Working draft, 21 October

'Ensuring availability and affordability of fertilisers'

1 INTRODUCTION

A **global mineral fertiliser crisis**, of a severity unseen since the first oil shock of 1973, is currently unfolding. The Covid crisis, the economic recovery and the attendant supply chain disruptions had led to very high fertiliser prices by the end of last year. **Russia's attack on Ukraine** has had a further negative effect on what had already been a very tight market. Scarcity or high prices for fertilisers further compound global food security risks to which the Commission drew attention in its March 2022 Communication[1].

A lot of attention has been paid to the damaging effect of Russia's war on the ability of Ukraine to keep producing and exporting food. The **EU's Solidarity Lanes** and the **UN-brokered Black Sea Grains Initiative** have been effective at allowing Ukraine to continue to export its grains. The high prices for fertilisers, a second round effect of Russia's war of choice, constitute a **slow-rolling but serious risk for global food security**.

In **developing countries** in particular issues of availability and affordability of fertilisers put food security at a grave risk. A dearth of nutrients has negative effects on plant growth. Less yield means less food. The UN has warned of a looming food crisis that would severely affect countries which often do not have the fiscal means to run expensive subsidy programmes for fertilisers. While viable food production depends on more than just fertilisers, what makes the current fertiliser situation ominous is the **immediate effect that fertiliser shortages can have on yields**.

The key macro-nutrients required for soil fertilisation are nitrogen, phosphorus and potassium. As is the case for many other countries, **Europe is dependent on imports** of fertilisers because of the limited local availability of essential inputs: natural gas (as a feedstock and energy source for the production of nitrogen fertilisers), phosphates and potash. The EU's dependence on natural gas imports was 83% in 2021. Before the war in Ukraine, 40% of the EU's gas imports came from Russia. The EU's import dependence amounts to 85% for potassium, almost 70% for phosphorus and to 30% for nitrogen compounds and fertilisers.

Having said this, **Europe has an important fertilising (end) product industry**. Its turnover was over € 23 billion before the crisis. Very high gas prices in 2021 and 2022 have led to the curtailment of the EU's own production of ammonia (an intermediate product for nitrogen fertilisers), thereby adding to global market woes and also putting upward pressure on domestic prices. Natural gas (methane) is the EU fertiliser producers' basic feedstock and energy source for the production of ammonia. **Gas accounted for up to 90% of the variable production cost** of EU ammonia production. In August 2022, the

[1] COM(2022)133 final

industry reported that it had curtailed 70% of its ammonia production as the gas prices had rendered production uneconomical.

While fertilisers remain available in the EU at this point in time, their affordability (149% price rise in September 2022 on a year to year basis for nitrogen fertilisers) has become an issue for farmers (other input costs have significantly risen as well). This affects farmers' purchasing and planting decisions. There are indications that EU farmers, against the backdrop of volatile markets and unusually high prices, have been **delaying their purchases of fertilisers** for the sowings of winter crops. Purchases in volume were reported to be down by approximately 20% in summer 2022 compared to the previous year. European fertiliser producers have **not been accumulating stocks in their usual way**. Come next spring, their lower inventories will be tested.

High commodity prices may make it worthwhile for crop farmers to consider using optimum fertiliser quantities regardless of high fertiliser prices. But for farmers there is **no certainty concerning crop prices for the future planting season**. Geopolitical events make markets volatile and jittery. Fertiliser price indices have lately been increasing more than commodity price indices pointing to a scissors effect.[2] Moreover, mixed farms which use their own – to be fertilised - fodder for feed rather than selling crops do not benefit of higher prices on the commodity crops markets.

The EU's **Farm to Fork Strategy**'s objective is to reduce the use of fertilisers by at least 20% and the nutrient losses by 50% by 2030 while at the same time securing yields. In contrast, lower (nitrogen) fertiliser use **forced upon actors in a rapid manner** due to an unusually high price environment due to geopolitical events is **liable to negatively affect agricultural yields and to lower grain quality** (protein content). Against the backdrop of an unsteady Black Sea Grains Initiative and looming geopolitical uncertainties every reasonable effort must be made not to sleepwalk into compromising Europe's continued contribution to food availability and affordability. This is crucial not least because high food prices have become a key driver for consumer price inflation in the EU.

