European Biostimulants Industry Council

Date:	25 April 2022
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Status:	Final
Distribution:	Public
Classification:	Public

POSITION PAPER

Plant biostimulants can alleviate a secondary food security crisis triggered by the conflict in Ukraine

On 23 March, the European Commission published its action plan entitled "Safeguarding food security, and reinforcing the resilience of food systems" [COM(2022) 133 final]. In one of the most concrete measures therein, the communication mentions that the European Union (EU) is working to support Ukraine's food security strategy, notably by helping to ensure that farming inputs products reach farmers in a timely manner; it does not mention plant biostimulants. This is a lost opportunity.

Because plant biostimulants contribute to climate-smart agriculture and nutrient use efficiency, they can be important tools to help alleviate the impacts of the Ukraine crisis on the food chain and avert a secondary food crisis, both in Ukraine and across Europe. Furthermore, they simultaneously contribute to the objectives in the European Green Deal and Farm to Fork Strategy. Peer-reviewed literature and manufacturer trials indicate that plant biostimulants can increase nutrient use efficiency by 5-10% or more under real-world conditions, while Europe is predicted to face a shortfall of 9% or more in its supply of nitrogen fertilisers this year. If only about 25% of EU crops were treated with nutrient-optimising plant biostimulants, that would translate into a savings of 138,750 tonnes of N and about 238 million euros.

Many of EBIC's members manufacture other fertilising products besides plant biostimulants, so our concrete suggestions below for how the European Union can improve the situation take an integrated view of ensuring a smooth supply of all fertilising products to EU farmers that avoids shortages and artificially high prices. We have prioritised this list in the order of ease of application and by which measures would have the greatest benefit for growers and could be applied quickly:

- **Extend the transition period foreseen in Article 52 of Regulation (EU) 2019/1009 by at least 12 months** to ease bottlenecks in the supply of fertilising products through the 2023 spring planting. This would allow products that meet the requirements of Regulation (EC) 2003/2003 to continue to be placed on the market alongside products that meet the requirements of Regulation (EU) 2019/1009 until the worst of the crisis has passed. This would avoid a price spike if a large number of product dossiers are not ready for products to be placed on the market under new rules. To avoid triggering additional supply disruptions, national market surveillance authorities should also be mindful that companies are doing their best to comply with new rules under difficult conditions.
- **Mutual recognition should be strengthened** for all fertilising products (including plant biostimulants). If a producer has not received any additional requirements within 30 days from the target market's authorities, it should automatically be allowed to place its product on the national market in question. The burden of proof should be on Member States to demonstrate that such fertilising products are unsafe if they want to remove them from their national markets.
- **Offer temporary "emergency authorisations" to plant biostimulants that improve nutrient use efficiency**, including microbial plant biostimulants that are not in the current lists of Component Material Category 7 (microorganisms).
- **Temporarily allow** (we suggest twelve months to cover the 2023 spring planting season) **importations of fertilising products and intermediate materials that are not REACH registered when those substances are identical to REACH-registered substances** already available on the EU market. This waiver would allow EU fertilising product manufacturers to pivot to suppliers in the United States, India, and other countries until the crisis eases.
- Last but not least, **plant biostimulants should be included among the inputs that the EU and Ukrainian government strive to make available to Ukrainian farmers.**

Introduction

On 23 March, the European Commission published its action plan for responding to the Ukraine crisis, entitled "Safeguarding food security, and reinforcing the resilience of food systems" [COM(2022) 133 final]. Among the key points noted by the Commission in its memo are:

- The economic effects come on top of disruptions related to the pandemic and climate volatility;
- The agricultural sector is particularly affected by rises in energy and fertiliser prices (which are related). It does not mention either the high costs of transport exacerbated by the conflict and mentions only in passing disruptions to Black Sea trade;
- EU dependency on imports relate primarily to energy, fertilisers, and animal feed;
- High fertiliser prices might provide market incentives for practices that improve nutrient use efficiency;
- The EU is a net global exporter of wheat, one of the key commodities that is facing supply constraints because both Russia and Ukraine are major exporters. The Commission notes that "It is fundamental from a geo-strategic point of view that the EU contribute to covering the production gap to address the expected global shortage in wheat. The EU is not only a major net exporter of wheat, but the one with the highest yields globally."

In one of the most concrete measures therein, the communication mentions that the Commission is working with the Ukrainian government to support its food security strategy, notably by helping to ensure that seeds, diesel, fertiliser, and plant protection products reach farmers in a timely manner; it does not mention plant biostimulants.

