European Compost Network

European Bio-Waste Management and the new EU Fertilising Product Regulation



European Compost Network ECN e.V. Stefanie Siebert info@compostnetwork.info

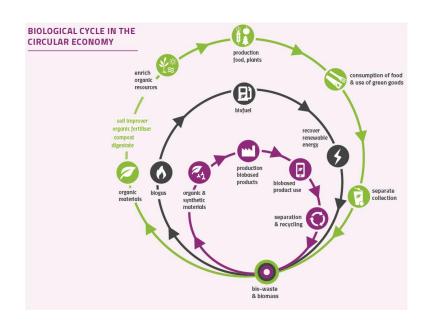
Outline

- European Compost Network
- European Bio-Waste Management
- EU Circular Economy
 - Waste Legislation
 - EU Fertilising Product Regulation
 - Quality Assurance for Compost and Digestate in Europe
 - EU Follow-up activities on the EU Fertilising Product Regulation

European Compost Network

ECN's Vision

"Living well within the limited resources of the planet respecting the organic cycle"



- ECN is the leading European membership organization
- Promoting sustainable recycling practices of organic resources: composting,
 anaerobic digestion...

61 members from 27 European countries

45 M tpa treatment capacities

4.500 treatment plants (composting & AD)



European Compost Network

ECN's objectives for the separate collection, biological treatment, production & use of quality compost and digestate :

1. FAVOURABLE LEGAL FRAMEWORK – EUROPEAN POLICY

Achieve an EU legal framework

2. MARKET DEVELOPMENT

Achieve favorable market conditions across Europe

3. IMPLEMENTING QUALITY ASSURANCE SCHEMES

Achieve Europe wide implementation quality assurance schemes with ECN-QAS as a benchmark



Biological treatment of municipal biowaste	Plants	Input [Mio t/a]
Composting	3.849	30.55
AD and combined AD & composting	705	14.38
Total	4.554	44.93

Source: ECN/ISWA Survey 2017 (results from 19 European Countries*)

^{*} AT, BE, CH, DE, EE, FI, FR, HU, IE, IT, LT, NL, NO, PL, PT, SE, SI, ES, UK



Treated bio-waste

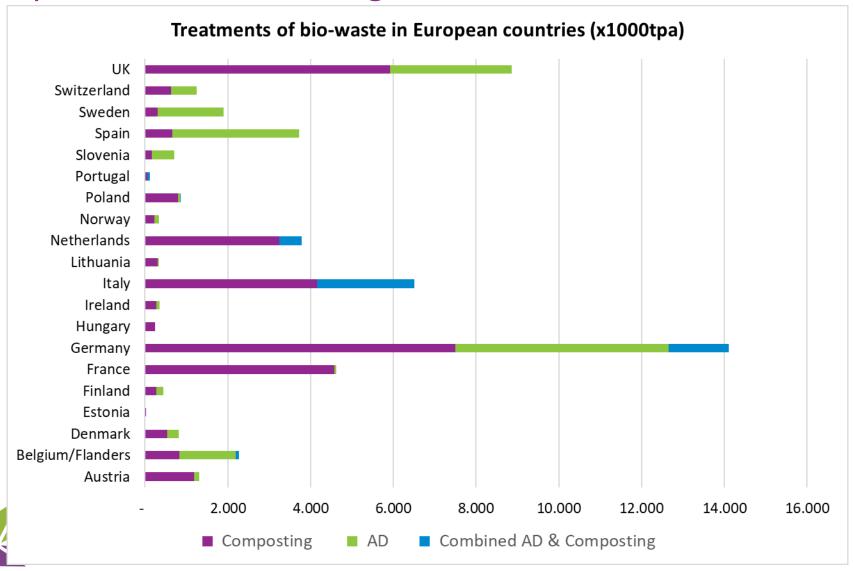
- ca. 60 % green waste
- ca. 40 % biowaste (food waste mixed with green waste)



- Separate collection and composting of biowaste
- Separate collection of biowaste in preparation/implementation
- Only limited collection of biowaste







Potential of Bio-waste Management

Potential und Treatment

- Total biowaste potential in Europa: 118-138 Mt pa
- 20-60 % Biowaste in Municipal Solid Waste (MSW)
- Biowaste potential of MSW in Europa: 96 Mt pa
- Biowaste management in Europa: 40 Mt pa
- 60 Mt pa Biowaste are wasted every year!!