[2] For example, the food price index of the World Bank increased by 12% between September 2021 and September 2022, while the fertilisers' price index increased by 72%

By way of the present Communication, the Commission presents the following actions:

- The Commission calls on Member States to ensure the **continued and undisrupted access to natural gas for fertiliser producers** in the case of rationing of gas by means of their national emergency plans.
- The Commission encourages Member States to use the amended **Crisis Framework for State aid** to specifically support farmers and fertiliser producers relying on, inter alia, funds generated by Union initiatives such as the **windfall and solidarity levies or the cohesion and recovery funds**. There is potential for expanding such targeted aid over and above the currently low share of aid approved for the sector.
- The Commission will, together with Member States, examine the expediency of new **exceptional support measures** financed by the agricultural crisis reserve.
- The Commission will pay particular attention to the **actual uptake by farmers** of the interventions Member States programmed in their **CAP strategic plans** in the area of sustainable fertilisation.
- The Commission will work with Member States to further ensure that **revisions of their CAP strategic plans** make farmers use fertilisers more efficiently by availing themselves of instruments such as e.g. nutrient management plans, precision farming, organic farming, agro-ecology, use of leguminous crops in rotation schemes and advice and training on nutrient management and eco-schemes to promote organic fertilisation. The Commission will swiftly approve such amendments.
- The Commission will take steps to improve **market transparency** in the fertiliser market by way of a new **market observatory** including the service of a dashboard.
- The Commission will promote measures pursuing **strategic autonomy** as regards fertilisers such as:
    - Better access to **organic fertilisers** and nutrients from recycled waste-streams;
    - Support for and prioritisation of the conversion of the European nitrogen fertiliser industry to **green ammonia**.

In the international field, the Commission will:

- Continue and reinforce its contribution to the four strands of the **EU global food security response**.
- Cooperate with selected EU partner countries to **reduce their dependence on imported mineral fertilisers**.
- Address in **bilateral and multilateral fora** the dimension of availability and affordability of fertilisers.
- Contribute to relevant international initiatives, including the G20's Agricultural Market Information System (**AMIS**) to fertilisers and the **Global Fertiliser Challenge**.

2 THE IMPORTANCE OF FERTILISERS FOR FOOD SECURITY

Fertilisers play a **significant role for food security**. The addition of nutrients to the soil through fertilisers increases the production of biomass, the potential yield of crops and facilitates capturing carbon dioxide. Plants absorb nutrients from the soil and use them for growth, thereby depleting the soil. Fertilisers add nutrients back to the soil. A higher quantity of output (i.e. grain, grass etc.) can be produced on a smaller surface, which limits the agricultural area needed for food production. Fertilisers can be mineral or organic. It is reported that 50% of the global food production today depend on the use of mineral fertilisers.

There are three key nutrients: **nitrogen (N), phosphorus (P), and potassium (K)**. Phosphorus and potassium are nutrients contained in mined ore and rock (mineral fertilisers). Nitrogen is the nutrient used in the largest quantity on cereal crops and which needs to be applied systematically whereas farmers can forego the application of phosphorus and potassium during some time without a negative impact on yields.[3]

While it is difficult to establish a precise ratio, an unpremeditated 20% reduction of nitrogen fertiliser in the cultivation in the EU of a crop such as wheat would be expected to lead to a reduction in yield of 4-5% (based on the optimum fertilisation rate).

The Haber-Bosch process, which allows to produce nitrogen synthetically, requires a lot of energy. In the EU, the energy source is normally natural gas which also serves as the feedstock for the production of hydrogen (H) needed for **synthetic nitrogen**[3]

The production of nitrogen fertilisers generates large **CO_2 emissions**. This is the case notwithstanding constant improvements of abatement technologies, especially at EU production sites.

If fertilisers are not properly applied, **nutrient losses** can account for up to 50-60% of the applied amount on fields. Maps of excess fertiliser per hectare of cropland show the existence of over-application of fertilisers in many parts of the EU, with little obvious yield gain. More than 90% of the EU's total (gaseous) **ammonia** emissions come from agriculture. 80% of this agricultural emissions come from manure and 20% from mineral fertiliser. When fertilisers leak into the environment they also spur the production of **nitrous oxide**, a potent greenhouse gas. Fertiliser **leaching and run-off**, due to excess application, are key causes of excessive soil, river and lake nutrients (nitrates) which can damage ecosystems and water quality. Such effects may stem from inorganic or organic fertilisers alike. Manure has worse leaching characteristics than mineral fertilisers.

The goal of optimised fertiliser application is to narrow the gap between actual and attainable crop yield, thereby eliminating the environmentally and economically waste of fertilisers.

The complete substitution of mineral nitrogen fertiliser needs by **organic fertilisers**, which generate no or less emissions at production, is not feasible against a backdrop of land and

[3] Gas is therefore energy source and feedstock.

food security constraints. However, a significantly lesser dependence on imported mineral fertilisers can be achieved by increasing on-farm nitrogen use efficiency, by harnessing precision farming, further developing, deploying and scaling up circular economy approaches (recycling and re-using nutrients from wastewaters; using treated manure in order to improve run-off characteristics), growing crops that have less nitrogen fertiliser needs or growing crops which fix nitrogen thereby nourishing the soil. All of these approaches harbour the promise of generating environmental and climate co-benefits and will strengthen the Union's strategic autonomy.

3 ENSURING AVAILABILITY AND AFFORDABILITY OF FERTILISERS IN THE EU

3.1 The situation of the fertiliser market in the EU

The **European fertiliser industry** has more than 120 production sites scattered throughout the majority of Member States hinting at the strategic role it plays because of food security considerations. It employed 61,000 people in 2017 and had an average turnover of € 23.3 billion in 2017-19[4].

