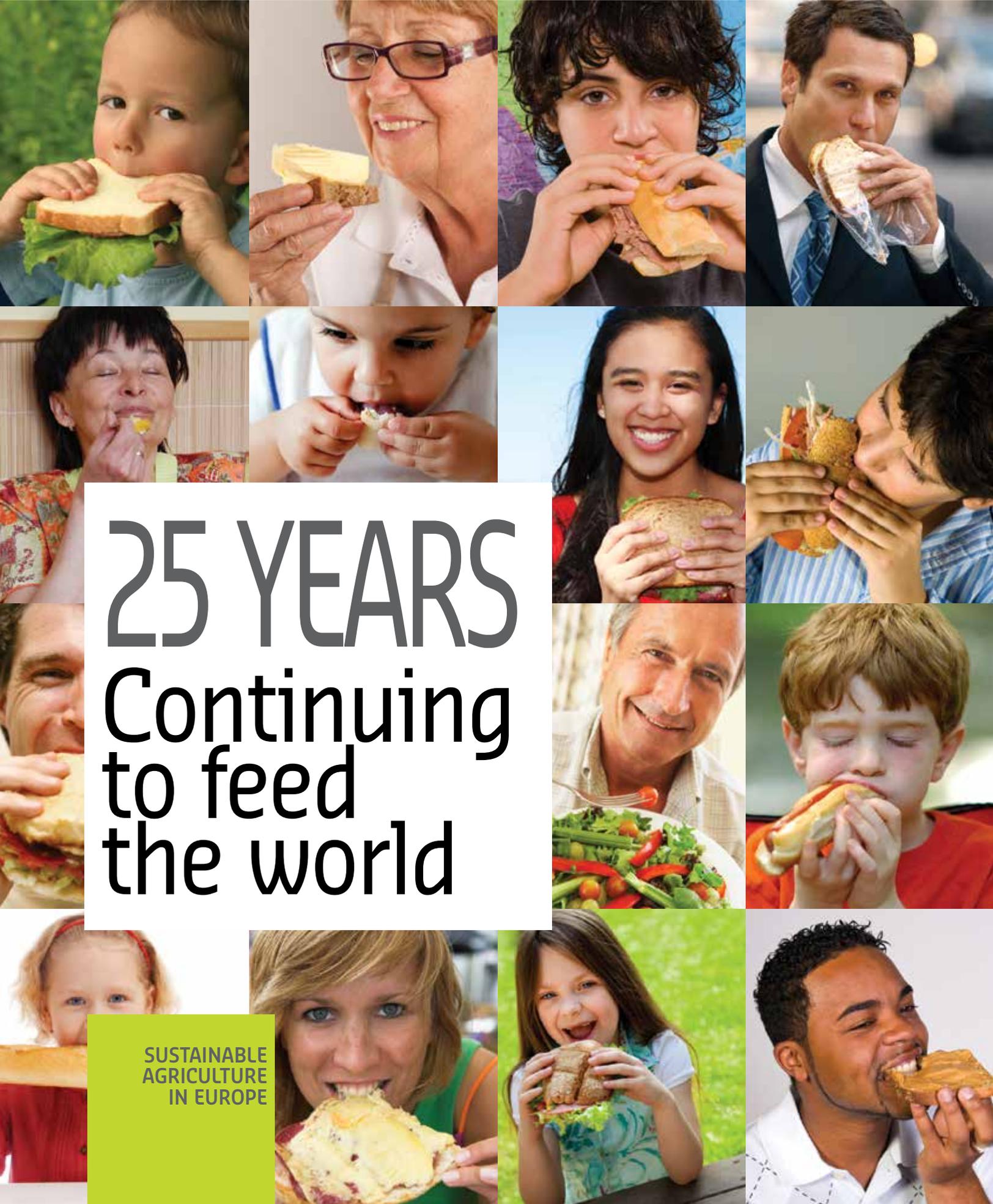


2012  
OVERVIEW



25 YEARS  
Continuing  
to feed  
the world

SUSTAINABLE  
AGRICULTURE  
IN EUROPE

# Contents

|                                 |   |
|---------------------------------|---|
| Towards infinity .....          | 4 |
| From the President .....        | 6 |
| From the Director General ..... | 7 |
| The Fertilizer Forum .....      | 8 |

## **More from less: greater productivity; reduced environmental impact**

|   |    |
|---|----|
| ➤ Europe and global food needs .....          | 10 |
| ➤ Europe's farmers need to be profitable..... | 10 |
| ➤ Effective plant nutrition .....             | 11 |
| ➤ Nitrogen-use efficiency .....               | 11 |
| ➤ Positive energy balance.....                | 12 |
| ➤ Climate change .....                        | 13 |
| ➤ Reducing emissions from agriculture .....   | 13 |
| ➤ Water quality .....                         | 14 |
| ➤ Resource recycling .....                    | 15 |
| ➤ The future of farming.....                  | 15 |
| ➤ The DAN initiative .....                    | 16 |

## **Fertilizer trends**

|                                   |    |
|-----------------------------------|----|
| ➤ Market demand .....             | 19 |
| ➤ Agricultural production .....   | 19 |
| ➤ Fertilizer consumption .....    | 20 |
| ➤ New fertilizer regulation ..... | 20 |

## **Fertilizers Europe: 25 years of progress**

|                                       |    |
|---------------------------------------|----|
| ➤ The first 25 years .....            | 22 |
| ➤ Fertilizers Europe Presidents ..... | 22 |
| ➤ Major milestones .....              | 23 |
| ➤ Fertilizers Europe today .....      | 25 |
| ➤ Fertilizers Europe Board .....      | 26 |
| ➤ Fertilizers Europe members .....    | 27 |
| ➤ Committee activities                |    |
| • Agriculture committee.....          | 28 |
| • Technical committee .....           | 30 |
| • Trade & Economic committee.....     | 32 |
| • Statistics committee .....          | 35 |
| ➤ Communications & advocacy .....     | 36 |
| ➤ Fertilizers Europe team.....        | 38 |



- Half the world is fed thanks to fertilizers.
- In Europe, every euro invested in a fertilizer provides farmers with an average five-fold return.
- European farmers produce more crops with less fertilizer than they did 20 years ago and lead the world in nitrogen-use efficiency.
- Nitrogen fertilizers create six times more energy than that it takes to make, distribute and apply them.
- Without fertilizers, agriculture around the world would need an additional 1,100 million hectares of farmland.
- Increased agricultural productivity in Europe has allowed forests to be planted over an area five times the size of Belgium.

# Towards infinity





**FERTILIZERS ARE INTEGRAL TO MODERN AGRICULTURE.**

They provide farmers with the means to meet global food and energy needs, both today and for the future. The European fertilizer industry is committed to developing innovative products and application techniques to maximize the use of resources and increase the sustainability of European agriculture. It combines active product stewardship with close collaboration with the entire food chain to ensure the best nutrient-use efficiency and to reduce the carbon footprint of food production.

# From the President

Overall, the past year has been a good one for the European fertilizer industry. The results published by our member companies are generally healthy and it is good to see that they are continuing to make their production more efficient.

The fertilizer industry is, of course, very much dependent on the farming sector and, despite the discussions about a new agricultural policy in Europe, farmers have kept their production stable.

## The DAN initiative

Over the year, Fertilizers Europe worked hard on preparing our Directly Available Nitrogen (DAN) initiative. The purpose is to highlight the qualities of our products and the environmental and agronomic benefits of nitrate fertilizers for European farmers and the European climate. With the help of our members and many scientific references, we have put together a well-researched and fact-based argument that makes a very interesting story.

We unofficially unveiled the initiative at the Congress of European Farmers in Budapest in the autumn of 2012 and it was very well received among the farming community. In March this year, we started rolling out our campaign to government officials and other key stakeholders all over the EU. In Brussels, the initiative was kicked off through meetings with the European Commissioner for the Environment, Mr Janez Potočnik, and the Chairman of the European Parliament's Agriculture Committee, Mr Paolo De Castro, MEP. I am convinced that the initiative will make its mark in European discussions on fertilizers and so support the high quality products from European fertilizer producers.

## Landmark decisions

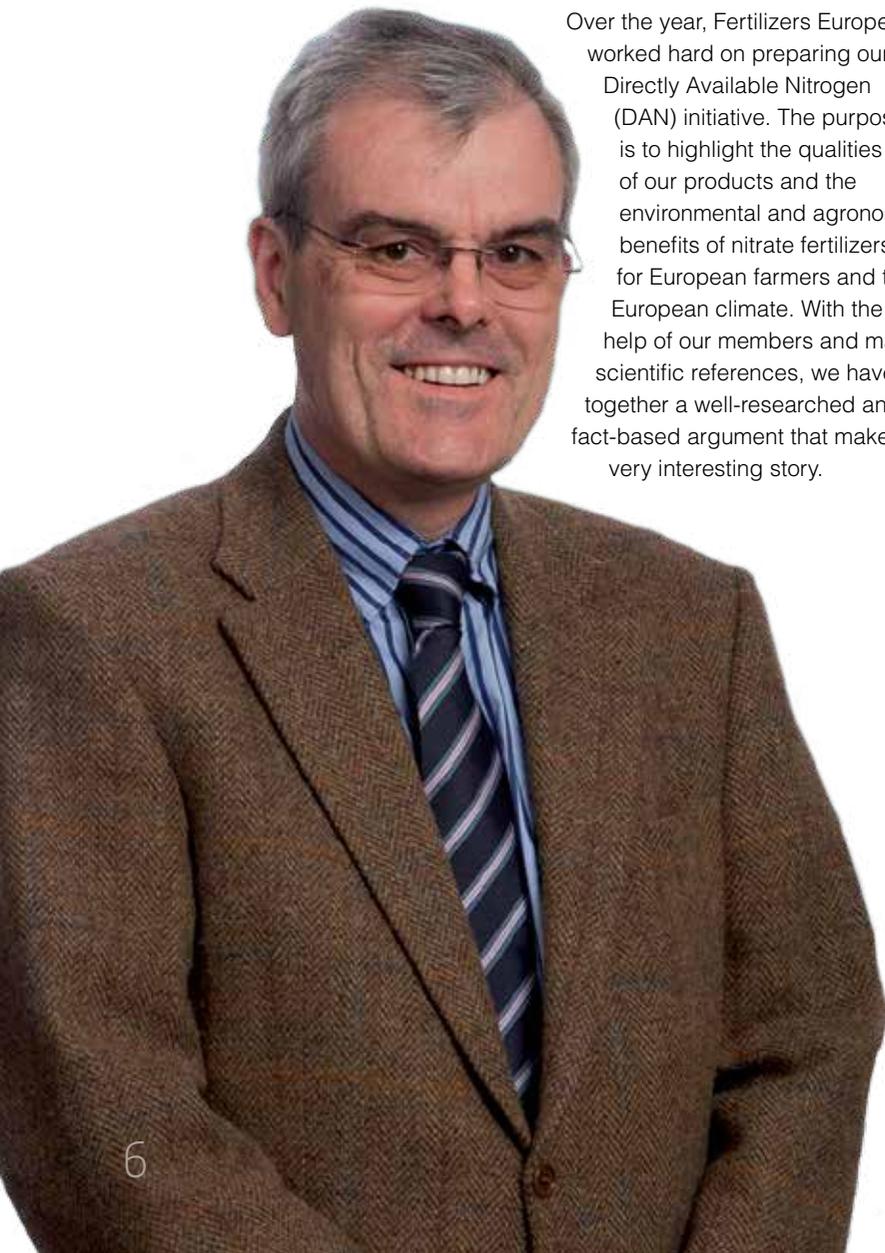
In February, the EU General Court in Luxembourg handed down its verdict on several cases related to the dumping of fertilizers on the European market. Russian fertilizer producers had made a legal complaint against the way that the EU handles anti-dumping cases, and especially the so-called "gas adjustment" which is a key element in the dumping calculations. Fertilizers Europe has played an active role supporting the European Council and the European Commission in this case.