Food waste in EU 28 (2012)

- 87.6 Mt total food waste per year
- 46.5 Mt food waste from households
- **41.1** Mt pa of commercial and industrial biowaste

Source: Stenmarck et. al. 2016 FUSIONS report





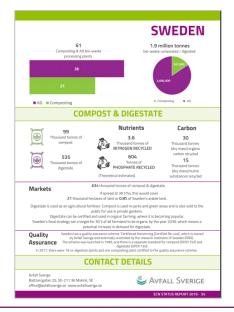


ECN Status report 2019

 Overall article about bio-waste management in Europe

2 page summarized country reports





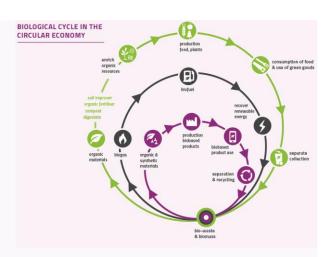




The EU Circular Economy

Objectives

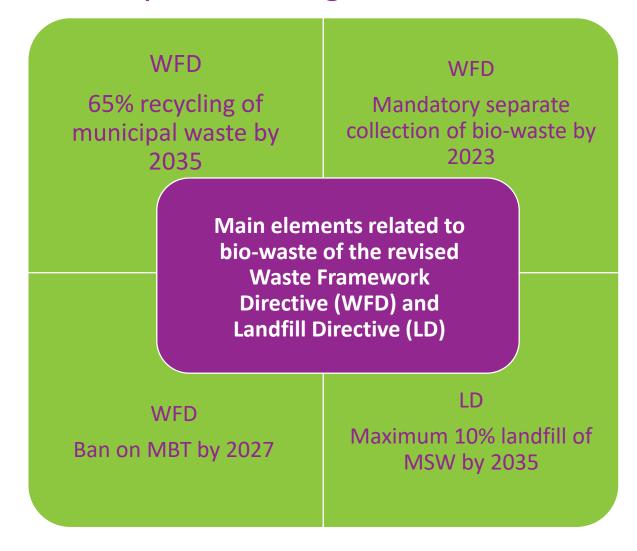
- Reduction of waste production in Europe
- Promoting recycling
- Saving primary resources



- Revision of the Waste Framework Directive and Landfill Directive
 - Status: Adopted and implementation in Member States
- Establishing of markets for secondary products
- ➤ Revision of the EU Fertilising Regulation —provisional agreement by the European Parliament on 27 March 2019



EU Circular Economy - Waste Legislation





EU Circular Economy - Waste Legislation

- Implementation act on calculating recycling targets
 - Draft Commission Implementation Decision on establishing rules for the calculation, verification and reporting of data on the recycling of municipal waste including the 'Methodology for calculating municipal bio-waste separated and recycled at source' (Annex II)
 - Draft still under discussion with Member States
- Delegated Act on a common methodology for measurement of food waste
 - Adopted by EU Commission on 3 May 2019
 - Delegated Act is subject to scrutiny by co-legislators and will be sent to the EP and Council by the end of July
- Guidelines for the separate collection of household waste
 - Questionnaire by project consortium of ACR+, Plan Miljo, Öko Institute sent to stakeholders on 18 January 2019,
 - Guidance not yet published



EU Fertilising Product Regulation

Commission proposal COM(2016)157 final, published 17/03/2016

- Including organic fertilisers, soil improvers, growing media, bio-stimulants
- Quasi end-of-waste criteria for compost and digestate from biowaste
 - defined input materials (separate collected bio-waste, no MBT material, no sewage sludge)

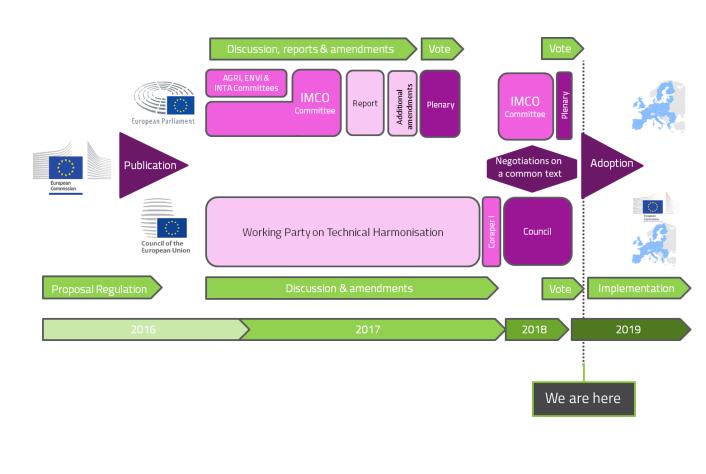
Objectives

- Boosting organic matter (biowaste) recycling from biowaste within CEP
- Integration of organic fertilising products into the scope of the NFR
- Introducing harmonised EU rules for products diverting from organic waste materials
- Creating access to CE marking and free trade for organic fertilising products across EU
- Maintaining the existing "Optional Harmonisation" scheme, free choice to opt for compliance with national rules for fertilising products restricted to national markets or CE marked fertilisers with unrestricted access to EU market



EU Fertilising Product Regulation

- Final adoption in EP plenary 27/03/2019
- The Council endorsed the text on 22/05/2019.
- Expected to enter into force in June/July 2019.
- Formal procedure to translate the regulation in all EU languages





Structure of the EU Fertilising Product Proposal

Exhaustive list of Component Materials

Categories CMC

(11)

- Quality
- Safety
- ...