On average, the total EU27 **production of mineral fertilisers** was 40.2Mt[5]. Besides the production of mineral fertiliser products, EU27 plants produced 12.2Mt of ammonia, mainly used for the production of fertilisers but also in other industries. Important by-products of ammonia production are AdBlue[6] and carbon dioxide[7]. The main producers in value are Germany, Poland, France and Spain with Yara, Grupa Azoty, Borealis, Agrofert, Achema and OCI being the more important players in the EU market.

Consumption of mineral nitrogen fertilisers in agriculture in 2020 was estimated to be 10Mt (expressed in tonnes of nitrogen) in the EU, similar to the average amount in the previous decade, following steep declines in the 1990s and 2000s, due to the Nitrates Directive in 1991 and the introduction of the national action programmes for designated nitrate vulnerable zones. Application of mineral nitrogen fertiliser in the EU stands on average at 86.7 kg/ha, with variations among Member States ranging from 48.6 kg/ha (Romania) to 217.2 kg/ha (Luxembourg). In specific regions higher amounts are used. Excess fertilisation is both an economic and an environmental problem. Phosphate inorganic fertiliser consumption reached 1.2 Mt in 2020.

International trade in fertilisers is highly concentrated, with the top five exporters of fertilisers accounting in 2020 for 43% of global trade in 2020 in the case of nitrogen, 76% for phosphates and 83% for potash. Deposits of the raw materials used in the production of fertilisers are unevenly distributed in the world. This is true for gas but also phosphorus and potassium. Global phosphorus deposits are all located outside Europe: around three quarters of the production of phosphate rock are divided among states such as China,

[4] Eurostat, annual detailed enterprise statistics for industry.

[5] Eurostat Prodcom, sum of production of different product expressed in different units (2019-2021).

[6] AdBlue, a diesel exhaust fluid used in vehicles to reduce harmful gases being released into the atmosphere, is very important for supply chains in general.

[7] Used for animal stunning, for the packaging of all meat to prolong shelf life and for fizzy drinks.

Russia, Morocco, the USA and Tunisia. Potash deposits are concentrated in Belarus, Canada and Russia (together they account for 68%).

The **EU imported** around 26 million tonnes of nitrogen fertilisers, nitrogen and phosphates intermediates in 2021, principally nitrogen-based (10.6 million t), i.e. ammonia, urea, urea ammonium nitrate, ammonium nitrate etc., potash (3.4 million t), phosphorus and precursors (6.4 million t) as well as compound fertilisers containing the three nutrients nitrogen, P and K (5.6 million t).[8] Imports represent respectively 30%, 68% and 85% of the EU consumption of nitrogen, phosphates and potash fertilisers[9]. As regards phosphates 23% of EU imports originate from Russia (low cadmium content phosphates) and 28% Morocco (higher cadmium content phosphates)[10]. As regards potash, 64% of the EU imports originated from Russia and Belarus[11]. Estimates for 2022 based on the first six months of the year show an overall decrease of fertilisers imports by around 13%, but this concerns essentially potash, phosphates and compound fertilisers, while the imports of ammonia and nitrogen fertilisers have increased substantially in 2022 (+12% for the six first months of the year).

EU fertiliser exports amounted to 12.9 million tonnes yearly in 2021, essentially nitrogen fertilisers (7.8 million t) and compound fertilisers (3.6 million t). In 2022, there are lower exports of mineral fertilisers (-3% for the six first months of the year).

Global fertiliser prices have progressively surged since the beginning of year 2021, with two periods of conspicuous increases: between September and November 2021 and after Russia's attack. They reached their peak in April 2022. Since then they have decreased slightly, N and P fertilisers in particular. Some recent surge has been recorded in September, for urea in particular. Compared to the average of the reference period of 2016-2020 they remain at very high levels: +254% for phosphate rock, +200% for urea and +141% for potash[12].

High and unstable fertiliser prices are challenging for EU farmers. Fertilisers represent a significant share of farmers' input costs, around 6% in average over the period 2017-2020 and 12% for specialist arable crops farmers. Farmers are building up fertiliser stocks for upcoming crop seasons during summer. In 2022, they appear to have delayed these purchases. Certain experts think that the magnitude of the reduction of fertilisation purchases could reach 20% for the whole crop cycle 2022/23 in the EU.

[8] Eurostat Comext

[9] https://www.fertilizerseurope.com/wp-content/uploads/2021/07/Industry-Facts-and-Figures-2021-1.pdf

[10] EC(2020), Critical Raw Materials Factsheets

[11] EC (2020), Non-critical Raw Materials Factsheets

[12] World Bank Commodity Price Data

3.2 **Supporting European farmers and fertiliser producers**

3.2.1 Market monitoring

Since the rise of the prices for agricultural inputs in 2021, the issue has been on the agenda of meetings of the Commission with stakeholders and Member States including in the European Food Security Crisis Preparedness and Response Mechanism and in the expert group meetings on fertilising products.