I was very satisfied to see that the European Commission (and Fertilizers Europe) won the case hands down. The verdict clearly supports present methodology and practice, which means that we continue to have an effective anti-dumping mechanism in Europe.

## 25th anniversary

Finally, I should also mention that 2013 marks 25 years of existence for Fertilizers Europe. Over the years, the association has proven its value to members and we will be celebrating the milestone at our Annual Meeting in Vilnius. This will be followed by a special dedicated event with friends in Brussels later in the year.

**Francis Raatz**  
President, Fertilizers Europe



# From the Director General

The fertilizer industry in Europe has enjoyed significant structural change over the past 18 months with production facilities being sold and companies merging. These changes illustrate a sector in movement and show that the industry is preparing for the future. In this way, it can continue to contribute to European jobs and economic activity and, even more importantly, continue to support Europe's agricultural and food sectors in producing high quality food for European consumers.

The association itself has also seen important change. In 2012, the General Assembly approved new statutes opening up membership to all producers of chemical fertilizers. As a result, phosphate fertilizer producer ICL has joined Fertilizers Europe, based on its activities in Holland. Representation of the phosphate fertilizer sector has also been strengthened by ZCh Police from Grupa Azoty in Poland joining the association. Another change has been that Russian fertilizer producer EuroChem has joined, based on its investment in production facilities in Antwerp.

The addition of these international companies, however, does not change the focus of Fertilizers Europe. The association continues to work for and promote European-made fertilizers based on European assets. With Croatia joining the European Union in 2013, Croatian nitrogen fertilizer producer Petrokemija has also been included as a member. In addition, traditional nitrogen producers Hellenic Fertilizers ELFE, Greece, and Azotowe w Tarnowie-Moscicach from Grupa Azoty, Poland, have also joined.

## Stronger association

These valued additions help strengthen our position as the spokesperson for fertilizers in Europe and also mean that the association is going through a very positive development. As part of this development, we have been working to improve our internal communications with members and I think we have taken a number of useful steps. We have greatly improved our statistics database, making it much more user-friendly, re-designed our Rapid Alert System so we are fully prepared to handle crisis situations, and also started a "Communicators' Web" so we can leverage all our communications efforts.

## Relationship with farmers

Our relationship with the farming community as the customers for fertilizers is, of course, of great importance. In 2012, we agreed to sponsor the COPA-COGECA Congress of European Farmers in Budapest. This was a very big event with more than 500 farm leaders from all over Europe taking part. Building on this initiative, we took part in a large COPA-COGECA event in Brussels in February this year, where European farmers were arguing for a strong EU budget to support a good agricultural policy in the EU. We have also continued the tradition of organizing seminars with the farmers and their cooperatives.

For further information on the association, I refer you to our newly relaunched website: [www.fertilizerseurope.com](http://www.fertilizerseurope.com).

Finally, I would like to thank our members for their support and engagement with the association. Without their active interest in Fertilizers Europe, we could not play the effective role that we do. I would especially like to thank the Board members for their participation and guidance over the past year. I would also like to recognize the efforts and skills of Fertilizers Europe staff. Together, we have made another successful year in the 25-year history of the association.

**Jacob Hansen**  
Director General  
Fertilizers Europe



# The fertilizer forum

The first "Forum on Fertilizers and Nutrients for Growth" was held on May 28, 2013 at the European Parliament in Brussels.



From left to right: Alan Seatter, Deputy Director General DG Environment, Britta Reimers MEP (Chair), Prof. Mark Sutton, Brian Johnson (moderator) and Julie Girling MEP at the forum.

Nearly 60 participants including MEPS, European Commission officials, scientists, experts from national and international agricultural and industry associations and representatives of the fertilizer industry attended the inaugural half-day event.

The idea behind the Brussels-based forum is to provide an opportunity for informal dialogue and debate between politicians, civil servants, scientists and stakeholders on important issues related to agricultural fertilizers and other nutrients. Issues to be covered include:

- Feeding the world through efficiently feeding plants
- Fertilizers potential to combat climate change, air quality and health issues
- Recycling of resources such as phosphates
- Labelling issues to support farmers and consumer choice.

The forum is chaired by German MEP Britta Reimers with UK MEP Julie Girling as vice-chair. Both serve on the Parliament's agriculture and environment committees.

Britta Reimers introduced the session by outlining the essential role that the fertilizer industry plays in meeting food needs, as well as providing jobs. She highlighted Europe's need for access to raw materials, recycling of scarce resources and research into the best use of nutrients.

## Nutrient management

Professor Mark Sutton of the Centre for Ecology and Hydrology, Edinburgh,

made the keynote address based on the findings of his recent United Nations Environmental Programme report "Our Nutrient World: The challenge to produce more food and energy with less pollution".

This global overview of nutrient management addresses the scientific complexity of the nutrient cycle and the current imbalances within it. It explores how the scientific community and legislators might work together to maximize the opportunities for improved nutrient management. Significant factors include the large amounts of nitrogen devoted to producing crops for animal feed rather than for direct human consumption and the need for more nutritional research on optimum diets.

Julie Girling stressed the need for scientific fact-based legislation for political credibility and the unacceptability of one-size-fits-all approaches. She said that for proposals to be adopted, the public required clear messages from its politicians. These needed to be distilled from the highly complex nature of the nutrient cycle.

## Air quality

The inaugural forum had "Air Quality" as its focal topic. This has become an increasingly important concern, with 2013 marking the launch of the EU's air quality policy review and it being the theme of the annual EU Green Week.

Alan Seatter, Deputy Director General of DG Environment, provided background to the policy review. He said that significant progress had been made on reducing vehicle and industrial emissions but that the issue of ammonia had not been sufficiently addressed until now. Existing legislation is sufficient to meet emissions targets up to 2020, but new targets will be needed beyond this date. The review is currently at impact assessment stage and the EC expects to present its proposals by the autumn.

Research shows that the majority of ammonia emissions from agriculture result from livestock production or the application of manure. Jacob Hansen explained how DAN nitrate-based fertilizers can reduce ammonia emissions from fertilizer use. He said that the industry makes a considerable effort to encourage best practice in both the production and application of fertilizers and was actively working with the food chain on nutrient recycling strategies.

The forum was reminded by COPA-COGECA that new environmental legislation often places significant additional burdens on Europe's farmers and that they need time to adjust to it. The agricultural sector, however, is receptive to understandable initiatives that are of perceived benefit to society.

The next Fertilizer Forum will take place in autumn 2013, before becoming a regular bi-annual event. More information can be found at: [www.fertilizersforum.com](http://www.fertilizersforum.com).





# More from less

Greater productivity;  
reduced environmental  
impact

## Europe & global food needs

Today, half the world is fed thanks to fertilizers but global food production needs to increase significantly to keep pace with projected food needs.

After doubling over the past 50 years, the FAO predicts that the world population will reach 9.1 billion people by 2050. To feed this number requires an increase in crop production of some 70% above current levels. In addition, the world's agricultural area is shrinking due to increasing urbanisation, soil erosion and nutrient exhaustion, with a large number of regions now affected by alarming levels of water scarcity.

Environmental pressure against extension of agricultural land means that the increase in food production can only be provided through better productivity on the land currently available.

With the best conditions and enough farmland to be self-sufficient in food production, Europe has the moral obligation to help meet growing global food needs. Over the last 10 years, however, its food imports have increased by some 40%. Today, an area outside Europe the size of Germany is devoted to meeting its food needs. With increased agricultural productivity, this land could be freed up to support global food demands.

European agricultural policy has a decisive role in incentivizing its farmers to increase production, while at the same time reducing their environmental impact and maintaining the rural environments in which they operate. This "sustainable intensification" of European agriculture requires widespread adoption of best farming practice, the use of modern crop science, targeted crop nutrition and the latest cultivation and soil management techniques.

## Europe's farmers need to be profitable

For the agricultural sector in Europe to be sustainable, it has to be economically viable. Europe's farmers need to make a sufficient return on their operations to be able to invest in them.

Commodity markets, such as those for major farm inputs such as fertilizers and fuel, have become increasingly global and recent volatility has put agricultural efficiency at a premium. Less efficient farmers, or those cultivating marginal land, face a growing struggle to compete.

Fertilizers play a key role in ensuring agricultural profitability. Used by 95% of farmers in Europe, every euro invested in them provides, on average, a five-fold return, so increasing their financial independence.

European fertilizer producers actively encourage efficient product use and they also need to be profitable. Without a strong local industry, Europe's farmers would increasingly have to rely on the reliability and pricing policies of producers outside Europe. But the European fertilizer industry faces two main challenges - the high price of gas in Europe and far stricter environmental controls.

European markets for gas, the main raw material for nitrogen fertilizer production, have traditionally been dominated by a small number of suppliers, principally in Russia, North Africa and the Middle East. Lack of European market integration has enabled them to maintain high prices and some have also run dual pricing policies, giving local fertilizer producers an unfair competitive advantage.

On top of this, although fertilizer producers in Europe are the world's most efficient, increasingly strict emissions controls have significantly added to their costs and, in some cases, increased the risk of carbon leakage.



# Effective plant nutrition

Agricultural efficiency starts at crop level. Effective crop nutrition requires sufficient sunlight, air, water and essential nutrients.

Absorbed from the soil surrounding the crop's root system, the primary nutrients nitrogen (N), phosphorus (P) and potassium (K) work together to enable crops to grow to their full potential. The power of the sun combines with the nutrients to enable the crop to grow more foliage, capture more CO<sub>2</sub> and store more energy, increasing its nutritional value for food or feed, or its calorific value for energy use.

When the crop is harvested, the nutrients are lost from the soil and its productive capacity declines unless they are replenished. Natural processes that break down organic matter and crop residues can replace about half the soil's nutrient content. The rest needs to be provided by fertilizers.

Mineral fertilizers enable farmers to offer a specific crop a predictable, balanced supply of N, P, K, as well as secondary elements such as calcium, magnesium and sulphur, and other micro-nutrients. Depending on the type of fertilizer, these are provided in a form that can be readily assimilated by the crop, minimizing any losses.

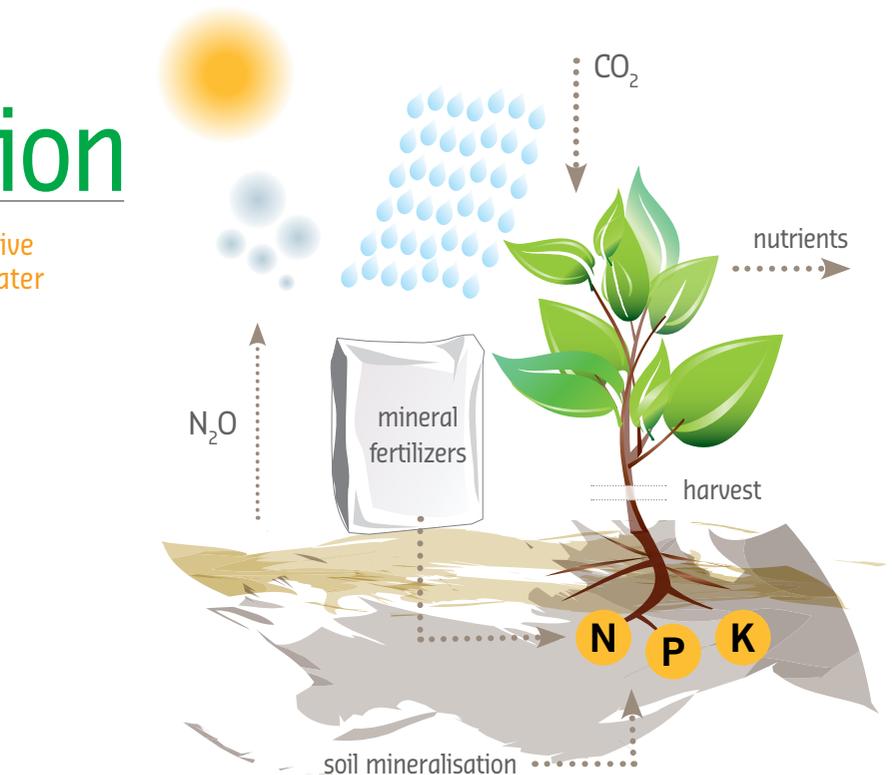
Balanced fertilization programmes closely match the nutrients in the soil with changing crop requirements over the growth cycle. This targeted nutrition increases nutrient uptake to ensure healthy and productive crop growth.

