

Circular Fertilisers: Chat on safety, benefits & market readiness

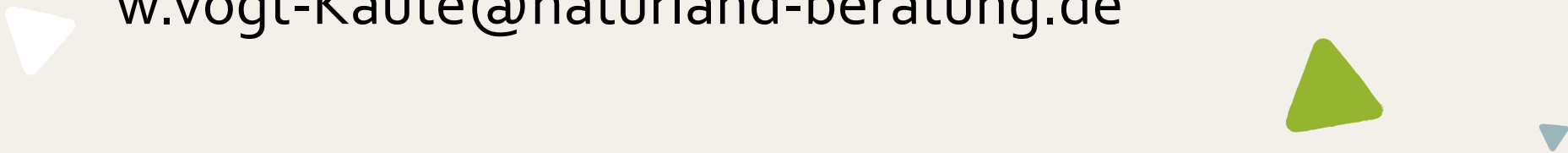
19 Feb 2025

FER-PLAY final conference



What are circular fertilisers? Are there benefits for the soil?

Werner Vogt-Kaute, Naturland e.V.
w.vogt-Kaute@naturland-beratung.de

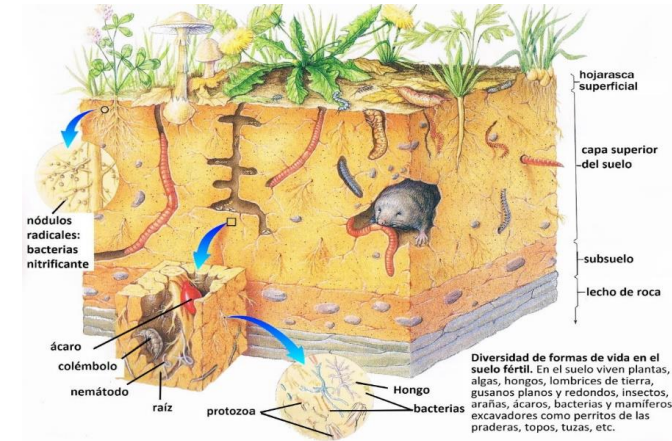


Circular Fertilisers (CF)



Scope/concept:

Those produced using nutrients recovered from recycled waste, subproducts and wastewater



Aiming for:

Increasing resilience, self-sufficiency

Minimising pollution

Enhancing soil health

Circular Fertilisers (CF)

Carbon rich fertilisers

- Compost, solid phase of biogas substrate, spent mushroom substrate and many others

Mineral circular fertilisers

- Mainly phosphorus
- Main aspect are nutrients. A certain minimum level of nutrients is necessary for soil and plants.
- Struvite is a big step forward towards a sustainable agriculture as rock phosphate is a limited source.

Benefits for the soil

Carbon rich fertilisers

- Increase of organic matter (humus) and sequestration of carbon (CO₂ sink)
- Biological activity (feed for soil life)
- Nutrient supply
- Volume and stability of pores
- Water holding capacity
- Filter and buffer function
- Stabilisation and increase of yields

Mineral circular fertilisers

- Slow nutrient release (low pollution potential, NO_x and P)
- Increase of yields

Thank you for your attention



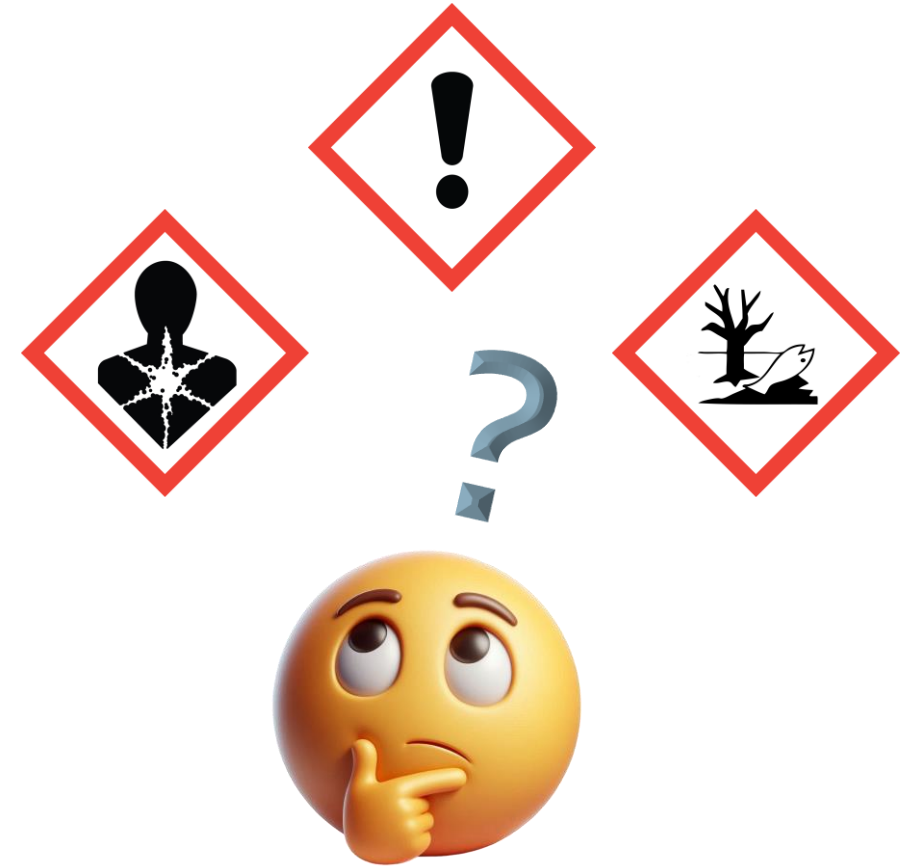
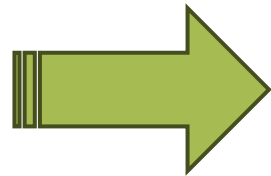
Ok, they're nice – but safe?