Data on stocks held by fertilisers industry and/or farmers and their producer organisations does not exist. The Commission will improve market transparency in the framework of a **observatory concerning fertilisers markets** in the EU. The Commission will also examine ways to obtain more timely information from Member States, using the appropriate legal basis for this purpose, or directly from stakeholders. It will liaise with the industry to explore the possibility to anticipate voluntary exchange of information in the case of fertilisers. This will also benefit the G20's AMIS.

3.2.2 Common Agricultural Policy (CAP) and Member States' CAP strategic plans

Under the new CAP, financial support will be available to farmers with a view to **optimising their fertiliser use**, thereby enabling them to achieve environmental and economic co-benefits. Best practices in Member States show that with greater nitrogen use efficiency fertiliser use can be reduced while securing or even increasing yields as well as having a positive impact on overall soil-fertility [factsheet on this planned].[13]

The **new green architecture** combines enhanced conditionality (GAECs[14] and SMRs[15]) to protect and improve soil health and fertility[16] with voluntary instruments designed by Member States to support farmers beyond the minimum requirements in the area of nutrient management. **Voluntary measures such as eco-schemes, agro-environmental and climate measures** in Member States' CAP strategic plans read on protection and enhancement of soil health and fertility, reduction in the use of inputs, improvement in fertiliser use efficiency and replacement of mineral fertilisers:

- *Protection and enhancement of health and fertility:* The practices supported under the CAP incentivise crop diversification and enhanced rotation (beyond GAEC 7) with inclusion of protein crops. Many CAP plans also support catch crops (e.g. mixed herbaceous and leguminous) for increasing green fertilisation and soil organic matter or commitments to increase the soil cover beyond the minimum requirements.

[13] In this context the proposal for the Soil Health Law in 2023 will provide further targeted medium/long term responses to the issue of fertile soil for food security in the EU.

[14] Good Agricultural and Environmental Conditions

[15] Statutory management requirements

[16] GAECs and SMRs relevant in the area of nutrients are the respect of the obligations derived from the Nitrates Directive (SMR2), establishment of buffer strips along water courses (GAEC 4), measures to avoid soil erosion and to ensure minimum soil cover (GAECs 5 and 6) and crop rotation (GAEC 7).

– *Reduction in the use of inputs and increase in use efficiency*: most. Several CAP plans support the wider adoption of nutrient management plans to optimise the use of fertilisers based on soil features and crops needs, and promote crops decreasing nutrient needs fixing nitrogen from the atmosphere. Precision agriculture will be supported under the new CAP in the form of management commitments and investments in new machinery as well as greater access to advice and training.

– *Replacement of mineral fertilisers*: Several CAP plans support partial replacements of chemical mineral fertilisers by organic fertilisers like manure, sewage sludge and biowaste, from methanisation process/biogas or biological and thermal treatments.

The Commission had urged Member States to include measures in their plans in relation to practices optimising the efficient use of fertilisers. On the basis of the initially approved plans, it will encourage Member States to promote a wider adoption of the said measures by farmers, fostering and facilitating this with a view to ensuring that already planned interventions are followed up and implemented. The Commission will invite Member States to look into further prioritisation and to increase the ambition of such interventions in **future revisions of their strategic plans**.

A tool of the new CAP is the **farm sustainability tool for nutrients** (FaST) to be made available to farmers by Member States as part of the farm advisory services and linked to the Agricultural Knowledge and Information System. FaST provides advice to farmers concerning the optimised use of fertilisers (timing and amounts) on their land. The Commission calls on Member States to accelerate the adoption and roll-out of the FaST.

3.2.3 Exceptional measures and agricultural reserve

In March 2022, the Commission adopted an **exceptional support package** of € 500 million to support the producers most affected by the serious consequences of the war in Ukraine. The agricultural crisis reserve was used for that purpose. On this basis, Member States provided € 492 million of financial support to farmers prioritising farmers engaged in sustainable practices hardest hit by the crisis.

Under the agricultural reserve € 450m are available in 2023 for public intervention and storage measures to stabilise agricultural markets or for exceptional measures that would react against threats of market disturbance, health risks, or other emergencies as laid down in the Common Market Organisation Regulation. In case exceptional measures are taken, the relevant provisions allow to further expand their amount by recourse to top-up aid by Member States. The Commission will, together with Member States, look into the expediency of deploying exceptional measures so as to prevent market disturbances that would stem from the impact of the tight fertiliser market on EU farmers' production decisions.