## Nitrogen-use efficiency

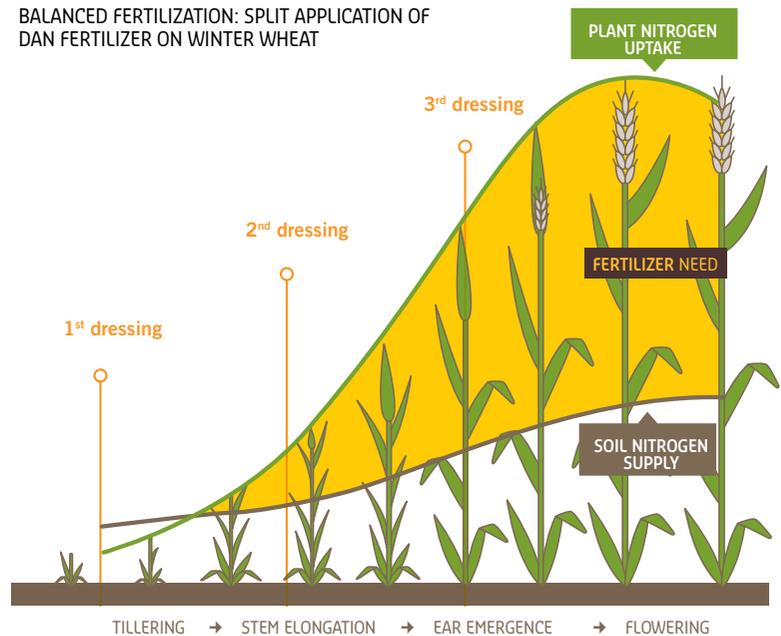
In the "green revolution" of the 1960s and 1970s, mineral fertilizers substantially increased crop yields around the world. Since then, the rate of growth has slowed.

Since the 1980s, increases in the yields of wheat, rice and maize in developing countries have all declined and today growth in agricultural productivity in Western Europe is almost static. To meet anticipated food and energy needs, this must change.

A more efficient nutrient supply is the key. Directly Available Nitrogen (DAN) fertilizers have traditionally been favoured by farmers in Europe as best suited to its topography and climate. And, as a result of industry and



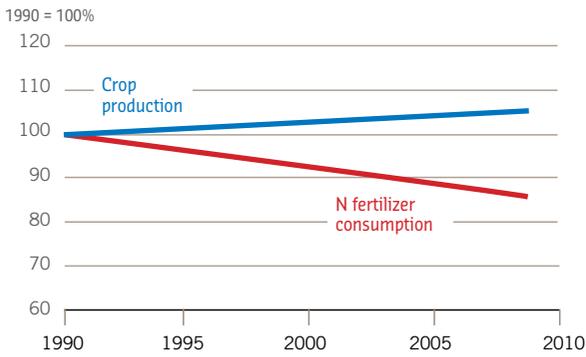
BALANCED FERTILIZATION: SPLIT APPLICATION OF DAN FERTILIZER ON WINTER WHEAT



other initiatives, today European farmers use less nitrogen to produce more crops than 20 years ago and lead the world in nitrogen-use efficiency (see overleaf).

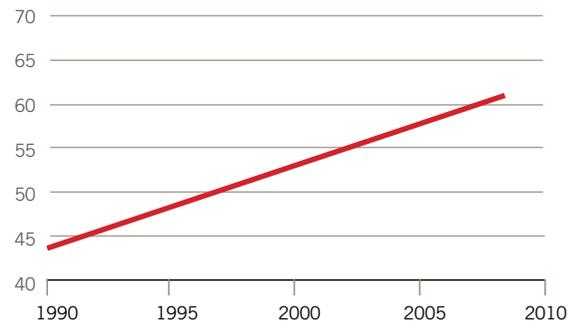
Informing the European farming community in the timing and dosing of nitrogen fertilizers (right product in the right place, at the right rate, at the right time) is increasingly widespread and yields achieved with appropriate products are high. Their impact on soil, water and air quality is also far better managed.

EUROPEAN CROP PRODUCTION & NITROGEN CONSUMPTION (%)



Sources: FAO, Fertilizers Europe

AVERAGE EUROPEAN NITROGEN USE EFFICIENCY (%)



Sustainable intensification of agriculture in Europe is closely linked to widespread adoption of good agricultural practice (GAP). Agricultural experts, legislators and providers of agricultural inputs all have a role to play.

The European fertilizer industry plays an active part in the development of advanced farm management strategies to optimize crop yields and control environmental impact in our quest for the "Fertilizer Infinity".

# Positive energy balance

Modern fertilizer production techniques have substantially reduced the energy consumption of European plants over the past 50 years and the resulting products have a highly positive energy balance.

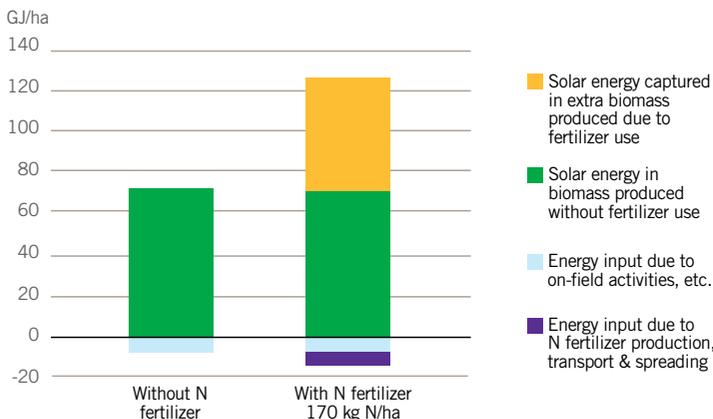
By increasing crop yield and the crop's energy content, fertilizers create six times more energy than that required to make, distribute and apply them. This energy, mostly in the form of protein, supports increasing human and animal nutrition, as well as the demand for bio-energy.

The development of the bio-energy sector is an important part of Europe's low-carbon strategy and first generation biofuel crops, such as cereals and oil seeds, are grown

on approximately four million hectares of land that was previously mostly idle or set-aside.

However, the indirect land-use changes resulting from biofuel production also increase GHG emissions. Possible revision of the EC's biofuels' sustainability criteria has therefore limited short-term growth of the sector. Europe's biofuel consumption also depends on external factors such as the oil price and worldwide biofuel availability. With this in mind, it is now anticipated that first generation biofuels will continue to dominate the European market until at least 2017.

ENERGY PRODUCED ON 1 HECTARE OF WHEAT



Data from Küsters and Lammler (1999)



# Climate change

The extension of agriculture in many parts of the developing world has had a major impact on climate change and the environment. But without fertilizers, it is estimated that global agriculture would today require an additional 1,100 million hectares of farmland.

Of the 25.5% of greenhouse gas (GHG) emissions currently attributed to global agriculture, 12% are due to direct changes in land use. In addition to releasing large quantities of GHGs, deforestation and clearing virgin land for farming destroys valuable wildlife habitats, as well as plant and animal biodiversity.

Deforestation also often has a negative impact on the natural water balance, resulting in a greater likelihood of flooding or drought. Since agriculture is highly dependent on climate, more extreme weather and variability in seasonality not only effect crop yields but can also bring new plant and animal diseases.

Europe's long history of agriculture means that its direct changes in land use are not large. Potential growth in crop yields on the existing agricultural area is considered sufficient to meet its future food needs, with uncultivated



or set-aside land remaining available for bio-energy crops or reforestation.

Over the past 25 years, Europe's increasing agricultural efficiency has allowed forests to be planted over an area five times the size of Belgium, creating new natural wildlife habitats, recreational areas and CO<sub>2</sub> sequestration sinks.

# Reducing emissions from agriculture

Within the EU's continued focus on climate change, atmospheric emissions from agriculture remain a priority.

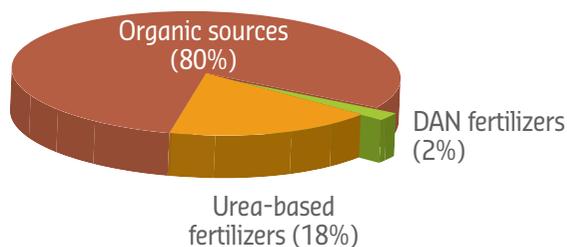
Emissions include ammonia (NH<sub>3</sub>) and the GHGs methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). They primarily result from livestock production, organic sources of nitrogen and the application of certain types of fertilizer.

The European Emissions Inventory (EMEP) estimates that 94% of all ammonia emissions are caused by agriculture, with around 80% originating from organic sources. Ammonia can affect human health, as well as cause soil acidification and the eutrophication of water. Mitigation measures include the use of low-nitrogen livestock feeds, low-emission livestock housing and slurry storage, a reduction in the application of slurry and solid manures, and reduction in the use of urea-based fertilizers.

The EU's 2050 Roadmap for the mitigation of GHG emissions requires the agriculture and forestry sectors to

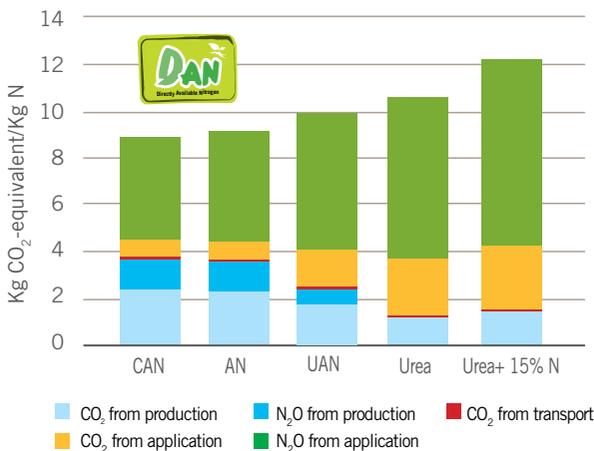
provide a shared-effort reduction of 10%. Emissions of CH<sub>4</sub> and N<sub>2</sub>O are the most relevant from this perspective. Life-cycle analysis (LCA) of fertilizers, which determines emissions from their production, distribution and application as well as during crop growth, provides a better understanding of their overall impact and what can be done to improve their carbon footprint.

AMMONIA EMISSIONS FROM AGRICULTURE



Source: European Emissions Inventory

CARBON FOOTPRINT OF DIFFERENT FERTILIZER TYPES



The life-cycle carbon footprint for ammonium nitrate is lower than for urea and UAN. When compensating for the lower efficiency of urea and UAN with a higher dosage, the difference is even more marked.

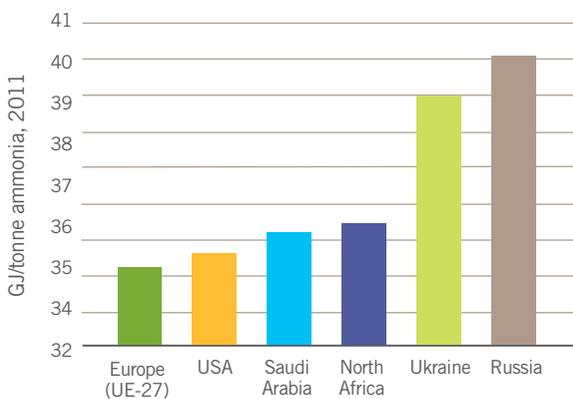
Comparison of DAN fertilizers with urea, for example, demonstrates that although urea's higher nitrogen content reduces the impact of its transport, storage and application, when emissions resulting from its use are included, the situation is reversed.

