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POSITION PAPER

Organic fertilisers, organo-mineral fertilisers and soil improvers are central to the Circular Economy

The European Consortium of the Organic-Based Fertiliser Industry (ECOFI) is the representative voice of European producers of organic[1] fertilisers, organo-mineral fertilisers and organic soil improvers. ECOFI promotes the contribution made by the organic-based fertilisers sector to the emergence of a knowledge-intensive, environmentally sustainable and high-employment economy in Europe. ECOFI was founded in 2014 and membership is open to any European producer in the sector whose production fully ensures the upstream traceability and the origin of raw material components.

EXECUTIVE SUMMARY

Organic fertilisers, organo-mineral fertilisers and soil improvers may be used in conventional and/or Organic Agriculture[2]. They differentiate from conventional mineral fertilisers because they contain organic carbon and nitrogen from either plant or animal origin and because the nutrients they contain must be converted by natural processes carried out by microorganisms in the soil before they are available to plants.

Organic fertilisers, organo-mineral fertilisers and soil improvers are central to the Circular Economy and are among the innovative tools that can help EU agriculture become more sustainable. The organic-based fertiliser industry can contribute to many of the objectives of the Circular Economy and the Europe 2020 strategy, particularly 1) recycling and using renewable resources 2) resource use efficiency, and 3) the creation of jobs, growth, and rural development. In turn, meeting these objectives will allow EU farmers to increase both the quantity and the quality of yields to feed growing populations, meet increasing non-food demands for agricultural products and improve performance on key environmental indicators like greenhouse gas (GHG) emissions, water use, etc.

To date, organic fertilisers, organo-mineral fertilisers and soil improvers have not been regulated on a European basis; the barriers created by varying national requirements have left the market fragmented along national lines. Many opportunities for more efficient and effective uses of natural resources have been lost as a result. Furthermore, the growth potential of the organic-based fertiliser industry is far from being fully realised. This is why our industry needs the Commission to include the Fertilisers Regulation revision in its forthcoming Circular Economy package and to make sure that organic fertilisers, organo-mineral fertilisers and soil improvers are incorporated into the new regulation in an appropriate manner.

[1] Throughout this paper, the word "organic" is used in the scientific sense, meaning "Relating to or derived from living matter" and/or "Relating to or denoting compounds containing carbon (other than simple binary compounds and salts) and chiefly or ultimately of biological origin. Compare with inorganic." www.oxforddictionaries.com

[2] Regulation EC n. 889/2008 lists raw materials that have been approved for use in Organic Farming.

HOW ORGANIC-BASED FERTILISERS AND SOIL IMPROVERS CONTRIBUTE TO THE CIRCULAR ECONOMY

1 The production and use of organic-based fertilisers exemplify the closed-loop principles of the Circular Economy

1.1 ***Renewable raw materials.*** *Plant materials such as vinasse are often used as raw materials in organic-based fertilisers. Renewable raw materials of animal origin may include manures.*

1.2 ***Reducing waste streams.*** *Some raw materials are derived from re-valorised animal by-products such as those resulting from the production of leather. This conversion of wastes into raw materials helps to reduce waste streams.*

1.3 ***Making loops possible across distances.*** *One of the perpetual dilemmas of agriculture is how to better manage the recycling of organic wastes over large distances. The creation of a functioning European market could help address the excess of organic wastes from regions with intensive-animal production (e.g. The Netherlands, Brittany, etc.) by converting them into organic-based fertilisers which can be shipped in an economical fashion over long distances to areas that are poor in organic matter.[3] Industrial treatment also helps to address potential safety hazards associated with untreated raw materials of organic origin.*

⇨ *Fundamental Principle:* ***Recycling and re-use are the very essence of organic fertilisers, organo-mineral fertilisers and soil improvers. The industry was born of the need to improve the carbon content of agricultural soils and to revalorise organic materials of plant and animal origin.***

2 Organic-based fertilisers contribute to the resource efficiency goals of the Circular Economy

2.1 ***Improving the efficiency of conventional crop inputs.*** *Experience has shown that improved management practices alone do not suffice to achieve optimal use of crop inputs like fertilisers and water. The organic matter contained in organic fertilisers, organo-mineral fertilisers and soil improvers enhances the soil structure. This improves water retention and the ability of plants to take up nutrients in the soil. By recycling nutrients from further down the value chain, the production of organic-based fertilisers, helps improve the overall nutrient use efficiency of agriculture.*

2.2 ***Feeding the vital microflora in soils.*** *Healthy soil is living soil. The carbon in organic fertilisers, organo-mineral fertilisers and soil improvers feeds soil microorganisms which play many important roles for agriculture: fixing nitrogen from the air, solubilising minerals like phosphorus in the soils and improving soil structure, among others.*