Although the communication repeated stresses the need to increase nutrient use efficiency and calls on Members States to revise their CAP plans to explicitly address this challenge, it does not mention plant biostimulants even once. This is a lost opportunity. Because plant biostimulants contribute to climate-smart agriculture and nutrient use efficiency, they can be important tools to help alleviate the impacts of the Ukraine crisis on the food chain and to help avert a secondary food crisis. Importantly, they can do so while simultaneously contributing to the objectives of the European Green Deal and the Farm to Fork Strategy to transition to a more sustainable food system.

How plant biostimulants can support the objectives of [COM(2022) 133 final]

- **The Commission is working with the Ukrainian government to support its food security strategy, notably by helping to ensure that seeds, diesel, fertiliser, and plant protection products reach farmers in a timely manner.** Plant biostimulants should be included in the packaged of inputs that Ukrainian farmers need. Plant biostimulants help improve nutrient uptake and use by plants; depending on the product, which is critical at a time when difficult access and high prices mean that every kilogram of fertilisers applied needs to be used as efficiently as possible. Plant biostimulants also help plants better tolerate harsh growing conditions like heat and drought, late frosts, and excessive rain as well as other abiotic stresses such as salinity. These benefits make plant biostimulants critical inputs to use any fertilisers supplied as efficiently as possible and to make sure that Ukrainian farmers' heroic efforts to grow food under dangerous and difficult conditions are not wasted due to bad weather.

- **In several places, the Commission's Communication stresses the importance of improving nutrient use efficiency.** In the section "Food security in the EU – stabilising EU markets and supporting growers," the communication expresses the hope that high fertiliser prices could create an imperative for more efficient nutrient management practices and calls on Member States to revise their CAP strategic plans to target this objective in "Ensuring Food system resilience – reducing dependence on imported inputs." Plant biostimulants are an essential tool to achieve additional efficiency gains, especially in the EU where many other good practices and tools have already been adopted by farmers. Peer-reviewed literature and manufacturer trials indicate that plant biostimulants can increase nutrient use efficiency by 5-10% or more under real-world conditions. **If we take the more conservative number (5%) and assume that only about 25% of EU crops are treated with nutrient-optimising plant biostimulants, that would translate into a savings of 138,750 tonnes of nitrogen per year[1], saving EU farmers about 238 million euros at recent urea prices**[2]. Before the war in Ukraine, VTB Capital estimated that Europe could face a deficit of 9% of its annual nitrogen fertilizer demand[3]; the fertiliser supply situation has only worsened by the conflict between Russian and Ukraine. Plant biostimulants can help close the gap.

  In addition to helping farmers cope with constrained nitrogen fertiliser supplies, plant biostimulants can also help to secure EU food production by ensuring that applied nutrients are used and increasing plant resilience to abiotic stresses that could otherwise endanger crop harvests.

- **To reduce dependency on imports, the Commission notes the importance of innovation through research, knowledge, technology, agro-ecology and adaption of best practices.** However, the communication omits the importance of an enabling regulatory framework**. Investing in research is pointless if the products that come out of the research pipeline cannot be commercialised.** The Fertilising Products Regulation (FPR) [Regulation (EU) 2019/1009] that enters into application on 16 July 2022 recognises plant biostimulants for the first time and offers them access to the Single Market, at least in theory; however, there are two obstacles to plant biostimulants coming to market under the FPR:

  1. Many plant biostimulants will not be eligible to be placed on the market under the FPR (at least for the foreseeable future) because their component materials are not yet accepted in EU Fertilising Products. These include most microorganisms, including those that solubilise phosphorus (P) or encourage plants to absorb and use P efficiently, N-fixing microorganisms that capture nitrogen from the air and make it available to plants, other microorganisms that enhance plant uptake and use of nitrogen, phosphites and possibly amino acids derived from animal by-products if the necessary end points are not defined to allow them as component materials under the FPR.
  2. Even plant biostimulants that contain components like extracts from plant or micro-algae or humic and fulvic acids could find it impossible to be sold under Single Market rules because there are virtually no conformity assessment bodies accredited under the FPR. Thousands of conformity assessment dossiers will need to be treated, but there are currently only three notified bodies

1 According to Fertilizers Europe estimates of average nitrogen fertilizer consumption over the past three crop years.
2 Based on an average of fob prices over the past six months.
3 Cited in https://www.bloomberg.com/news/articles/2022-01-21/crunch-time-for-pricey-fertilizers-squeezing-european-farmers

listed in the NANDO database as having completed their accreditation for the conformity assessment processes that apply to plant biostimulants.

