

Fertilizer Focus



**Fertilizer's opportunity
for decarbonisation**

- New facilities
- Digital soil maps
- Africa focus

Strategies to enhance the commercialisation of circular fertilizers

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The European Union is facing a significant decline in soil quality. Soil surfaces are decreasing due to ongoing urbanization and infrastructure development, while large areas of soil are contaminated by heavy metals and organic pollutants. Additionally, erosion is reducing the availability of fertile land, and desertification has become a pressing issue, particularly in the Mediterranean region. These challenges threaten not only the environment but also agricultural productivity and ecosystem resilience.

Organic matter plays a critical role in maintaining productive and healthy soils. It enhances soil structure, making it softer, easier to till, and more conducive to root growth. Moreover, organic matter helps the soil manage extreme weather conditions: during heavy rainfall, it improves water infiltration and reduces runoff, while in drought periods, it absorbs and gradually releases water, mitigating stress on crops. Organic matter also plays a key role in reducing soil erosion, preserving the land's fertility and stability.

To address these challenges, the EU has introduced the Soil Monitoring Law, which aims to map soil quality

The FER-PLAY project intends to foster the uptake of circular fertilisers in EU

across member states. This initiative paves the way for future legislation dedicated to protecting soil health. In the meantime, the European Commission is funding projects to raise awareness among stakeholders from both agricultural and environmental sectors. These efforts aim to promote sustainable practices and foster collaboration to safeguard its soil, which is one of the EU's most vital resources.

FER-PLAY is a European project working to decrease EU dependence on fertilizer imports and improve resource efficiency through the promotion of circular fertilizers. The project objective is to map and assess circular fertilizers made from waste, by-products and wastewater (like compost, digestate or spent mushroom substrate) and highlight their multiple benefits to foster their wide-scale production and application.

As a result of the numerous co-creation activities engaging the circular fertilizer producers, the project

has elaborated a guideline document specially dedicated to them, that displays a compilation of messages and recommendations that may contribute to solve the main hurdles that they encounter when approaching the market and the civil society. This chapter summarises the main successful strategies to enhance the commercialisation and market value of the circular fertilizer product.

Assign the correct market value to your product

In some cases, the main revenue obtained by circular fertilizer producers is not linked to the fertilizer itself but to the service they provide managing and treating the feedstock. It might be the case for example for the producers of compost and solid digestate out of bio-waste or of the producers of struvite out of wastewater.

Due to these alternative revenue streams, producers might reduce the emphasis on marketing the fertilizer



Offering an integrated system that includes the service from a third party with specific machinery for the efficient application of the fertilizer is a good commercial strategy to overcome concerns and facilitate the transition to the use of circular fertilizers

effectively, selling the circular fertilizer at a low price or even give it away for free. Establishing a market value that takes in account nutrients and soil benefits helps in building a sustainable business model. A balanced approach, that considers all possible revenues from the company activity, can enhance the overall profitability and sustainability of the business.

Build an integrated selling system that provides support for best practices

Farmers often hesitate to switch to circular fertilizers; these worries stem from the significant changes that new fertilizers might bring to their well-established agricultural practices. To address these concerns and facilitate a smoother transition, a circular fertilizer producer can offer an integrated system that includes:

- The advice of an agronomist with in-depth knowledge of the circular fertilizer and that ensures that the application of the product is the most efficient for the farm and safe for the environment
- Transport service of the fertilizer to the farm

- Support in bureaucratic aspects associated with the application of the new fertilizer
- Service from a third party with specific machinery for the application of the fertilizer to ensure that the product is distributed evenly and effectively, maximising its benefits

Plan with farmers

By establishing yearly sales contracts with farmers, circular fertilizer producers can better manage their production cycles, reduce inventory challenges and meet the agronomic needs of farms effectively. This strategic approach not only benefits the producers by stabilising their operations but also supports farmers in achieving optimal crop yields with timely and adequate fertilizer supply.

This solution could be extended to an arrangement between the fertilizer producers and farmers to receive the agricultural waste with the aim to use as an input for circular fertilizer production. The producer will benefit from a constant supply of input of known quality, while reinforcing the relationship of trust with the agriculture sector.

Consider alternative market destinations for the product beyond its traditional use on arable land.