As part of a GHG emission reduction protocol for the food production chain, Fertilizers Europe members have already developed a production module for a Carbon Footprint Calculator and have now adopted the "Cool Farm Tool" run by the independent Sustainable Food Laboratory as the basis for complete LCA calculations for fertilizers. The tool's whole farm approach is already widely used by major food companies and academic institutions.

The European fertilizer industry is the world's most efficient manufacturer of DAN fertilizers, produced by reacting ammonia with nitric acid. One hundred years after the invention of the original Haber-Bosch process, the energy efficiency of European ammonia plants is close to the technological optimum and an increasing number of nitric acid plants are fitted with advanced N<sub>2</sub>O emissions abatement technology.

With the availability of new fertilizers that limit emissions from the soil, the main focus of current GHG mitigation efforts is on the promotion of good agricultural practice and nutrient-use efficiency. In Europe, this has increased by 45% since 1985 but there is still possible scope for improvement.

ENERGY EFFICIENCY OF AMMONIA PLANTS WORLDWIDE (REGIONAL AVERAGE)



The average energy efficiency of European ammonia plants is among the best in the world.

# Water quality

EU legislators are also focusing on agriculture's impact on water quality, where leaching of nitrate or phosphate can lead to eutrophication of waterways and excessive algal growth.

Nitrate or phosphate leaching can result from a number of factors. These include poor farm management, overuse of organic or mineral fertilizers, working unsuitable land, hedge removal or the absence of cover crops in winter. Leaching often occurs when the soil is saturated with water and excess nitrate or phosphate is washed beyond the plant root zone. As the nutrients are not bound to the soil particles they move freely with the soil water.

Since most losses occur outside the cropping period, the objective is to minimize nitrate and phosphate concentrations in the soil at the end of the harvest. For winter cereals, application of nitrogen fertilizer up to the economic optimum rate has been shown to maximize crop yield as well as significantly decrease soil nitrate concentrations, reducing the risk of leaching.



Good agricultural practice can also make a major contribution to limiting soil erosion and the run-off of nitrates and phosphates into surface water. This includes only using fertilizers with a predictable nutrient release, better synchronisation of fertilizer application with crop growth cycles, more ecological application techniques such as injecting manure into the soil, maintaining a porous soil structure, and immobilizing residual nitrogen and phosphorus with catch crops.

# Resource recycling

The fact that nutrients such as phosphorus are derived from non-renewable resources has recently focused attention on effective waste reduction and nutrient recycling strategies.

As far as agriculture is concerned, these primarily involve "on farm" recycling of crop waste through composting, anaerobic digestion of manure for energy or fuel generation, and the more efficient use and application of manure as part of the fertilization strategy.

There are some regions in Europe, such as parts of The Netherlands and northern Italy, where very intensive livestock production generates more manure than can be

recycled locally. Here, schemes have primarily focused on processing the manure to reduce its volume and liquid content and produce a more marketable fertilizer, often in a granulate form. Where suitably processed product cannot be used locally, the aim is to make it economically viable to transport it to mineral-deficient areas for further use in agricultural or horticultural applications.

Specific processing techniques include accumulating the nutrients in a specific fraction via separation or incineration or concentrating the nutrients and other non-volatile compounds through evaporation or drying. Incineration of poultry manure for energy generation or gasification, with the resulting ash being recycled as a fertilizer, has been successful in several regions.

Research continues into viable nutrient recycling schemes. Combined with more efficient nutrient use, this can lead to significant improvements in resource use and in maintaining an appropriate environmental balance.

# The future of farming

Fertilizers Europe's future focus includes the continuing promotion of precision farming techniques for better productivity, more efficient management and use of water, and increasing farmer awareness of Good Agricultural Practice.

Modern fertilizers are increasingly tailor-made to meet specific crop requirements and cater for different locations and soil types, as well as for different weather conditions. New technologies such as GPS soil and biomass mapping can now define nutrient demand at field level. These allow more even application of fertilizers, with small targeted coefficients of variation, limiting the risk of crop and nutrient losses. Agricultural techniques such as fertigation can increase water-use efficiency, while crop rotation, minimum tillage and cover crops help maintain the structure and nutritional quality of the soil.

## Air/water management

As the EU continues to focus on climate change, air quality and water protection, these remain priorities for Fertilizers Europe. It is currently monitoring the implications of the EU 2050 Roadmap for the mitigation of GHGs on the agricultural sector. The EU's 2013 focus is on Air Quality and the association continues to work on effective ways to monitor this. It has also sought broad collaboration with the European Commission on the promotion of agricultural techniques to reduce ammonia emissions.



## Good agricultural practice

Today, high quality mineral fertilizers are specifically formulated to enable the accurate application of the required nutrients, both in terms of rate and evenness of spread. Best practice in their application, covering the calibration and maintenance of spreading equipment and training of spreader operators, takes advantage of these characteristics.

The development of guidelines for best practice in nutrient management on farm has been a focus of Fertilizers Europe attention for many years. It has built up a comprehensive range of publications for the farming community that address specific issues such as productivity, energy efficiency and the management of emissions and will continue to add to this bank of knowledge for the benefit of Europe's farmers.

# The DAN initiative

Directly Available Nitrogen (DAN) fertilizers, such as ammonium nitrate (AN), calcium ammonium nitrate (CAN) and ammonium nitrosulphate, combine the benefits of ammonium and nitrate, the two simplest forms of reactive nitrogen directly available to plants. These compound nitrogen fertilizers offer farmers and agronomists a precise and reliable means of increasing food and energy production in an environmentally acceptable way.

Over the years, the majority of European farmers have found DAN fertilizers to be an effective and efficient source of nitrogen. However, other types of nitrogen fertilizer, including urea and UAN, are also used in Europe and are in widespread use in other parts of the world, most notably the USA and South America.

Both the production and use of fertilizers contribute to GHG emissions, notably carbon dioxide (CO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O). However, different nitrogen fertilizers interact with the soil in different ways, which needs to be taken into account when evaluating their overall effectiveness.

## Transformation losses

Nitrogen undergoes transformation in the soil, depending on the composition of the nitrogen applied. While nitrate is taken up directly by a plant's roots, environmental losses can occur when urea and ammonium are progressively transformed into the nitrate form.

Plants do not directly absorb nitrogen in the urea form in significant quantities and it needs to be first hydrolysed to ammonium by the soil enzymes, which takes between a day and a week, depending on temperature and moisture. Nitrification by soil bacteria then converts ammonium into nitrate in a period of a few days to a few weeks. Nitrous oxide and nitric oxide are lost to the atmosphere during the process.

Furthermore, the ammonium generated by the hydrolysis of urea does not behave exactly in the same way as that from ammonium nitrate. Hydrolysis of urea results in a short-term alkalinization in the immediate vicinity of the urea pellet. This shifts the natural balance between ammonium and ammonia to the latter form, resulting in volatilization losses.

Although the use of a urease inhibitor can help mitigate these losses, they are the main reason why lower nitrogen-use efficiency is observed with urea. They are also the reason why, whenever possible, urea should be incorporated into the soil immediately after application.

## Lower carbon footprint

Even if they are not incorporated into the soil, DAN fertilizers display a lower carbon footprint over their production and application life-cycle, as well as lower ammonia volatilization. Urea emits less CO<sub>2</sub> during its production



Fertilizer Europe's Jacob Hansen presents the DAN initiative to Commissioner for the Environment, Mr Janez Potočnik (left) and to Chairman of the European Parliament's Agriculture Committee, Mr Paolo De Castro, MEP (right).



"There is no doubt that ammonium nitrate has much lower ammonia emissions than urea. Research over many years has proven this."

Professor, Mark Sutton, Centre for Ecology and Hydrology, Edinburgh.

### Towards smart agriculture

During 2012, Fertilizers Europe has developed the brochure 'Towards Smart Agriculture' which sets out the main aspects of the agronomic and environmental impact of different types of nitrogen fertilizer currently in use in Europe and the advantages of DAN fertilizers. The brochure, which has been translated into 15 European languages, is a major contribution to Fertilizers Europe's on-going programme of promoting the best agricultural practice in Europe.

More information on DAN fertilizers can be found at: [www.danfertilizers.com](http://www.danfertilizers.com).

than AN but this difference is reversed on its application, when more CO<sub>2</sub> is released. The overall carbon footprint of urea is therefore higher than that of a DAN fertilizer. In addition, urea's volatilization losses and lower nitrogen-use efficiency need to be compensated by a higher dosage of about 15%, adding to its carbon footprint.

Fertilizers Europe believes that the sustainable intensification of European agriculture can be provided through good agricultural practice and the efficient use of fertilizers. The minimum rule for fertilizer use remains simple: apply the right product, in the right place, at the right rate, at the right time. Fertilizers with a reliable release profile and precise application characteristics reduce losses and improve plant uptake.



Danny

Dani

The DAN family promoting smart agriculture

#yesweDAN

A close-up photograph of a person's hand holding a large quantity of white, spherical fertilizer granules. The hand is positioned in the upper half of the frame, with the granules falling towards the bottom. The background is a blurred agricultural landscape featuring a green harrow in the foreground, a golden field, and a line of trees under a blue sky with light clouds.

# Fertilizer trends

Market demand,  
agricultural production,  
fertilizer consumption &  
new regulation

# Market demand

Although CAP revision and the continuing development of the EU's bioenergy policy will have an effect on fertilizer consumption in Europe over the coming ten years, ongoing tensions in the food and energy sectors, with their related impact on food and fertilizer prices, and the continuing growth in the global population are still the key factors affecting anticipated fertilizer demand.

Recent spikes in fertilizer prices and imbalances between supply and demand caused a major fall in the consumption of phosphate ( $P_2O_5$ ) and potash ( $K_2O$ ). However, the rate of application of nitrogen (N) was only slightly affected, with demand for this nutrient being relatively price-inelastic. Phosphate and potash prices are now more stable but at levels somewhat above the pre-spike prices. The demand for these two nutrients recovered significantly last season but forecasting the pace and the strength of the recovery is difficult.

The Fertilizers Europe "Forecast of Food, Farming and Fertilizer Use in the European Union 2012 - 2022" provides further detail. The forecast is developed by combining estimates of European crop areas and yields with the fertilizer application rates which will be applied.

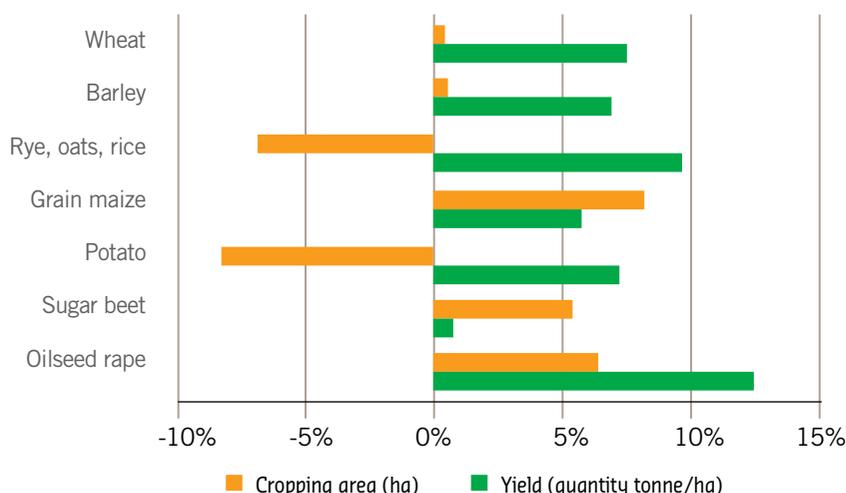
## Fertilizer prices

Fertilizer prices are primarily based on global supply and demand with major fertilizer exporters, such as Russia, Ukraine, the Middle East and Iran, and the importing regions of Europe, the USA and South America accounting for a major proportion of trades. The European nitrogen fertilizer market is one of the most globally integrated and between 20-30% of the market is serviced by imports.