The delays in operationalizing the Fertilising Product Regulation and making it possible for most plant biostimulants to be placed on the Single Market are particularly regrettable in the context of the current fertiliser crisis. With prices high and supplies tight, plant biostimulants should be an essential tool for farmers across the EU, in Ukraine, and beyond to optimise nutrient use; unfortunately, few EU farmers will have access to these valuable tools for the foreseeable future unless corrective measures are taken quickly (see next section for suggestions).

- **In the section of its communication on "Ensuring Food system resilience – sustainable food systems," the Commission suggests that leguminous crops could be part of the solution**. However, these crops depend on N-fixing microorganisms that live in symbiosis with them. Such crops grow best when inoculated with these beneficial microorganisms, but as described above, few of these microbial plant biostimulants will be allowed under the Fertilising Products Regulation for at least several years, according to current timelines.

Concrete steps the EU can take to allow plant biostimulants alleviate the impacts of the Ukraine crisis on food accessibility over coming months

To help unleash the potential of plant biostimulants to help European agriculture withstand the overlapping crises resulting from climate change, the pandemic, and the crisis Ukraine, the European Biostimulants Industry Council (EBIC) has several concrete suggestions for some short-term and some permanent measures. Most of these measures are complementary.

- **Extend the transition period foreseen in Article 52 of Regulation (EU) 2019/1009 by at least twelve months** to ensure that the application of the Fertilising Products Regulation does not inadvertently pour oil on the fire of the current fertiliser price and supply crises. This is not the time for many products on the market under Regulation (EC) 2003/2003 to be abruptly forced out of the market simply because there the process is too long to upgrade their REACH registrations, there are too few conformity assessment bodies to review dossiers, or because the Commission has not yet published the criteria for key component materials. A twelve-month extension should ensure relatively smooth supplies of fertilising products to farmers through Spring 2023 planting. In mid-2022, companies producing fertilising products should be focused on increasing supplies to ease bottlenecks rather than being distracted by the need to prepare and process large numbers of administrative dossiers, especially since few products are likely to be placed on the market under the new regulation until many months after July 2022 given the current state of implementation of the new regulation and the woefully inadequate number of Notified Bodies.
- **Mutual recognition should be strengthened for all fertilising products (including plant biostimulants). If a producer has not received additional requirements within 30 days from the target market's authorities, it should automatically be allowed to place its product on the national market in question.** The burden of proof should be on Member States to demonstrate that such fertilising products are unsafe if they want to remove them from their national markets.
- **Offer temporary "emergency authorisations" to plant biostimulants that improve nutrient use efficiency, including microbial plant biostimulants that are not in the current lists of Component Material Category 7**

(microorganisms). The EU may want to take inspiration from India, which instead of grouping microorganisms taxonomically has a blanket authorisation for a group it defines as "nutrient solubilisers".

- **Temporarily allow** (again, we suggest twelve months to cover the 2023 spring planting season) **importation of fertilising products and intermediate materials that are not REACH-registered when those substances are identical to REACH-registered substances already on the EU market.** This waiver would allow EU fertilising product manufacturers to pivot to suppliers in the United States, India, and other countries until the crisis eases.
- **Last but not least, plant biostimulants should be included among the inputs that the EU and Ukrainian government strive to make available to Ukrainian farmers.** Before the invasion, Ukraine was a rapidly growing market for plant biostimulants, and a number of EBIC members have local partners or subsidiary teams there to serve the market.

Conclusion

Just as governments and the European Union took brave and unprecedented steps at the outbreak of the covid pandemic, we must acknowledge the gravity of the shockwaves rippling through agriculture and food production today. In 2020, the EU did everything it could to ensure that agricultural production continued and that food chains functioned smoothly. **The Commission's Communication** [COM(2022) 133 final] **states that "Now more than ever is the time to demonstrate solidarity." These are noble words, but they ring hollow if Europe does not do everything it can to support agricultural yields in the EU, but also in Ukraine, and beyond by facilitating a larger supply of all fertilising products to ease tight supplies that exacerbate high prices in an infernal spiral.** By increasing nutrient use efficiency 5% or more, plant biostimulants can help close the gap between fertiliser supply and demand (forecast at around 9% in the EU this year) and help farmers cope with high fertiliser prices.

References

European Commission Communication "Safeguarding food security, and reinforcing the resilience of food systems" [COM(2022) 133 final].

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