Vanesa Benito (GAIKER)

benito@gaiker.es

...well, we have to check it out!

Secondary raw materials



What do the regulations say?



REG (EU) 2019/1009

Facilitate access to the EU market and free circulation of efficient and

safe

fertiliser products for human health and the environment.

REACH regulation CLP regulation

Protect human health and the environment from the risks that can be posed by chemicals.

How to know if it is safe?

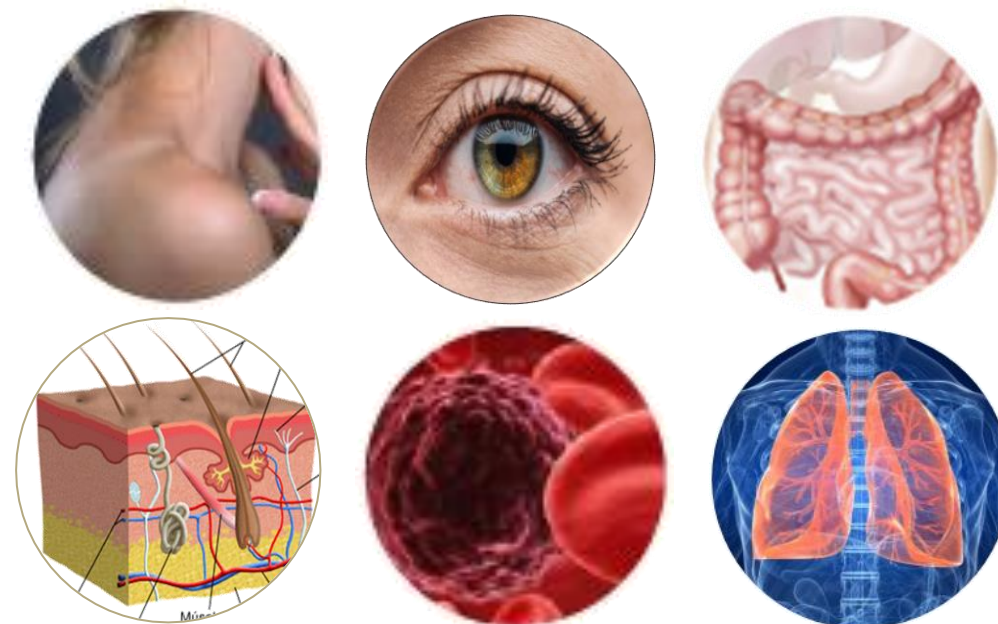
✓ Check existing information...

✓ Test it!

ECOTOXICOLOGICAL TESTS



HUMAN TOXICOLOGICAL TESTS



Thank you for your attention



A LEGAL FRAMEWORK FOR COMPOSTING ORGANIC WASTE AT EVERY SCALE

Nicolas SCHERRIER (Bruxelles Environnement)

nscherrier@environnement.brussels



Final Conference, Brussels 18-19 Feb 2025



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N° 101060426.

Why create a legal framework for composting ?

EU Reglementation on Animal By Products (ABP)

Any food waste coming out of a kitchen is considered an ABP

ABP have to be treated according to industrial processes to ensure sanitary security : mainly hyginisation.

Hygienisation is obtained after heating the waste at 70°C for 1 hour (standard procedure)

After hygienisation, an EOW status can be obtained

EU regulation anticipates exemptions for MS

Ref : 1069/2009 and 142/2011

Small scale composting (non industrial)

Impossible to ensure hygienisation criteria

No end of waste status, composting waste on a small scale is virtualy illegal

BRUDALEX (Chap 9)

Fr : [explanation](#) and [legal text](#)

Nl : [explanation](#) and [legal text](#)

New regulation in Brussels : BRUDALEX Chap 9

Industrial scale : an Environmental Permit is required

Composting and anaerobic digestion are equally concerned

The permits ensures hyginisation is achieved and gives an end of waste status to the compost

A specific and compulsory training has to be followed

Composting and anaerobic digestion are equally concerned

BRUDALEX (Chap 9)

Fr : [explanation](#) and [legal text](#)

Nl : [explanation](#) and [legal text](#)



New regulation in Brussels : BRUDALEX Chap 9



BRUDALEX (Chap 9)

Fr : [explanation](#) and [legal text](#)

Nl : [explanation](#) and [legal text](#)

Compagny composting and Compagnies Cluster Composting

ABP regulation allows MS to make exceptions when the sanitary risks are confined.