Over the past five years, fertilizer markets worldwide have generally been demand-driven, with prices increasing accordingly. However, high feedstock costs continue to have a major impact on producer profitability, particularly in Europe. Growing volatility of commodity markets has also resulted in notable swings in the prices of oil, gas and agricultural products. The gas-based nitrogen fertilizer market has historically suffered from this volatility, with prices in Europe spiking and then dropping back suddenly in 2008 and again in the second half of 2011 as buyers decided to postpone orders.

# Agricultural production

FORECAST CHANGES IN FARMING FOOD CROPS 2012 - 2022



Source: Fertilizers Europe Forecast of Food, Farming and Fertilizer Use in the European Union 2012 - 2022

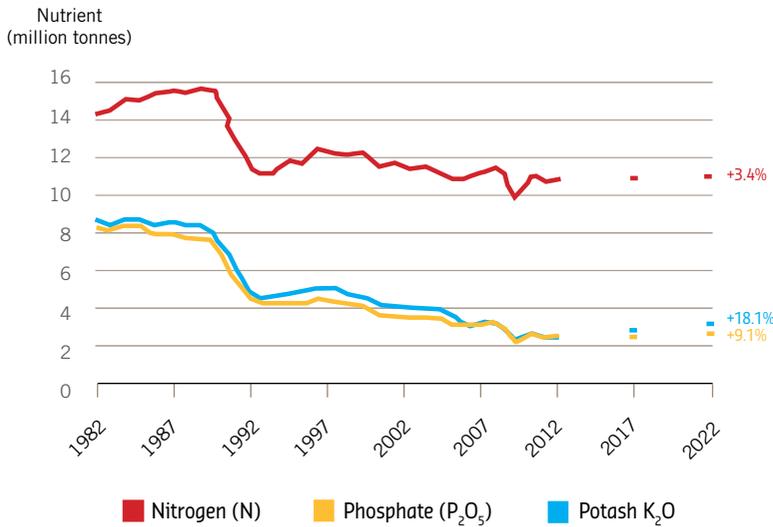


It is estimated that over the next ten years the total EU-27 cereals cropping area will decline by 0.6%. Within this, the wheat area will slightly increase by 0.4%, the areas of other cereals (rye, oats, rice) will decline by 7%, and the grain maize area will increase by 8%, mainly due to the demand for grain-based bioethanol. Cereal yields, however, are expected to increase over the period by an average of 9%, resulting in an overall output increase of 8%.

The oilseed rape area is forecast to increase by 6.5%, with the yield increasing significantly by 12% to give 20% growth in production. The sugar beet area is also expected to increase by 5.5%, mostly as a source for bioethanol production. The potato area is set to decline by 8% but, with increased yields, production will decline by only 2%.

# Fertilizer consumption

FERTILIZER CONSUMPTION IN EUROPE (EU-27) BY NUTRIENT (1982 - 2022)



Source: Fertilizers Europe Forecast of Food, Farming and Fertilizer Use in the European Union 2012 - 2022

In the EU-27 countries, on average over the last three growing seasons, fertilizers containing 10.5 million tonnes of N, 2.4 million tonnes of P<sub>2</sub>O<sub>5</sub> and 2.7 million tonnes of K<sub>2</sub>O have been applied each season to 134 million hectares of farmland. By 2021/22, Fertilizers Europe expects fertilizer annual consumption figures to reach 10.8, 2.6 and 3.2 million tonnes respectively, applied to the same land area.

Considering recent historical trends, at first sight the expected changes for P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O relative to the reference period (from 2009/2010 to 2011/2012) appear to be surprising. Although a reasonable 3.4% increase in N consumption over the period is forecast for the EU-27, the implied increases for P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O are 9.1% and 18.1% respectively.

While these increases might appear unlikely, the combination of the recovery of phosphate and potash application rates from their recent exceptional lows with the appropriate increases envisaged by the forecasters for the EU-12 countries make the forecast more logical.

# New Fertilizer regulation

The procedure initiated by DG Enterprise to construct a new fertilizer regulation has now entered into a "shadow phase" during which the proposal will be drafted and complemented by an "Impact assessment" of the possible options.

For the first time, the regulation will cover not only mineral fertilizers but also organic fertilizers, soil improvers, growing media and bio-stimulants. Member states and representatives of the different product categories have been addressing the main technical issues through their participation in four specialized working groups

since December 2011. This initial phase has now been completed.

During the "shadow phase", the committee will continue its discussions with DG Enterprise on any outstanding issues, while Fertilizers Europe's new "Advocacy Group", which is more focused on the political debate, will start discussions with the main EU official bodies, especially the European Parliament, based on our final position paper. It is expected that the Commission's proposal for the new regulation will be published in July 2013.



25 years

MEETING  
EUROPE'S  
FOOD NEEDS

FERTILIZERS  
EUROPE

25 YEARS  
of progress

# The first 25 years

This year Fertilizers Europe is celebrating its 25th year of operation. It has come a long way since its foundation as the European Fertilizer Manufacturers Association (EFMA) in Brussels in January 1988.

Brought about by the merger of earlier industry associations APEA/CEA in Zurich and CMC Engrais in Brussels, EFMA's mission was to identify, promote and manage the common interest of its members. Fertilizers Europe's objectives remain largely unchanged today. In broad terms, they are:

- Explain and promote the essential role of fertilizers in the food and energy production chains
- Anticipate and prepare for emerging issues that may affect the industry
- Assemble and publish statistics and other information on the industry
- Represent the industry with European Union institutions and legislative bodies
- Participate in discussions on EU policy on trade, agriculture and environment
- Coordinate and manage the contributions from members' delegates.

When EFMA was founded in 1988, it was open to nitrogen fertilizer producers in EU and EFTA countries, and thus covered a much smaller area than the EU today. Its members accounted for the clear majority of nitrogen and phosphate fertilizer production in this part of Europe.

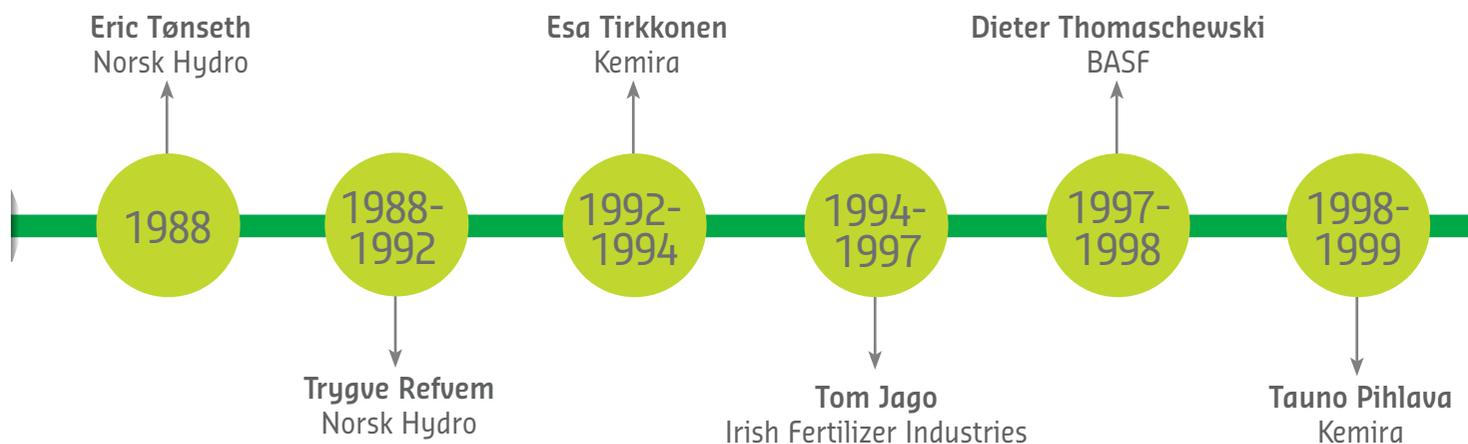
The 1990's were years marked by big economic changes in Eastern Europe and restructuring among the members of the association. With the enlargement of the EU in 2004, EFMA quickly opened its membership to producers from the new EU member states. Today, Fertilizers Europe is probably one of the European industry associations with the strongest representation in the new member states. With the many restructurings, the present 17 members still account for the vast majority of nitrogen and phosphate fertilizer production in the enlarged EU.

Led by 11 Presidents and supported by a number of standing committees, over the 25 year period the association has relied on the knowledge and expertise of its members and a small secretariat to build up a wide range of partnerships and contacts, both in Europe and worldwide.

The main focus is on working with the European Institutions (European Commission, European Parliament, European Council and associated agencies). In addition, the association works closely in the global arena with the OECD, UNECE (United Nations Economic Committee for Europe and the FAO, to name but a few.

## Fertilizers Europe Presidents

Eleven Presidents have led the association since 1988 and overseen the development of its activities.



## Information source

From the start, the association's activities have been supported by the development of its industry database, based on the original CMC Engrais database in Zurich. This has been continually updated and extended and was finally moved to Brussels in 2007/2008.

The database supports members' forecasting and benchmarking activities and provides the input for widely published industry statistics, such as trade figures and the annual fertilizer consumption forecast. Fertilizers Europe is now recognized as the dedicated industry source of information on fertilizers in Europe and its statistics are widely consulted by the EU institutions and other international bodies when discussing agricultural and industrial policy.

In addition to the direct services the association provides to members through its major internal programmes, such as Good Practice and Product Stewardship, over the years it has developed a full range of external communications tools aimed at European and national policy-makers, the farming community, and increasingly all those involved in the food and bioenergy production chain.

These tools include a regular programme of conferences, presentations and workshops on fertilizer production and use; continuous dialogue with European and other institutions on policy and forthcoming legislation in the areas of trade, agriculture and the environment; many



publications and position papers on a broad range of industry issues; Europe-wide awareness and sponsorship programmes; and active participation in global initiatives to increase public appreciation of the role of fertilizers in modern agriculture.

In 2008 EFMA decided to change its name to Fertilizers Europe. This reflected the association's increasing influence with the European Institutions and involvement within the wider food production chain and with the general public.

The association's activities have been highlighted through an active website and through dedicated internal tools such as its recently launched "Members Lounge".

Jean-Louis Besson  
Grande Paroisse

Heikki Sirviö (acting)  
Kemira

Francis Raatz  
GPN

1999-  
2001

2001-  
2007

2007

2007-  
2011

2011-  
2013

Daniel Clauw  
Yara International ASA

Renso Zwiers  
DSM Agro/OCI Nitrogen

# Major milestones

A selection of milestones over the past 25 years shows the volume and scope of Fertilizers Europe's activities. Many of these would not have been possible without the significant contributions from members and the time and effort of numerous member delegates serving on its various committees.

