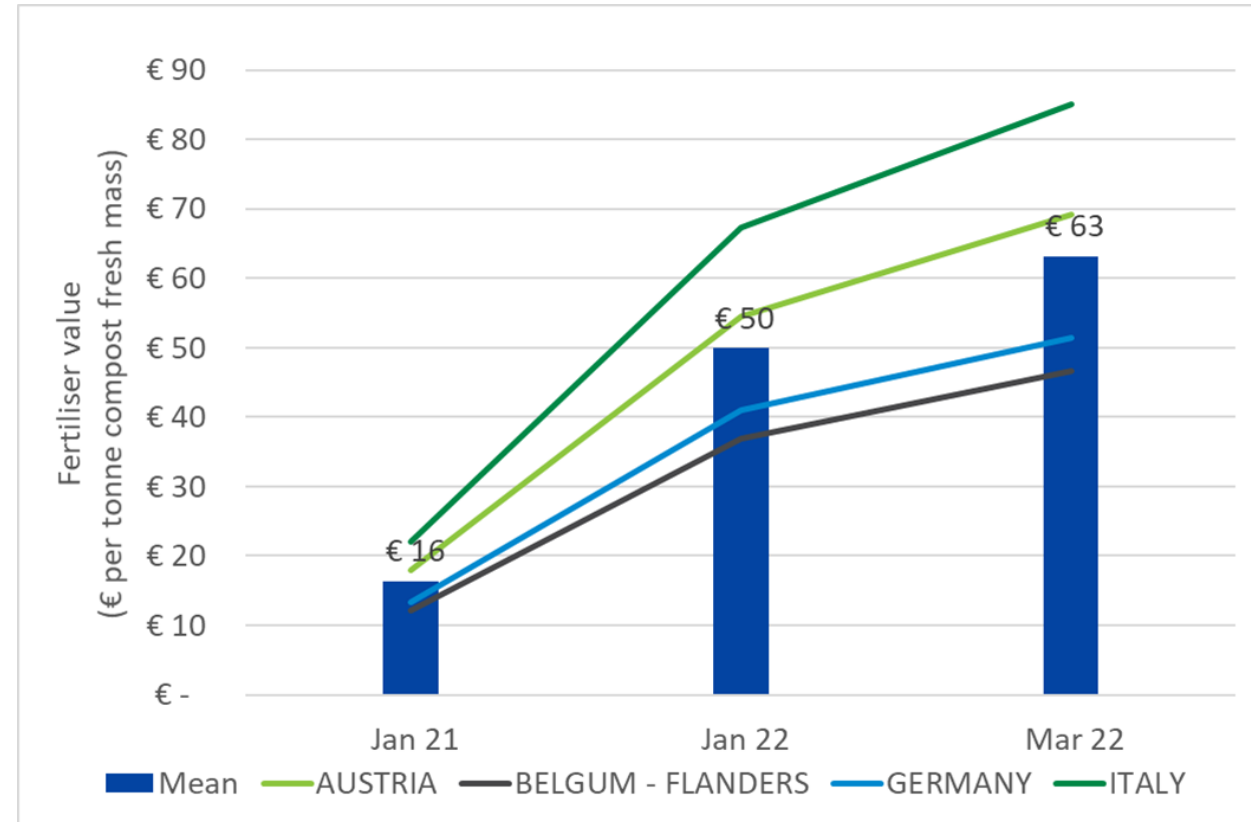
DM 4,6 %; pH 8,5; Salt content 16,1 g/l

Compost – FERTILISER RESOURCE & VALUE

Estimated Quantities of NPK Fertilisers in Compost

	N	P as P ₂ O ₅	K as K ₂ O
	(thousand tonnes)		
EU27	142	53	84
CH, NO & UK	28	10	16
TOTAL	170	63	100