CMC 3 Compost CMC 5 Digestates other than from energy crops Exhaustive list of Product Function Categories

PFC (7)

- Quality
- Safety
- Declaration
- .,

Conformity assessment procedure related to 'CMC/PFC' combination

- Modul A D1
- Declaration of conformity

PFC 1 A. Organic fertiliser

PFC 3 A. Organic Soil Improver

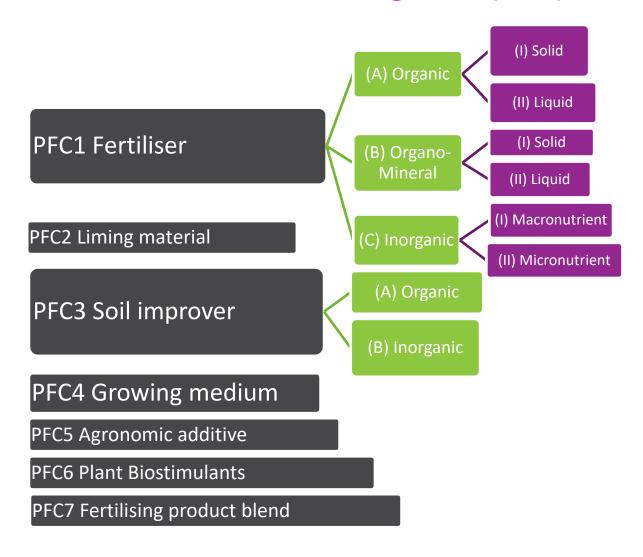
PFC 4 Growing Media

PFC 7 Fertilising Products Blends

Modul D.1 Quality Assurance of Process and Products



New structure - Product Function Categories (PFC)





PFC1(A)(I)/(II) – Requirements Organic fertiliser

	PFC 1 (A)(I)	PFC 1 (A)(II)
Criteria	Solid	Liquid
Corg	≥ 15 %	≥ 5 %
Nitrogen (N)	≥ 2,5 %*	≥ 2 %
Phosphorus (P ₂ O ₅)	≥ 2 %*	≥ 1%
Potassium* (K ₂ O)	≥ 2 % *	≥ 2 %
SUM (NPK)	(1/1/1) ≥ 4	(1/1/1) ≥ 3 %

All values based on fresh matter



^{*} As a minimum one of the three nutrient contents have to been reached

PFC3(A) – Requirements Organic soil improver

	EP
Dry matter	≥ 20 %
Corg	≥ 7,5 %
Composition	An organic soil improver shall consist 95% of material of solely biological origin including peat, leonardite, lignite and humic substances obtained from them but excluding other materials which are fossilized or embedded in geological formations.
All values based on fresh matter	



Criteria	PFC 1 (A)(I)/(II)	PFC 3 (A)
	Organic fertiliser	Organic soil improver
Cd (mg/kg dm)	1,5	2
Cr IV / Cr (mg/kg dm)	2 / -	2 / -
Hg (mg/kg dm)	1	1
Ni (mg/kg dm)	50	50
Pb (mg/kg dm)	120	120
Cu (mg/kg dm)	300	300
Zn (mg/kg dm)	800	800
As /mg/kg dm)	40	40
$C_2H_5N_3O_2$ (g/kg dm)	absent	-
Salmonella spp.	absent	absent
E. Coli / Enterococcaceae (CFU/g)	≤ 1000	≤ 1000
ECN		10 / 21



Overview on environmental criteria

Criteria	Fertilisers Reg.	Fertiliser Reg.
	Digestate (CMC 5)	Compost (CMC 3)
PAH ₁₆ (mg/kg dm)	6	6
Weed seeds (seeds /L)	-	-
Impurities (% dm)	≤ 0,5 ^{x1}	≤ 0,5 ^{×1}
Stability		
Oxygen Update rate [OUR] (mmol O ₂ / OM *h)	25	25
-OUR/Rotting degree /- Residual Gas potential (liter biogas/g volatile solids) / organic acides (mg/l)	-/≤0,25/-	III/-/-