## Production

- Best Available Technology (BAT) documents for ammonia, nitric acid, sulphuric acid, phosphoric acid, urea, UAN, AN, CAN and NPKs (input to EC IPPC Directive, EU BATREF documents)
- Annual Emissions Benchmark surveys on fertilizer plants (since 1996)

## Safety & Health

- Guidance on the Storage, Handling and Transportation of Mineral Fertilizers (1996; updated 2007)
- Development of standardised industry Safety Data Sheets, Material Safety Data sheets, Safety Survey - Lost-time injuries (since 1997)
- Guidance for UN transport: Classification of Ammonium Nitrate-based Substances
- Annual Safety Seminar (started 1997)
- Incident Database relaunched 2013

## Energy use

- Energy Performance survey - ammonia production: European industry v. other parts of world
- EU ETS III 2012-2020

## Agriculture

- Development of EFMA Code of Best Agricultural Practice ("grandfather" code for individual national codes)
- EU guidance on CAP Reforms and Common Definitions (2003 & 2010)
- Annual Forecast of Food, Farming and Fertilizer Use in the EU (since 1992)

## Environment

- Guidance/input on emissions (water, air, soil):
- Nitrates Directive (1991) - inventory of nutrients, vulnerable zones, Best Agricultural Practice
  - EC Action Plan "Towards Sustainability" & Drinking Water Quality Directive (1993)
  - Gothenberg Protocol 2012
  - Exploration of land use trends under SOER 2010 (EEA)
  - OECD Cadmium study: Working Group "Cadmium and fertilizers" (1995)
  - The European Nitrogen Assessment (ENA) Report (2011)
  - European Environment Outlook (EEA) 2009
  - Revised Groundwater Directive (2006)
  - The Future of Food and Farming - Foresight Report (2011)

## Trade

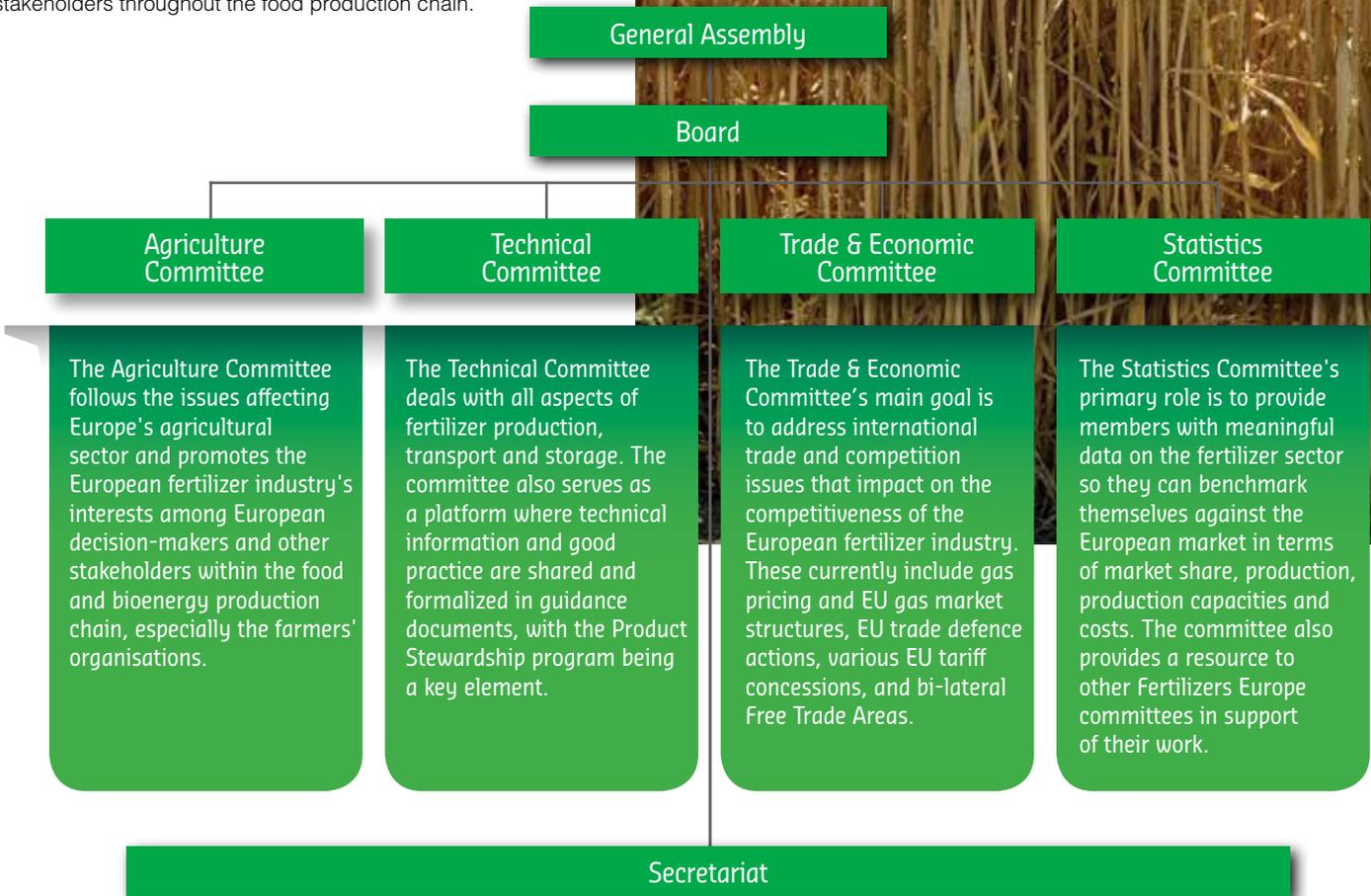
- Guidance/input (start dates) on:
- GATT fertilizer import tariffs (1993 with Cefic)
  - Anti-dumping cases UAN, AN (1993/1994)
  - Revitalization Russian market (1995 with IFA, IFDC)
  - EU Minimum Import Prices (MIP) review (1995)
  - Study "Competitiveness of EU industry" (1996)
  - EFMA/EU Trade policy instruments seminar (1996)
  - EU Trade defence proposals (2007)
  - EU Energy Package targets - gas market (2007)
  - 3rd Gas Market Directive (2008)
  - Gas Seminars



# Fertilizers Europe today

Fertilizers Europe's activities are governed by its General Assembly and Board and principally carried out by its four committees - Agriculture, Technical, Trade & Economic, and Statistics. Various working groups and task forces support the committees' activities.

Fertilizers Europe's communications and advocacy functions operate across the committee structure to maximize internal synergy and to make the most efficient use of common information and ideas. They often work in conjunction with the committees in addressing broad-based issues with the European institutions and with stakeholders throughout the food production chain.



The work of Fertilizer Europe's committees is supported by a small dedicated team of professionals at the secretariat in Brussels. In conjunction with the committee Chairmen and Vice-Chairmen, they manage the association's day-to-day activities, plan and progress new initiatives, and act

as the association's main interface with the European and international institutions and other stakeholders. A description of each committee's activities during 2012 is provided from page 28 of the report.

# Fertilizers Europe Board



# Fertilizers Europe members

## CORPORATE MEMBERS



**AB Achema**  
Lithuania



**Eurochem  
Antwerpen BV**  
Belgium



**Lovochemie AS**  
Czech Republic



**Anwil SA**  
Poland



**Fertiberia SA**  
Spain & Portugal



**Nitrogénművek Zrt**  
Hungary



**Azomures**  
Romania



**GPN**  
France



**OCI Nitrogen**  
The Netherlands



**BASF AG/Fertilizer  
BU Europe**  
Germany



**GrowHow UK Ltd**  
United Kingdom



**Petrokemija Plc**  
Croatia



**Borealis Agrrolinz  
Melamine GmbH**  
Austria



**Grupa Azoty SA**  
Poland



**Yara International ASA**  
Belgium



**Hellenic Fertilizers  
ELFE**  
Greece



**ICL Fertilizers Europe**  
The Netherlands

## NATIONAL ASSOCIATIONS



**AIC** - Agricultural Industries Confederation, United Kingdom



**ANFFE** - Asociación Nacional de Fabricantes de Fertilizantes, Spain



**ASSOFERTILIZZANTI** - Associazione Nazionale Fertilizzanti, Italy



**BELFERTIL** - Belgium



**IVA** - Industrieverband Agrar e.V., Germany



**PIPC** - Polish Chamber of Chemical Industry, Poland



**UNIFA** - Union des Industries de la Fertilisation, France



**VKP** - Vereniging van Kunstmest Producenten, The Netherlands



# Agriculture Committee

In addition to the development of its major campaign to promote the use of more efficient Directly Available Nitrogen (DAN) fertilizers among the farming community throughout Europe, the core of the committee's activities during 2012 have been on the new CAP proposals and the forthcoming fertilizer regulation. Further work on life-cycle analysis of the environmental impact of fertilizers has included the adoption of tools to measure the carbon footprint of fertilizers along the food production chain and monitoring changes in EU biofuels legislation to reflect the effect of indirect land use change.

## Common Agricultural Policy

The European Commission presented its final CAP 2014-2020 proposals 18 months ago and negotiations with the European Parliament and Council are still in progress. The Commission's intention for the CAP reform was to create a more competitive and sustainable agricultural sector in Europe and provide support for the rural economy.

The revised policy was initially intended to come into force in January 2014. As things currently stand, however, the CAP's second pillar - rural development - might meet this deadline, with the first pillar - farm payments - coming into force one year later.

In a nutshell, there will be significantly less money available to fund the CAP 2014-2020 programme than that assigned over the past seven years. The three institutions agree that there should be a progressive transition to a "fairer" allocation of farm payments both within and between member states, with a wider menu of possibilities for targeting payments at specific categories of producers and a "greening" element in the payments to deliver actual environmental benefits.

But it remains to be seen how these concepts are to be translated into effective legislation by the trilogue negotiations, which are scheduled to be finalized by the end of June 2013.

Fertilizers Europe contributed to the initial CAP debate in 2010 with its position paper "CAP after 2013" and the possible impact of the Commission's proposals on crop production and fertilizer consumption were set out in the "Forecast for Food, Farming and Fertilizer Use in the EU 2012 - 2022", published in June 2012.

The initial reaction to the Commission's final proposals is that they only partly respond to the challenges facing European agriculture, which needs to remain productive and profitable.

Sustainable intensification of farming in Europe is the way to improve competitiveness, provide income stability for farmers, and increase Europe's self-reliance in food production, as well as improve its contribution to the

Ermis Panagiotopoulos  
Agriculture & Environment  
Policy Officer



Christian Pallière  
Agriculture &  
Environment Director

global food supply. Furthermore, increased productivity will ensure that no additional land is required for agriculture, safeguarding Europe's natural areas and the biodiversity.

Fertilizers Europe also actively encourages the promotion of integrated farming practices and fertilization based on selection of appropriate fertilizers according to crop and soil characteristics (right product, right place) and precision application techniques (right rate, right time).

## Carbon calculator



The committee has chosen the Cool Farm Tool (CFT) to work with Fertilizers Europe's own fertilizer production

module to become the industry's full Life-Cycle Analysis (LCA) calculator. The CFT is an internet-based greenhouse gas calculator that helps growers measure the carbon footprint of their crops at farm level.

The CFT is simple to use and based on information that farmers have readily available. It identifies greenhouse gas hotspots and makes it easy for them to test alternative management scenarios and identify those that have a positive impact on their total net emissions. At the same time, the Fertilizers Europe fertilizer production module will be constantly updated and improved.

## Biofuels legislation

Although the terms of the European Commission's first Biofuels Directive in 2003 (2003/30/EC) were not legally binding, it did set indicative targets for biofuel production. In January 2009, the Renewable Energy Directive (2009/28/EC) introduced the mandatory use of renewable energy in the EU transport sector.

Due to the limited progress achieved under the Biofuels Directive, the targets in the new Directive were made legally binding. It set out sustainability criteria for emissions savings,

prohibited the use of raw materials from sensitive areas, and stated that the effects of direct changes in land use should be included in GHG calculations.

Environmental NGOs challenged the Commission's biofuel mandate on emissions from Indirect Land Use Change (ILUC), alleging that some biofuels have greater emissions than fossil fuels (due to conversion of forests for food production to compensate for growing biofuel crops on existing farmland).