Brudalex allows

- a compagny to compost its own organic wastes (including food waste)
- up to a maximum of 25m³ wastes at any given time
- The compost can only be used by this compagny [=risk is confined] under its own responsibility => no selling or giving away the compost.
- The compost keeps its waste status, but is allowed to be used under best practises
- A specific and compulsory training has to be followed
- A cluster of compagnies can do the same, under the same framework

New regulation in Brussels : BRUDALEX Chap 9

Community composting (=citizens)

ABP regulation allows MS to make exceptions when the sanitary risks are confined.

Brudalex allows

- a community to compost their organic wastes (including food waste)
- up to a maximum of 25m³ wastes at any given time
- The compost can only be used by the participants [=risk is confined] under their own responsibility => no selling or giving away the compost.
- This compost keeps its waste status
- A specific and compulsory training has to be followed

[Our website](#)



New regulation in Brussels : BRUDALEX Chap 9

Home composting (=citizens)

ABP regulation is not relevant

Citizen are allowed to compost their organic wastes and to use the compost.

We provide guidance, a helpdesk, training, etc...

[Our website](#)

FÛT

- 🕒 Récolte du compost: 6 à 12 mois
- 💶 Entre 0€ et 150€ selon le fût. Vous pouvez même recevoir une prime de votre commune
- 👍 Déposez votre fût sur des dalles en béton, il gagnera en stabilité et sera protégé des rongeurs

VERMICOMPOST

- 🕒 3 à 6 mois pour le compost et à partir de 1 mois pour le percolât.
- 💶 Entre 0€ et 80€ selon votre choix: achat d'une vermicompostière ou fabrication maison.
- 👍 Jetez les restes d'agrumes avec modération. Les vers ont la peau sensible!

Are CF on the market?
Are they legal and
cheaper than
conventional fertilizer?

Morana Jednačak (IPS Konzalting)

mj@ips-konzalting.hr

FER-PLAY Final Conference, Brussels 18-19 Feb 2025



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N° 101060426.



Market Availability of Circular Fertilizers (CFs)

CFs in the EU market

- Circular fertilizers (CFs) include bio-based fertilizers (BBFs) made from organic waste, digestate, sludge, and treated manure
- EU fertilizer consumption is shifting, with BBFs gaining interest due to sustainability goals.

Survey insights

- Many stakeholders are unaware of CFs but interested in their potential
- Adoption is slow but growing with policy support

Market Availability of Circular Fertilizers (CFs)

Challenges in market penetration

Supply chain issues

Production scale is lower than conventional fertilizers

Lack of awareness

Farmers need more education on BBFs' benefits and application methods

Consumer hesitation

Concerns about yield consistency and soil impact

Legal Framework & Policy Support for CFs in the EU

EU Regulations Supporting CFs

- **Fertilising Products Regulation (FPR)**
2019/1009: Allows CE marking for organic and waste-derived fertilizers
- **Farm to Fork Strategy**: Aim for a 50 % reduction in nutrient losses and 20 % less fertilizer use by 2030
- **Circular Economy Action Plan**: Encourages nutrient recovery from waste streams

Barriers to Legal Integration

- **Complex certification**: CE-marking process for BBFs is still evolving
- **National-level restrictions**: Some countries hesitate to approve BBFs due to concerns over contaminants
- **Lack of harmonization**: Differing waste regulations across EU countries slow down CF approval

Cost Comparison – Are CFs Cheaper?

Price Trends

- **Traditional fertilizers prices fluctuate** due to natural gas dependency (e.g., **nitrogen fertilizers**)
- **CFs have stable pricing** due to their reliance on waste streams rather than fossil fuels

Survey Results on Willingness to Use CFs

- Farmers **are open to CFs** if they **cost the same or less** than conventional fertilizers
- Perceived **long-term benefits**: Improved soil health, reduced dependency on imports

Cost Comparison – Are CFs Cheaper?

CFs are generally **20-50 % more expensive** than mineral fertilizers due to production scale, advanced technology, and market volatility

Stakeholders **prioritize disease risk, nutrient release efficiency, and soil benefits** over price

Increased CF adoption may drive competition, potentially lowering overall fertilization costs

Market transparency is needed - a **centralized CF pricing and availability database** is recommended.

Subsidies can bridge the cost gap, supporting input costs (e.g., manure) and incentivizing sustainable farming.

Long-term benefits outweigh higher upfront costs, making CFs a viable but initially costly alternative.



IF you are a farmer/technologist?



IF you are a consumer?



Thank you for your attention