^{X1} no more than 3 g/kg dry matter of macroscopic impurities above 2 mm in any of the following forms: glass, metal or plastics; and

Process Requirements for compost and digestate

	Fertiliser Regulation
Input material	Bio-waste, source separated, ABP cat 2 & 3, excluding sewage sludge and mixed municipal waste Plus a liquid or non-liquid microbial or non-microbial extract made out of compost; and Unprocessed and mechanically processed residues from food production industries, except ABPR materials
Process criteria for digestate	 a) Thermophilic at 55 °C/24 h/hydraulic retention time of 20 days b) Thermophilic at 55 °C incl. pasteurisation step 70 °C-1h c) Thermophilic at 55 °C followed by composting d) Mesophilic at 37-40 °C incl. pasteurisation step 70 °C-1 h e) Mesophilic at 37-40 °C followed by composting
Process criteria for compost	70 °C ≥ 3 days 65 °C ≥ 5 days 60 °C ≥ 7 days 55 °C ≥ 14 days



Fertiliser Regulation - Quality assurance

Quality Assurance is a pre-condition for placing compost- or digestate-based fertilising products on the European Market

 External control of the quality assurance system by an <u>accredited</u> notified body





ECN's Concerns on the EU Fertilising Product Proposal

- The lack of recognition that limit values for minimum nutrient and organic carbon content should be expressed on dry matter basis
- ➤ It will be difficult for digestates (liquid or solid) to fulfill the nutrient or carbon minimum content requirements for organic fertilisers or soil improvers.
- The pathogen control with limit values for 'Escherichia coli / Enterococcaceae'
 as product criteria for organic fertilisers, organic soil improvers and growing
 media
- Organic materials will be excluded to be placed as fertilising products on the European market as these pathogens will regrow



ECN's Concerns on the EU Fertilising Product Proposal

- The proposed stability criteria for digestate will be difficult to reach for solid and especially for liquid digestate.
- The requirement that the quality assurance organisations have to be accredited by the national bodies:

External control of fertilising products based on compost (CMC3) and digestate (CMC5) by **an accredited national body will be very costly!**



Quality Assurance for Compost and Digestate

ECN-QAS European Quality Assurance Scheme for compost and Digestate

Objective: Harmonisation and promotion of recycling of organic waste materials «from waste to product»



Conformity assessed quality assurance organisations in ECN-QAS









KBVÖ Austria



VLACO Belgium

CIC Italy



Implementation of Fertilising Product regulation (FPR)

- FPR sets a new Regulatory Committee (Committee on Fertilising Products) –
 for the adoption of implementing acts.
 - Changes to the mandate of the EU Working Group to an Committee on Fertilising Products
- Setting-up the administrative structure for the conformity assessment
- Market Surveillance Regulation (June/July 2022 relevant for Member States)
- Criteria on agronomic efficiency and safety for by-products (June/July 2022)
- Draft standardisation request
- Guidance document on labels
- Frequently Asked Questions (FAQs)



Conformity assessment (COM (EC) No 765/2008)

- Setting-up the administrative structure for the conformity assessment
- FPR follows the new legislative approach:
 - the conformity assessment to be done following one of the modules set in Annex IV
 - the module is chosen depending on the PFC and/or the CMC
 - in some of the modules notified bodies play a role --> need to create the corresponding infrastructure
- Timeline March/April 2020



Draft standardization request

The COM will request CEN to develop harmonized standards to prove compliance with the essential requirements in FPR.

Next steps

- The COM will send a revised version of the draft standardisation request for comments in 10 working days.
- The adoption procedure will be launched as soon as possible once the Regulation is published in the OJEU.



Guidance document on labels

Commission obligation to publish the guidance as mentioned in art. 4(3) of FPR

Scope

 to provide guidance for manufacturers and market surveillance authorities with clear information and examples concerning the visual appearance of the label referred to in Annex III to FPR

Next steps

- Setting up a EU task force with interested members and observers of the WG
- The task force should send a plan to DG GROW by end of June
- Work timeline June/July 2020



EU Fertilising Product Proposal – Follow-up

Frequently Asked Questions (FAQs)

FAQs document is proposed by the Commission to facilitate the implementation of the FPR

It is a living document subject of updates; not legally binding

Next steps:

- finalise the first list of questions based on the draft proposed by COM and additional comments sent by WG by 31 May 2019
- The replies to the FAQs will be discussed in the WG
- publication of the FAQs document in Commission webpage



Further information

ECN Homepage:

www.compostnetwork.info

- ECN Status Report
- Factsheets
- ECN News/E__Bulletin
- Country reports
- ECN-QAS Manual