2.3 ***Reducing human impacts on the nitrogen cycle.*** *The industrial synthesis of plant-available forms of nitrogen was a critical breakthrough for feeding a growing population. But not all of the nitrogen applied to crops is used; losses to the environment of plant-available nitrogen can cause a cascade of unwanted environmental, and even health, impacts (e.g. the release of nitrogen*

[3] It is not very economical to ship raw organic wastes over long distances because they are heavy, bulky and relatively poor in value. Concentrating them into industrially produced organic-based fertilisers and soil improvers increases the value-to-bulk ratio and makes long-distance commerce more economically attractive.

oxides into the atmosphere can cause respiratory ailments and damage vegetation). Organic fertilisers, organo-mineral fertilisers and soil improvers help recapture some of this "lost" nitrogen and reinject it back into agricultural systems where it can be useful rather than letting it escape to the environment. Furthermore, organic-based fertilisers help prevent nitrogen leakage into the environment through the slow and sustained release of nitrogen that has to be mineralised or has to be unbound from organic matter.

2.4 ***Mitigating issues related to critical raw material phosphorus.*** *Phosphorus is essential for European agriculture and has been classified as a critical raw material[4] by European policymakers. Organic nitrogen-phosphorus (NP) fertilisers are mainly derived from recycled sources such as animal by-products. This represents an important alternative to imported phosphorus of mined origin. Furthermore, by improving the efficiency of phosphorus use and liberating phosphorus that is "locked" in soils, all organic fertilisers, organo-mineral fertilisers and soil improvers can help reduce the EU's dependence on imports.*

They can also help limit the amount of naturally occurring contaminants (like cadmium) that are added to soils by increasing the fertilising power of each unit of phosphorus applied.

⇨ *Fundamental Principle: Organic fertilisers, organo-mineral fertilisers and soil improvers are central to resource efficiency goals for agriculture as they provide a major vehicle for the re-use and recycling of nutrients in agricultural systems and are often based on renewable resources like plant materials.*

3 Organic-based fertilisers and soil improvers provide jobs, skills and investment relevant for the Circular Economy

3.1 ***A source of jobs and rural development.*** *Producers of organic-based fertilisers employ a wider range of workers in production sites, warehouses, distribution chains, offices and laboratories. Many organic-based fertiliser companies are small enterprises outside of major economic centres. These companies provide welcome sources of employment — often highly skilled — and demand for local services in rural areas, where the economy may be sorely in need of diversification.*

3.2 ***Boosting investment and skills in green innovation.*** *ECOFI members are part of a research-based, knowledge-intensive and innovation-driven sector that is pioneering solutions to challenges throughout the value chain. Because of the relatively modest size of organic-based fertiliser companies, they often conduct their research in partnership with universities and independent research institutes. This model of open innovation fosters the exchange of knowledge and innovation and creates demand for researchers and other highly skilled workers, thus encouraging more students to enter the scientific fields that will help drive sustainable economic growth in Europe in the coming years.*

⇨ *Fundamental Principle: If European policymakers truly want to foster green innovation, they need to break old regulatory habits and meet the real needs of bio-based sectors like organic-based fertilisers and soil improvers, which provide knowledge-intensive jobs,*

[4] "Raw materials are called critical, when their high supply risk is mainly due to the fact that a high share of the worldwide production is concentrated in few countries. This concentration is in many cases compounded by low substitutability and low recycling rates." See the European Commission's website for more information.

often in rural areas or secondary cities.

ORGANIC-BASED FERTILISERS AND SOIL IMPROVERS ARE CENTRAL TO THE SUCCESS OF THE CIRCULAR ECONOMY PACKAGE

There is currently a tension between producing more and better quality crops to meet growing demand for food, feed, fibre and energy on the one hand and reducing environmental impacts from agriculture on the other. To resolve this tension, it is essential to revise the EU's Fertilisers Regulation to include products like biostimulants, organic fertilisers, organo-mineral fertilisers, organic soil improvers and efficiency-enhancing fertiliser additives. An updated Fertiliser Regulation therefore must be part of the Circular Economy package, and the new regulation must accommodate products like organic fertilisers, organo-mineral fertilisers and organic soil improvers. It must also ensure that only products safe to human health and the environment can enter the market. A failure to regulate organic fertilisers, organo-mineral fertilisers and soil improvers at the EU level, and to create a sorely needed single market for them, would be a missed opportunity that will negatively affect the EU's ability to meet its Circular Economy objectives, weaken Europe's leadership position in green innovation, and deprive European farmers of these innovative tools that can help them produce more with less.

⇨ *Fundamental Principle: The revised Fertiliser Regulation is an essential component of the Circular Economy package, but to be fully effective, the revised regulation must include organic fertilisers, organo-mineral fertilisers and organic soil improvers.*