3.2.4 Temporary Crisis State Aid Framework as a conduit for financial assistance

The Temporary Crisis State Aid Framework allows Member States to support among others, primary agricultural producers, including as regards their purchases of fertilisers, as well as fertiliser producers. Member States may grant aid to cover the recent increase in gas and electricity costs for companies, including for example primary agriculture and manufacturers of fertilisers and nitrogen compounds. Fertiliser producers as a particularly affected sector may benefit from higher aid intensities and aid amounts of up to € 50 million.

Between March and September 2022, the Commission approved **18 agriculture specific aid schemes** with a total budget of about € 3.5 billion under the Crisis Framework. Three of the schemes are dedicated to farmers' purchases of fertilisers (total budget of € 855 million). A majority of the Member States opted for umbrella schemes open to all sectors of the economy (€ 455 billion in September 2022). Some Member States decided for dedicated State aid schemes to support energy intensive companies.

The Commission [has amended the **Temporary State Aid Crisis Framework** in October 2022] to adjust it to the needs of Member States to support energy intensive companies most affected by the crisis, including fertiliser producers, and [rendered the eligibility criteria more workable].

By virtue of a [cap] on the market revenues for electricity generators that use infra-marginal technologies (such as renewables, nuclear and lignite) and the [solidarity contribution] on the profits of businesses active in the crude petroleum, natural gas, coal and refinery sectors, Member States will have funds at their disposal (approximately € 140 billion) that they **can direct towards supporting and protecting energy users, such as farmers or fertiliser producers**. The recently announced amount of € 40 billion stemming from unspent 2014-20 **cohesion fund money** is a further source for State aid measures. The Commission encourages Member States to prioritise measures that target fertiliser affordability and thereby bolster food security.

State aid can take different forms. It is, for example, possible for public authorities to purchase fertilisers at more competitive market prices (given their bargaining power) and to offer them at lower prices (there would be an element of State aid in this) to farmers, provided that the limits of maximum amounts of aid under the Temporary Crisis Framework are respected. Member States could also ensure that fertilisers which are lacking are distributed among farmers in a reasonable and non-discriminatory manner.

3.2.5 Other types of funding

The EU, through the Recovery and Resilience Facility (RRF), provides funds for investments aimed inter alia at a more effective use and sustainable production of fertilisers in Member States. There is the possibility for Member States to review their National **Recovery and Resilience Facility** (RRF) Plans so as to adjust them to provide more targeted support to producers of fertilisers or making fertilisers available to farmers at affordable prices including green fertilisers.

[CLIMA: add sentence on innovation fund]

3.2.6 Organic fertilisers

Since July 2022, the **Fertilising Products Regulation** (FPR)[1] has opened the single market in particular to fertilisers made from recovered waste and by-products available in the EU. It **promotes green and circular alternatives** to natural gas and mined raw materials for fertiliser production. Specialty EU fertilising products such as inhibited fertilisers, controlled release fertilisers and plant biostimulants will increase use efficiency and therefore reduce the amounts of fertilisers needed for optimal yields. Thanks to the Single Market Emergency Instrument (SMEI) recently proposed by the Commission, the possibilities to quickly bring innovative products complying with the FPR will increase.

The Commission continuously adapts the FPR so as to optimise its potential to promote green and circular alternatives. **Animal by-products** constitute an important share of this. The forthcoming definition of end-points in the manufacturing chain under the Animal by-products Regulation - a pre-condition for the market access granted by FPR - will be important further progress.

Developing methods to extend **efficient nutrient recycling of organic waste** (e.g. livestock manure, anaerobic digestion and other organic waste streams) into renewable biobased fertilising products contributes to the objectives of the **Farm to Fork Strategy**. A better local use of organic waste not only has environmental benefits, it also improves the economic benefits for livestock farmers and farmers producing arable crops and will reduce dependence of European agriculture on mineral fertilisers from outside the Union.

Under **Horizon Europe**, targeted investments with a volume of around € 9 billion are mobilised for the period 2021-2027, dedicated to the work programmes, partnerships, and missions of Cluster 6 related to food, bioeconomy, natural resources, agriculture and environment. In the first two years of Horizon Europe, more than 35 projects with a budget of around € 180 million are estimated to contribute to the application of fertilisers in agriculture, including projects on optimisation of nutrient budget, alternative fertilising products, and nature-based solutions for nutrient management. Funding is also granted under the Mission 'A Soil Deal for Europe'. This Mission supports Europe's path to a sustainable soil management as part of the wider green transition in urban and rural areas. One of its specific objectives is reducing soil pollution by excess nutrients, targeting actions towards reducing fertiliser use and nutrient losses.