Having investigated the concern by outsourcing specific studies on ILUC, the Commission came up with a proposal to amend the 2009 legislation, factoring in the ILUC emissions. This proposal can be summarized as follows:

- Biofuels derived from food crops should not account for more than 5% of the final energy consumed by transport by 2020;

- Sustainability criteria based on GHG savings should be at least 60% (35% before ILUC) for biofuels produced in installations starting in July 2012;

- The European Commission encourages non-land use biofuels (residues from agriculture, aquaculture, fisheries and forestry; household waste and algae)

- The Commission will cut all public subsidies for biofuels produced from crop-based biofuels by 2020.

The European Parliament and Council still have to approve this about-turn in policy before it can come into force.





# Technical Committee

Major activities in 2012 have covered climate change, where the committee has had notable success in issues relating to ETS III, assessment of the carbon footprint of fertilizer production, further development of the Fertilizers Europe Product Stewardship program, and fertilizer safety and security. Its focus for 2013 will remain on Product Stewardship as well as on fertilizer security, the new fertilizer regulation and the issue of carbon leakage.

## ETS and climate change

The committee has closely followed evolution of ETS III (Emission Trading Scheme) in close cooperation with other Fertilizers Europe committees. During 2012, its actions resulted in necessary benefits for its members:

- The European Commission (DG Competition) qualified the fertilizer sector for state aid relating to the carbon cost of electricity, which is essential for some members. The decision now has to be followed up at national level.
- We were able to prove to the Commission that it should withdraw its plan for a 2012 ban on emission reduction units (ERUs) in joint-implementation projects. Members who had made early investments in installing abatement technology will therefore not be unduly penalized.

The committee has actively collaborated with Cefic and the consultancy office Ecofys in developing a 2050 Roadmap to the low-carbon economy. The roadmap is intended as a tool for Fertilizers Europe's advocacy activities in the areas of climate change and energy. It clearly shows that nitrate-based fertilizers perform much better than urea-based fertilizers in terms of overall emissions. Over the long term, this will become even more important as Carbon Capture and Storage becomes available.

The committee's Carbon Footprint Task Force has developed a calculator to assess the carbon footprint of fertilizer production. This calculator will now be used in combination with the Cool Farm Tool, a whole farm calculator to provide the carbon footprint of various agricultural products within a full life-cycle analysis perspective.

## Product stewardship

Fertilizers Europe's Product Stewardship program has been the umbrella for our members' environment, safety and security activities since 2003. In 2012, we continued our collaboration with the International Fertilizer Association (IFA) to make Product Stewardship the global standard for the industry.

Laetitia Six  
Technical Analyst



Antoine Hoxha  
Technical Director

## Benchmark studies

Fertilizer Europe regularly performs benchmark studies covering industry safety, environmental emissions and energy use. The data collected provide key references in discussions with the European Commission and other institutions. Member companies also use the studies to benchmark their own performance. In 2012, we organized surveys on:

- ▶ Emissions (N<sub>2</sub>O, CO<sub>2</sub>, NO<sub>x</sub> etc.)
- ▶ Energy efficiency in ammonia production
- ▶ Safety performance: Total Injury Rate (TIR) and Lost Time Injury Rate (LTIR).

## Safety

The committee has organized an annual Safety Seminar since 1997. It provides a platform for members to discuss safety and related issues in order to exchange experience and increase knowledge. The 2012 seminar, held in Warsaw, saw record member participation. The seminar was followed by a plant visit to Pulawy.

Fertilizers Europe also maintains a database of some 800 safety incidents that have taken place since 1920. This is a useful tool for member companies and the recommendations in its accident reports provide a learning tool. In 2012, the database became available on-line in the Members Lounge.

## Security

Fertilizers Europe closely follows developments in Europe and worldwide regarding risks of the misuse of fertilizers. At the beginning of 2013, the European Union voted on legislation on explosives precursors and the European Commission has started the drafting process for implementation guidelines for this legislation.

Fertilizers Europe has updated its own security measures under its Product Stewardship program, which now cover all nitrogenous fertilizers in the supply chain. It has also actively participated in the IFA task force on security, proposing our Product Stewardship measures as the model for the basic levels of IFA Product Stewardship.

## New fertilizer legislation

In cooperation with the Agriculture Committee, the committee has actively participated in the European Commission's stakeholders working groups to prepare the new fertilizer regulation. Fertilizers Europe is in favour of the fully harmonized approach where common safety, security and quality requirements will be applied to all types of fertilizer.

## 2013 Focus

**Product Stewardship:** All Fertilizers Europe members will be audited according to our Product Stewardship program in 2014. The secretariat will organize the auditing process and help new members to integrate into the program. Fertilizers Europe will also continue to cooperate with the European Commission and stakeholders in defining and implementing measures to reduce the risk of fertilizer misuse. The committee will also review and issue new versions of several guidance documents on the safety of fertilizers.

**Fertilizer Regulation:** It is expected that the Commission's proposal for the new fertilizer regulation proposal will enter the legislative process in 2013. In close collaboration with the Agriculture Committee, the Technical Committee will play an important role in defending industry's position on a number of important issues, such as limits on contaminants.

**Climate change:** In 2014 the European Commission will review the list of industrial sectors at risk of carbon leakage. It is of the utmost importance that our sector is recognized as being at high risk and Fertilizers Europe will prepare data and the arguments for defending this issue.





# Trade & Economic Committee

Three driving characteristics shaped the committee's activities during the year: an unusually high level of trade policy landmark initiatives, important anti-dumping decisions from the General Court in Luxemburg and the drive towards implementation of the EU's Third Energy Package.

Trade policy landmarks included a wave of EU Free Trade Area negotiations, a new determination to strengthen the EU's unilateral trade policy via the Generalised System of Preferences (GSP) scheme, and the opening of trade defence reviews. On the multilateral front, after nearly two decades of negotiations, Russia joined the WTO in August. Hearings at the General Court in Luxemburg addressed four Russian complaints on earlier Fertilizer Europe anti-dumping cases concerning ammonium nitrate and UAN. The EU's drive to implement the Third Energy Package represented a new competitive challenge in the light of the USA's full-blown exploitation of shale gas.

## EU bi-lateral trade

The European Commission's DG Trade Directorate countered the failure of the Multi-lateral Doha Trade Round with a fast-forward on several key trade policy features, notably the opening of a whole series of new Free Trade Areas (FTAs). For the EU fertilizer industry, most important were the "near neighbourhood" partner country negotiations with the Former Soviet Union and Euro-Med countries. Fertilizers Europe contributed position papers to discussions with Egypt, Ukraine, Kazakhstan and Georgia, while Morocco and Algeria required simpler monitoring activity.

Fertilizers Europe strongly welcomes the new FTA emphasis. Unlike the Doha Round, which is constrained by polarised positions now often found in such international forums, the EU's deep and comprehensive FTA model better addresses the EU fertilizer industry's critical "level playing field" issues (i.e. energy pricing and market structures, equal or equivalent carbon and climate change commitments, and the harmonization of health, safety and environmental law).

By December 2012, release of the agreed draft EU-Ukraine Partnership & Co-operation Agreement II (which includes a comprehensive FTA) contained a landmark energy chapter outlawing dual pricing and promoting energy priced on market forces. The draft treaty further cements the energy market structures

Carmen Turcu  
Trade & Business  
Analyst



Sean Mackle  
Trade & Economic  
Director

already started with Ukraine's membership of the European Energy Community. It also addresses the approximation of its HSE laws and intellectual property and investment rights. However, Ukraine did not commit to join the EU's Emission Trading Scheme (ETS) and the whole project has been delayed by the Justice and Human Rights chapters due to the controversial imprisonment of Mrs Tymoshenko and her ministers.

While there was partial breakdown on the Ukraine negotiations, there was a breakthrough with the USA. The announcement that the EU-USA would seriously engage in FTA negotiations set off a further round of considerations. Fertilizers Europe alerted the Commission to the considerable "gas price gap" that had developed between the EU and the USA and the possible need for a "back loading" of tariff reductions on certain key products.

Moreover, freeing-up US LNG exports to the EU also became an issue as "resource nationalism" arose in certain parts of the US establishment and business community. Fortunately, the EU moved quickly to engage in an "energy chapter" to ensure free and fair trading of energy products. Together with a "regulatory cooperation" forum, this will now give important legs to the whole EU-USA FTA venture.

## EU unilateral trade

In April, The European Commission launched a major trade defence review. Proclaimed as a "modernisation" initiative, it set out an apparently "balanced" package, improving the rights of both importers and exporters. On one hand, importers would win a "shipper's clause" including pre-notification of anti-dumping measures and better refund mechanisms on duty payments. On the other, producers would get ex-officio openings for politically sensitive cases and removal of the lesser duty rule on subsidy cases. All parties were also intended to benefit from new transparent, quasi-legal guidelines on key issues such as union interest, analogue markets and injury margin calculations, which include profit ratings.

Fertilizers Europe joined forces with other major manufacturing sectors to argue for faster provisional measures, the removal of the lesser duty rule on anti-dumping cases where there are obvious raw material distortions, more modern profit-rating tools and techniques and higher profit ratings. On the latter issues, it has long been argued that the ROCE ratio should be added to the Commission's toolbox and that the empirically confirmed profit rating for capital intensive industries such as fertilizers is realistically 12 to 15% and not the 5 to 8% it currently uses.

The Commission's formal proposal was released in April 2013. A major success was the removal of the lesser duty rule but future progress through the European Council and Parliament is likely to be prolonged and possibly troubled.

EU institutions also agreed a new GSP regime governing EU import tariff levels for many developing or emerging economies. The outcome that stood out was the exclusion of countries with GDP per capita incomes higher than US\$ 4000. Thus, major competitors in

the Arab Gulf, as well as Russia, Belarus and Kazakhstan, were excluded from the regime. In contrast, Ukraine retained its GSP advantage. The GSP Scheme is due to come into force on January 1, 2014, from when it will start to impact trade patterns.

## Russian WTO accession

Russia's accession to the WTO in August 2012 included a gas "cost plus profit plus investment" deal, signifying its recognition that it is no longer justifiable to regularly sell gas below cost. The practical effect of the deal is that gas prices to Russian fertilizer producers may well rise to more than US\$ 6 to 7 MMBTU in the coming years.

There are already signs, however, that Russia's interpretation of the deal differs from that of the other WTO members and it cannot be ruled out that only a WTO dispute settlement case can definitively settle the issue. There is absolutely no doubt, however, that a "cost plus profit plus investment" gas deal is written into Russia's WTO Accession Treaty.





## Third Energy Package

In 2012, the European Commission's DG Energy, assisted by ACER - the new Agency for Co-operation for European Regulators - set about an impressive implementation programme for the Third Energy Package. Supplementing this effort to create a competitive Internal Energy Market in Europe, DG Competition opened a potential landmark anti-trust investigation into "excessive pricing" of gas in Europe by OAO Gazprom in September.

Fertilizers Europe fully engaged in the implementation programme, holding a gas seminar in September 2012 where Ms. Inge Bernaerts, DG Energy's Head of Unit for the Electricity and Gas Markets made a reference presentation.

The Gas Working Party also released its gas publication at the seminar. This was followed by the Commission's own review in November 2012 and a further Gas Working Party review in January 2013.

At the same time, Europe's growing dependence on expensive imports of natural gas, while the USA enjoys a "fertilizer investment boom" due to low cost indigenous shale gas, means that Fertilizers Europe continues to support the development of shale gas in Europe. This position particularly manifested itself in a joint position-paper on shale gas with IFIEC, the representative body of energy intensive users in Europe, and a fertilizers chapter in Cefic's reference position paper.

While competitive pressures grow as Europe's gas prices remain high compared to those of our major international competitors, 2013 will be the vital year for the implementation of the Third Energy Directive - and the promise of better gas prices.

## Fertilizer anti-dumping cases

Over the winter months of 2012 and 2013, four judicial hearings on Russian complaints to anti-dumping cases concerning ammonium nitrate and UAN were held at the General Court in Luxemburg.