N % FM	P as P ₂ O ₅ % FM	K as K ₂ O % FM
1.2	0.5	0.7
FM Fresh Matter		



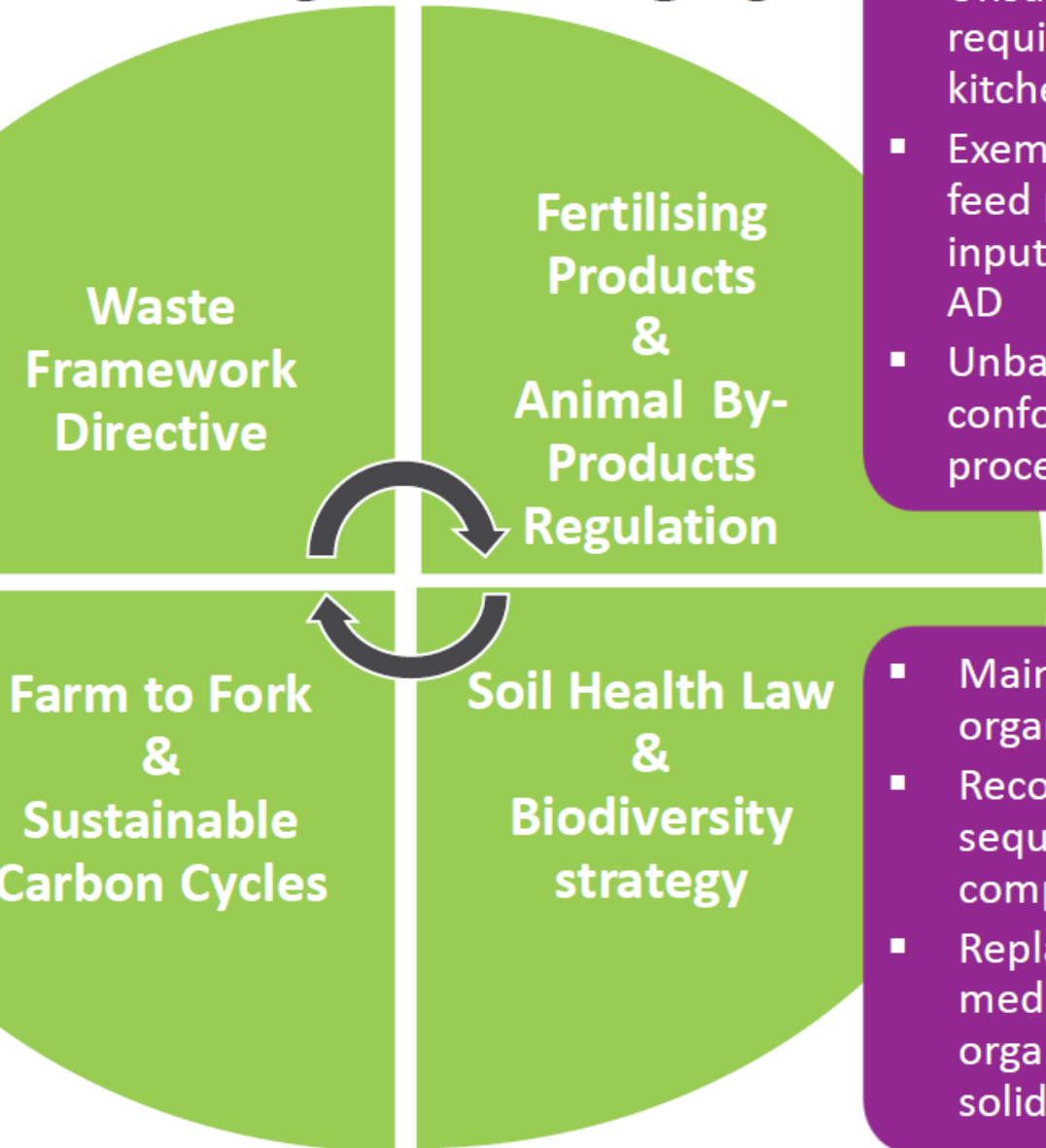
Perspectives and challenges for manufacturers of compost and digestate

Examination of the CE marketing for compost and digestate

	Strengths	Weakness
Green compost	+++++	
Biowaste compost <ul style="list-style-type: none"> ▪ Fresh compost ▪ Mature compost 	+++ + +++++	-- ---- -
Digestate <ul style="list-style-type: none"> ▪ Solid digestate ▪ Liquid digestate 	+ (+) ++	- (-) --- -----

KEY CHALLENGES

- Enforcement: implementation of biowaste separate collection (esp. food waste)
- Binding recycling target for separate collected/source separated municipal biowaste
- Separate collection/recycling target for commercial and industrial biowaste



- Unsuitable ABPR treatment requirements for food waste from kitchen (Cat. 3)
- Exemption of sludges from food & feed processing industries as input material for composting & AD
- Unbalanced requirements in the conformity assessment procedures for compost & AD

- Including compost & digestate from biowaste in carbon farming practises, carbon removal schemes
- Replacement of mineral fertilisers with high-quality recycled organic materials
- Recognition of soil organic matter in the Integrated Nutrient Management Action Plan

- Maintaining & improving soil organic matter
- Recognition of carbon sequestration potential of compost and solid digestate
- Replacement of peat in growing media with high-quality recycled organic materials (compost & solid digestate)

EU CE & Green Deal

Further information



Compost and Digestate for a Circular Bioeconomy



**IMPROVING
SOILS**



**RECYCLING
FERTILISERS**



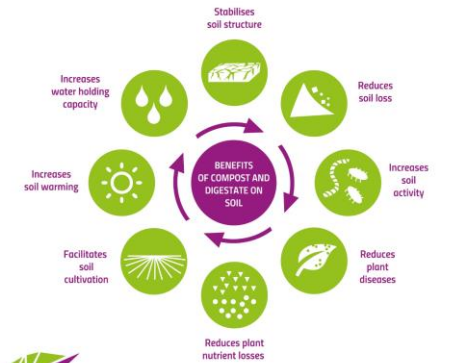
**TACKLING
CLIMATE CHANGE**

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ECN DATA REPORT 2022

COMPOST AND DIGESTATE FOR A CIRCULAR BIOECONOMY

Overview of Bio-Waste Collection,
Treatment & Markets Across Europe



<https://cutt.ly/D1ceQ2u>