The Nitrates Directive currently sets a 170 kg/ha/year limit for nitrogen from manure and **processed manure** that can be applied in **nitrate vulnerable zones**. Beyond this limit only mineral fertilisers can be used. The reason for this is that manure's leaching characteristics are worse than those of mineral fertilisers. In non-polluted areas which represent 30% of the agricultural land in the EU, farmers can already now without any restriction substitute mineral fertilisers with manure or processed manure. Having said this, the economics of transport of manure over larger distances is often such that it is only economically viable

[1] Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products

in a limited perimeter of where the manure is generated. Processed manure may economically be more viable as a substitute for mineral fertilisers in view of its lower transportation costs.[17]

Technological efforts have been ongoing to process manure in a way that reduces leaching. A 2020 Joint Research Centre report (on 'RENURE') concludes that considerable progress has been made regarding the development of manure processing technologies.[18] However, it was noted that the available technologies are likely to yield products with **higher ammonia emissions** than certain mineral fertilisers such as calcium ammonium nitrate (CAN) and ammonium nitrate (AN) - although better than manure and similar or lower than urea. Therefore, the application of RENURE products in nitrate vulnerable zones would need to be subject to strict requirements concerning **application practices**.

The application of these criteria will be discussed in the Commission's **Integrated Nutrient Management Action Plan** which will be adopted at the beginning of 2023, in combination with possible short-term flexibilities under the Nitrate Directive[19]. Action in this field will contribute to **closing the nutrient cycle**[20] and help mitigate the price pressure on farmers from high mineral fertiliser prices.

3.2.7 Alternative supply sources of imports and suspension of import duties for ammonia and urea

By way of introduction, **diversification of imported fertilisers** and intermediate products constitute a pragmatic short term reaction with a view to shoring up food security. Having said this, a viable fertiliser production sector in the EU is in the vita**l strategic interest of the Union** and deserves commensurate political resolve and supporting policies.

The Commission has reached out to alternative suppliers of fertilisers so as to compensate for short-falls from Russia and Belarus. U.S., Oman, Turkmenistan and Qatar are identified as alternative sources for nitrogen fertilisers. Imports from Egypt and Algeria are also up substantially (by almost 20% and 40%, respectively), with the realistic prospect of Egypt replacing Russia as EU's main source of imports in 2022.

The EU nitrogen market is protected by **Most Favoured Nation duties** of 6.5% (ad valorem duty).[21] The Commission has proposed to suspend these tariffs for two key intermediate goods used in the production of nitrogen fertilisers, ammonia and urea, until

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[17] This is why the EP has kept calling for legislative measures. See resolutions 2020/2077 paragraph 90 and 2022/2593 paragraphs 26 and 28.

[18] JRC 2020, ''REcovered Nitrogen from manURE' - Technical proposals for the safe use of processed manure above the threshold established for Nitrate Vulnerable Zones by the Nitrates Directive (91/676/EEC)

[19] Directive EU 91/676

[20] Communication from the Commission - A new Circular Economy Action Plan For a cleaner and more competitive Europe COM/2020/98 final

[21] However, a number of fertiliser exporting countries such as Morocco, Egypt, Algeria, Tunisia, Trinidad & Tobago enjoy duty-reduced access to the EU under GSP or free trade agreements.

the end of 2024 (excluding Russia and Belarus from the suspension of tariffs)[22]. This would allow to address availability and affordability concerns relating to the supply of ammonia and urea. This proposal is currently discussed in the Council. The Commission calls on Member States to rapidly adopt its proposal. In 2019, following an investigation concerning the damage to the EU's industry and farmers, the Commission imposed anti-dumping measures against imports of urea ammonium nitrate (UAN) from Russia, Trinidad and Tobago and the United States of America. The measures remain in place during five years. Legally justified trade defence measures contribute to ensuring a level playing field and the EU's open strategic autonomy.

3.2.1 Measures to ensure gas security of supply and affordability

Over the past year, the Commission has taken decisive steps to ensure security of supply and stabilise gas markets. On 13 October 2021, the Commission published guidance to Member States ('**Energy Price Toolbox**') to address the immediate impact of current prices increases, and further strengthen resilience against future shocks. The **REPowerEU** Communication of 8 March 2022 introduced measures to decarbonise gas markets and promote renewable gas as well as energy savings, diversification of energy supplies, and the accelerated roll-out of renewable energy to limit the impact of supply disruption and keep energy prices in check.

More recently, the Commission reinforced the EU's preparedness for this winter. The **regulation on coordinated demand-reduction** measures for gas aims at the reduction of natural gas demand by 15% this winter compared to their average consumption in the past 5 years. In addition, the **regulation on an emergency intervention** to address high energy prices intends to reduce electricity consumption, notably during peak hours. As gas is often the marginal power production technology, this should help easing pressure on gas consumption by about 1.2 bcm over 4 months.

In the **'Safe gas for a safe winter'** Communication[23], the Commission provides guidance to Member States concerning the industries considered critical or strategic from a societal perspective for purposes of prioritisation. Food supply chains and its value chain elements are mentioned in this context in the annex to the Communication. Mention is made of the fertiliser sector as supplying the **socially critical agricultural sector** across the whole EU. The Commission therefore calls on Member States to ensure the continued and undisrupted access to natural gas for fertiliser producers in the case of rationing of gas by means of their national emergency plans.