The foremost issue addressed was the use of a "market gas adjustment" taken from Waidhaus, Germany, to replace Russia's local state-fixed gas price. Another significant complaint concerned the appropriate profit ratings. By February 2013, the Court judged that the Council, the Commission and Fertilizers Europe had all conducted the correct market gas price adjustments and profit ratings.

The four judgments made by the General Court on February 7, 2013 are:

- T-118/10 Acron OAO v. Council (UAN)
- T-459/08 EuroChem Mineral and Chemical Company OAO (EuroChem MCC) v. Council (AN)
- T-235/08 Acron OAO and Dorogobuzh OAO v. Council (AN)
- T-84/07 Open Joint Stock Company Mineral and Chemical Company "EuroChem" v. Council (UAN)



Gabor Marton  
Data & Statistics  
Analyst



Michał Wendołowski  
Statistics Manager

# Statistics Committee

The committee's continued focus has been on facilitating members' access to reliable market information. During 2012, activities were directed at upgrading the statistics database. Currently the database allows members to monitor EU fertilizer trade figures but the committee is working on adding EU fertilizer consumption data. It also continued to support the activities of other Fertilizers Europe committees, contributing to the annual "Forecast of Food, Farming and Fertilizer Use" with actual fertilizer consumption figures and providing regular support in trade defence cases.

## Industry statistics

The committee has distributed industry statistics to members throughout the year to support their forecasting and benchmarking activities. The statistics are produced in compliance with European competition law. Regular publications include figures relating to European fertilizer consumption, capacities, production, exports and imports, deliveries, as well as the Membership Profile covering industry turnover, investment and employment.

The committee also produced the Fertilizers Europe annual survey of members' production costs for the main fertilizer products. This survey identifies trends within the industry as a whole and serves as a benchmarking tool.

## Annual meeting

The annual meeting of the full Statistics Committee in Brussels in October gave members the opportunity to review activities and upcoming projects. In 2013, the committee will work on integrating the new members and ensuring the accuracy and timely delivery of industry statistics.

## Fertilizer trade

Fertilizer imports into Europe (EU-27) in 2011/2012 from countries outside the EU were 0.9 million tonnes less than the previous year. These accounted for 20% of total European fertilizer consumption, compared to 26% the year earlier.

### Nitrogen fertilizer trade balance (million tonnes of N)

|                    | 2010/2011 | 2011/2012 | % change |
|--------------------|-----------|-----------|----------|
| Imports to EU-27   | 3.32      | 2.39      | -28      |
| Exports from EU-27 | 1.35      | 1.85      | +37      |

### Nitrogen fertilizer consumption in EU-27 (million tonnes of N)

|                      | 2010/2011 | 2011/2012 | % change |
|----------------------|-----------|-----------|----------|
| Agricultural use     | 10.83     | 10.15     | -6       |
| Non-agricultural use | 1.82      | 1.76      | -3       |



# Communications & Advocacy

Throughout 2012, Fertilizers Europe has continued to update and strengthen its range of electronic and printed publications, as well as the Fertilizers Europe website and social media platforms. These have all increased the prominence of its communications activities with stakeholders and often played a major role in Fertilizers Europe's advocacy activities with the European and other institutions. For members, the success of the "Members Lounge" and "LIFE" magazine, as well as the launch of the "Communicators' Web" have enhanced both internal and external collaboration.

## New corporate website

Much of our attention over the past months has been put into redesigning the Fertilizers Europe website: [www.fertilizerseurope.com](http://www.fertilizerseurope.com). The new look website has recently been launched and is perfectly suited to the changing world in which we now live. With its responsive design features, it is easily accessible over multiple platforms and devices. This new platform will hopefully bring our message closer to our stakeholders and the wider public.

We are still very active in new media and our followers across different platforms have grown significantly. We will continue to extend our message to stakeholders by whatever medium they wish to receive it. You can follow Fertilizers Europe on Twitter, Facebook, LinkedIn and YouTube.

## The DAN initiative

The DAN initiative was conceived this year and we have seen the DAN family travel Europe spreading the message of DAN fertilizers. We have been at the heart of the DAN initiative and, together with our members, have been instrumental in launching the DAN campaign in Brussels and across Europe.

With the assistance of our members, we have managed to coordinate translation of the main DAN "Towards Smart Agriculture" brochures into 15 different European languages and their help with this task is greatly appreciated. A new DAN "Air Quality" leaflet has just been released and others are in the pipeline. After the successful release of our first video introducing the initiative, we are now working on a follow up.

## Communicators' web

A new Fertilizers Europe communications platform has also been set up. The purpose of this "web" is to harness communications and public affairs expertise from around our network in order to ensure that we deliver a comprehensive and common narrative. The web will meet formally every six months and have regular interaction throughout the course of the year.

Charlotte Prestini  
Web & Communications  
Officer



Mark Cryans  
Head of  
Communications

## Fertilizer Forum

An integral arm of our advocacy work has been the formation of the "Forum on Fertilizers and Nutrients for Growth". The forum has been established to provide a platform for stakeholders to discuss all issues relevant to the fertilizer industry. The communications department was responsible for the organization and management of the highly successful launch event, which took place at the European Parliament in May. The forum has its own distinct website at [www.fertilizersforum.com](http://www.fertilizersforum.com)

"Modern agriculture feeds the world" were all redesigned, and the yearly "Forecast of Food, Farming and Fertilizer Use in the EU" released. A new updated "Faster Forward to Competitive Gas and Sustainable Agriculture" was prepared

on behalf of the Trade and Economic Committee. The Technical and Statistics Committees were not left out, with numerous updates and adaptations being made to a variety of technical documents.



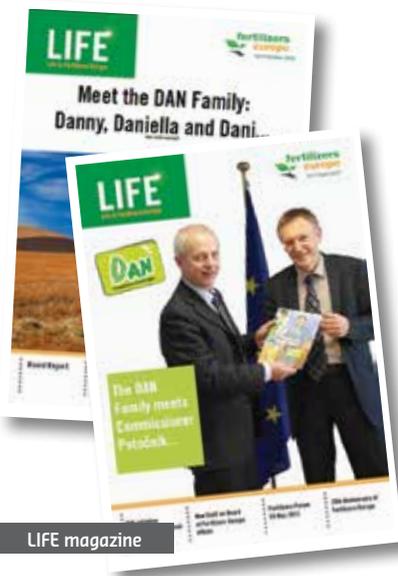
Website & social media

## Members Lounge

The Fertilizers Europe Members Lounge continues to evolve and saw several upgrades and new features added throughout the year.

## LIFE magazine

We are starting the 8th issue of our LIFE magazine, which was launched in 2011. The magazine is now a central part of the association's communications with members and their feedback shows that they are delighted to be regularly updated with concise information about all Fertilizers Europe's activities.



LIFE magazine

## 25<sup>th</sup> Anniversary

A great deal of effort is being put into ensuring that our 25th anniversary is celebrated in appropriate fashion and the first event on the agenda will be at our annual meeting in Vilnius in June 2013. We will also take the opportunity to celebrate with our friends in Brussels at the tail end of the year.

## Publications

As well as the specific materials for the DAN initiative, several other publications were released or updated throughout 2012 with the purpose of supporting the work of our committees. In the agricultural domain, "Harvesting energy with fertilizers", "Managing greenhouse gas emissions" and



Recent publications & logos



# Fertilizers Europe team



FROM LEFT TO RIGHT:

- Patricia Everaert**  
Senior Secretary
- Jenny Wahman**  
Office Manager
- Laetitia Six**  
Technical Analyst
- Ermis Panagiotopoulos**  
Agriculture & Environment  
Policy Officer
- Charlotte Prestini**  
Web & Communications  
Officer
- Carmen Turku**  
Trade & Business Analyst
- Gabor Marton**  
Data & Statistics Analyst



Fertilizers Europe  
team plant visit.

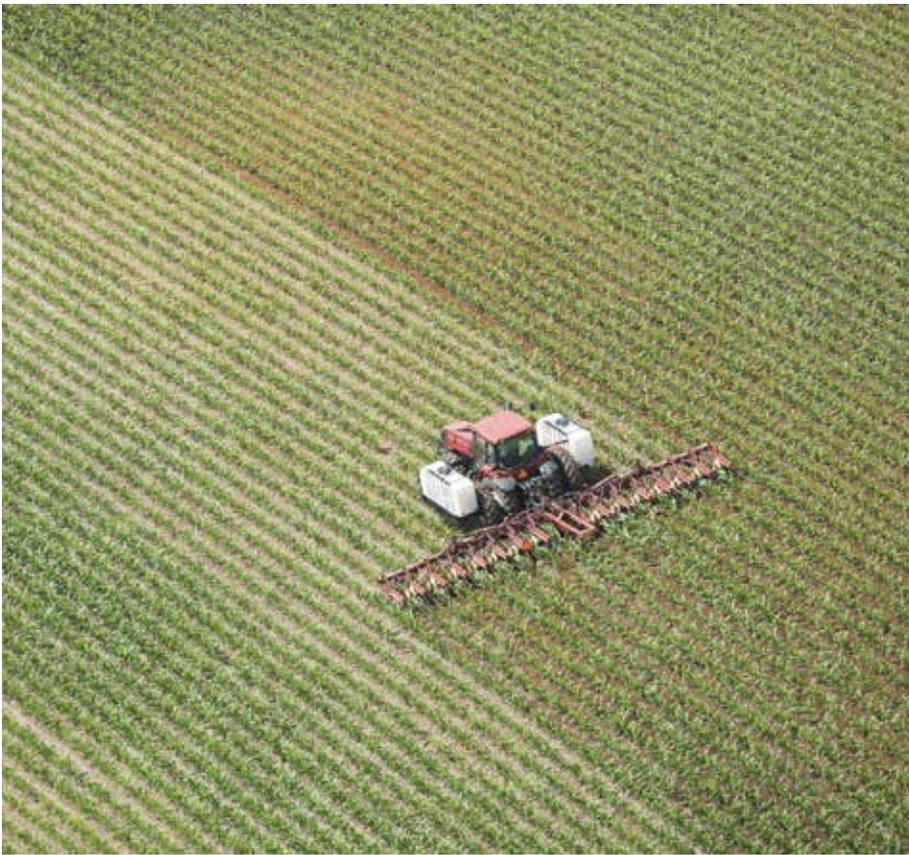
FROM LEFT TO RIGHT:

- Christian Pallière**  
Agriculture &  
Environment Director
- Mark Cryans**  
Head of Communications
- Antoine Hoxha**  
Technical Director
- Sean Mackle**  
Trade & Economic Director
- Jacob Hansen**  
Director General
- Michał Wondolowski**  
Statistics Manager





Continuing to feed the world



Fertilizers Europe represents the majority of fertilizer producers in Europe and is recognized as the dedicated industry source of information on mineral fertilizers. The association communicates with a wide variety of institutions, legislators, stakeholders and members of the public who seek information on fertilizer technology and topics relating to today's agricultural, environmental and economic challenges. The Fertilizers Europe website provides information on subjects of relevance to all those interested in fertilizers contribution to global food security.

Fertilizers Europe asbl  
Avenue E. Van Nieuwenhuysse 4/6  
B-1160, Brussels, Belgium  
Tel: +32 2 675 3550  
Fax: +32 2 675 3961  
main@fertilizerseurope.com

[www.fertilizerseurope.com](http://www.fertilizerseurope.com)

 [www.facebook.com/fertilizerseuropepage](http://www.facebook.com/fertilizerseuropepage)

 Group Fertilizers Europe

 [twitter.com/FertilizersEuro](https://twitter.com/FertilizersEuro)

 [www.youtube.com/fertilizerseurope](http://www.youtube.com/fertilizerseurope)

[www.danfertilizers.com](http://www.danfertilizers.com)

[www.productstewardship.eu](http://www.productstewardship.eu)

[www.fertilizersforum.com](http://www.fertilizersforum.com)