Certain circular fertilizers can be refined to enhance both their quality and market value. For instance, compost and solid digestate can be pelletized or packaged instead of being sold in bulk. While this refinement process involves higher costs, it enables producers to charge premium prices. Packaged products are more convenient and appealing to consumers, particularly in retail markets. By investing in refinement and quality improvements, producers can tap into more lucrative market segments and boost their profitability.

Organic Farming: a pivotal market sector for circular fertilizers

Organic farming has emerged as a significant market sector in Europe, highlighting the growing importance of sustainable agricultural practices. This sector's expansion is driven by both regulatory targets and market dynamics, making it a crucial outlet

for circular fertilizer production. As of 2022, the European agricultural surface allocated to organic farming reached 18.5 mn hectares, representing more than 10% of the total farmland in the region. It is important to keep in mind that the EU organic Regulation 2018/848 prohibits the use of chemical fertilizers. This creates an urgent need for alternative nutrient sources to maintain soil fertility and productivity. Many organic farms in the EU suffer from negative nutrient balances, particularly in phosphorus, which is crucial for plant growth. To address these challenges, circular fertilizers present a viable and promising solution for organic agriculture and, for producers, a lucrative market opportunity.

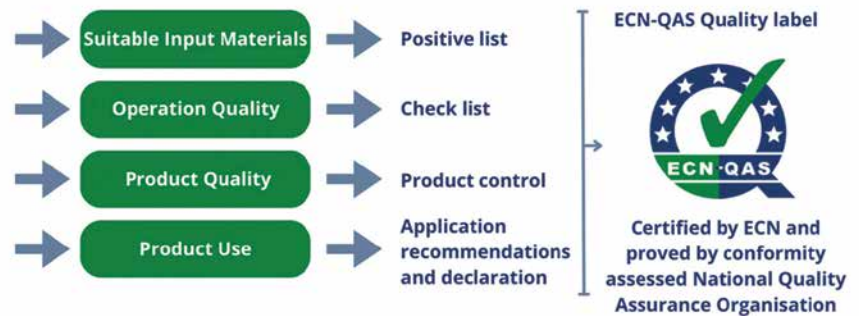
For many organic end-users it is not clear which circular fertilizers are allowed in organic farming. For this reason, a cooperation between the organic farming associations, their certification schemes (e.g. Biokreis, Bioland, GÄA and Naturland) and the certification schemes for circular fertilizers (e.g. ECN-QAS in EU, CIC in Italy, BGK in Germany, KBVÖ in Austria and Vlaco in Flanders) are promising approaches to achieve confidence in circular fertilizers by the organic farmers and to increase their use in the organic farming sector.

Circular fertilizers in Green Public Procurement and the role of the public administration as key customer

The Green Public Procurement (GPP) in the EU is defined as a process of procuring goods, services and works with reduced environmental impact throughout their life cycle. In some EU countries where GPP policies are well-defined, circular fertilizers are included in the list of goods that public administrations are encouraged to purchase when they need fertilizers.

Public administrations can be a significant customer of circular

Figure 1. Through their comprehensive and transparent approaches, QAS help producers demonstrate their commitment to excellence and responsibility, thereby fostering a more trustworthy and sustainable market environment. A good opportunity is the certification under the ECN-QAS for the production of high-quality compost and digestate from the recycling of bio-waste



Source: European Compost Network ECN e.V.

Focusing on certifying the quality of the fertiliser and of the production process is always a winning strategy

fertilizers, driven not only by quality and pricing but also by environmental sustainability considerations. Producers should keep in mind that public entities often have mandates to reduce their environmental footprint, making circular fertilizers an attractive option. Building relationships with public sector buyers and understanding their procurement criteria can help producers effectively position their products in this market.

Adopt voluntary Quality Assurance Schemes

Quality Assurance Schemes (QAS) certifications are self-imposed systems or standards that companies adopt to ensure their products meet certain quality benchmarks beyond regulatory requirements. These schemes involve internal processes, independent audits, or certification by

third-party organizations to assure customers and stakeholders of the product's safety, durability and overall quality. Unlike mandatory regulations, these schemes are often used by companies to differentiate their products, demonstrate commitment to high standards, and enhance consumer trust. This is particularly important in circular fertilizers market, due to the concern related with these products being produced by waste streams. QASs for circular fertilizers cover material suitability, production consistency, and environmental responsibility, with recognized examples across Europe like the European Compost Network's ECN-QAS holding a scheme for the production of high-quality compost and digestate from the recycling of bio-waste.

For further information read more at: <http://fer-play.eu/resources/> ■