These demand reduction measures, along with the efforts made under the Gas storage regulation to reach and even exceed our gas storage filling targets, have attained their

[22] 19 July 2022, Commission proposal for a Council Regulation amending Annex I to Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff, COM(2022)359 and press release

[23] 20 July 2022, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee Of The Regions, "Save gas for a safe winter" and Annex

objectives. Prices, although still at very high levels, have decreased compared to the peak level they reached in August.

3.2.2 Emergency measures for gas supply and prices

The Commission presented on 18 October its **Energy Emergency plan**, aiming at strengthening security of supply and at addressing high energy prices. This plan and the regulation it contains put forward a series of measures **aiming at addressing the volatility of gas markets and the level of prices in order to make prices more acceptable to consumers**. This includes the notably possibility of **joint gas purchasing** via the EU Energy Platform, the possibility to put in place a mechanism to limit prices via the main European gas exchange, the TTF, when needed, and the creation of a new, reliable **benchmark for liquefied natural gas** (LNG).

In addition, so as to reinforce preparedness for possible emergencies over the winter, the Commission proposes measures allowing Member States to **exceptionally reduce non-essential consumption** such as outdoor heating to ensure that gas is being supplied to other essential sectors, services and industries, provided it does not affect the consumption of vulnerable customers.

3.2.3 Boosting green ammonia

As regards nitrogen fertilisers, **green ammonia** based on green hydrogen is a technology that promises to greatly reduce the GHG emissions from the fertiliser production process. Currently, such projects are expected to come on-stream not before the end of the decade. A green ammonia infrastructure at scale pre-supposes significant investments.

Challenges remain to upscaling clean hydrogen-based ammonia production, including the lack of infrastructure, lengthy permitting procedures, and availability of necessary technology such as electrolysers. The Commission's own **REPowerEU** Communication addresses some of the challenges. As gas prices rise, these projects are becoming commercially viable compared to natural gas-produced ammonia, accelerating the former's deployment.

Two groups of **Important Projects of Common European Interest** (IPCEI) have received state aid approval totalling more than €10 billion and are expected to attract an additional €17 billion in private investment. These projects focus on accelerating the deployment of clean hydrogen at large-scale, in particular in large industrial installations including fertiliser production. Projects like these will ultimately drive down the cost of producing green ammonia in the EU.

Considering investment gaps identified, the Commission encourages Member States to launch IPCEIs on the conversion of the European nitrogen fertiliser industry to green electricity or biomethane production, in combination with local circular nutrients recuperation projects. The Commission will contribute to targeted investments in these technologies and infrastructure and thus support the creation of a green and competitive ammonia market, thereby accelerating the green transition of the nitrogen fertiliser industry in Europe.

Biomethane has interesting substitution potential in relation to gas, especially for the zones where green hydrogen would be less competitive. The European Biomethane Industrial Partnership (BIP) announced in the REPowerEU Plan was launched on 28 September 2022, with a target of annual production and use of biomethane of 35 billion cubic metres by 2030, requiring about €70 to 80 billion of additional investment according to this BIP.

The Commission will furthermore look into incentivising measures complementing the ETS that would contribute to **making green fertilisers competitive in the market** during the transition to a fully decarbonised economy.

3.2.4 The EU's Emissions Trading System

The EU's Emissions Trading System (ETS) covers the fertiliser industry. The Covid as well as the current market disruptions will lead to future allocations of free allowances which is lower than the one that would occur in the absence of these events (Free Allocation Regulation (FAR)[24]). The FAR will be reviewed next year where this will be raised by stakeholders.

4 ENSURING AVAILABILITY AND AFFORDABILITY OF FERTILISERS IN THE WORLD

4.1 The situation of the fertiliser market in the most vulnerable countries in the world

Global fertiliser markets have been strongly affected by the war in Ukraine, in particular due to their dependence on natural gas and to market disruptions, including **export restrictions** imposed by countries like Russia and China. Many countries worldwide are relying on few trade partners for their fertiliser imports and will hence face steeper fertiliser import bills and higher costs of production that will negatively affect harvests. The most affected are in particular the most vulnerable areas (West and Sub-Saharan Africa chiefly, as well as Central and South America and Asia).

In 2022, a record high of 222 million people in 53 countries are **acutely food insecure** and in need of urgent assistance[25] Millions of people are starving in particular in the most affected countries, such as Somalia, Afghanistan, Ethiopia, Nigeria, South Sudan and Yemen[26].

But supply risks exists in other regions too, for example in Latin America. In June 2022, the UN Global Crisis Response Group sounded the alarm on a global fertiliser crisis,

[24] Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council

[25] Report of the Global Network Against Food Crisis

[26] FAO/WFP Hotspots report

indicating that it might jeopardise food production in the coming years leading to a food availability crisis[27].

4.2 Supporting farmers and fertiliser producers in the most vulnerable countries

The European Union has swiftly reacted to the systemic shock generated by the Russian aggression against Ukraine by launching actions to address food insecurity at the global level. In total, the European Union has committed to provide almost € 8 billion until 2024 in support of the most affected populations around the world. **Fertiliser support actions** are integrated in the four strands of the EU food security response: (1) Solidarity, (2) Production, (3) Trade and (4) Multilateralism (see the [Annex] for more details).

The Commission reinforces the **multilateral approach** in its bilateral talks where it had occasions to tackle issues related to the access and use of mineral fertilisers. For example, within the Collaboration Platform on Agriculture set up together with the US in November 2021, common EU-US views were noted such as the lack of reliable information on supply and demand in international markets, the need to improve crop production efficiency and the use of nutrients, and refining production practices using data and precision application. The Commission and Canada are also planning to hold a joint event on the sustainable use of fertilisers, focusing on optimisation of use and the development of new products.

Given the high sensitivity of food security concerns, the EU has essentially carved out the food sector and fertilisers from the various **sanctions packages against Russia**, and has worked with international organisations in order to minimise any possible indirect or unintended negative consequence of sanctions for the EU and global agri-food markets.

4.2.1 Global Fertiliser Challenge

The Commission will join the **Global Fertiliser Challenge** (GFC) launched at the Major Economies Forum in June 2022. The initiative aims to strengthen global food security and reduce agriculture greenhouse gas emissions by helping alleviate fertiliser supply shortages notably through **enhanced nutrient management planning, increased fertiliser efficiency, and advanced alternatives to mineral fertilisers.** The GFC sets a goal of raising at least US$ 100 million in new funding by CoP27 of the UN Climate Change Conference. Contributing € 25 million the Commission will design its response and contribution to GFC objectives focusing on improving nutrient management for an efficient and sustainable use of fertilisers, with a particular focus on extension and advisory services for farmers.

[27] UN Global Crisis Response Group on Food, Energy and Finance, Brief No.2: "Global impact of the war in Ukraine: Billions of people face the greatest cost-of-living crisis in a generation", 8 June 2022.

4.2.2 Support for partner countries: sustainable soil fertility management and farmers' productive capacities

Global levels of mineral fertiliser consumption per hectare of arable land vary considerably[28]. Diversified agricultural practices, access to water, adapted training and rural advisory services, secured land rights, fair access to quality seeds and access to credit are among the important levers for support and resilience strategies. These factors are key especially in areas where levels of land degradation leads to a low fertiliser response.

Against this backdrop and in line with its Farm to Fork strategy, the Commission is committed to globally pave the way for **innovative approaches in support of integrated soil fertility management**, applying a diverse set of site-specific soil fertility solutions conducive to sustainable yield gains. Diversified agro-ecosystems, higher soil organic matter content and better nutrient cycle management (i) enhance the resilience to climate change, and (ii) contribute to climate mitigation by an increased storage of carbon in the soil.

The EU helps its partners to reduce their reliance on imported fertilisers and dependence on mineral fertilisers by investing in efficiency of use and alternatives, including organic fertilisers, and also **sustainable agriculture and soil fertility management**. This is a key component of the rollout of the country driven national food systems transformation pathways, following the 2021 UN Food Systems Summit. In particular, the EU will:

- facilitate dialogue and sharing of experiences, support research and innovation activities, notably in countries with high fertiliser use and/or low nutrient use efficiency;
- work closely with farmers' organisations across specific agri-value chains and link them systematically to agricultural research organisations and private sector, building a.o. on the DeSIRA and GCCA+ portfolios;
- promote agroecological approaches, including on concrete value chains and crops, and sustainable agricultural practices that are essential to improve and sustain soil fertility (legumes and plant proteins, cover crops, agroforestry, polyculture-livestock, etc.);
- enhance access to and efficient use of fertilisers for smallholders through transparent and well-targeted tools (e.g. e-vouchers, co-payment schemes, use of micro-doses for more efficiency), efficient advisory services (calculation of nutrient balances, mobilisation of different sources of nutrients) and improved public input subsidy programmes for inorganic and organic fertilisers;
- foster ongoing strategic partnerships, notably with CGIAR, IFAD and FAO, to strengthen sustainable soil fertility management and facilitate agro-ecological approaches.

[28] From 20 kg/ha in Sub-Saharan region, to 77 kg in North Africa, 125 kg/h in North America, 155 kg/ha in Europe, 171 kg/ha in Latin America to 294 kg/ha in East Asia (2018, World Bank)

4.2.3 Market transparency and G20's Agricultural Market Information System (AMIS)

The Commission will continue to **promote transparency to ensure stability of the markets** and to avoid market disturbances and prices spikes. The Commission welcomes the extension of the coverage of (AMIS) of the G-20 to the fertiliser market and is committed to provide all necessary data and support to the AMIS Secretariat. The Commission is exploring with Member States the possibilities for increased funding of AMIS with a view to further expanding market transparency.

5 CONCLUDING REMARKS

[...]