European Fertilizer Manufacturers Association

Modern agriculture feeds the world and helps protect the environment

ANNUAL REPORT 2008

Contents

From the President 4

From the Director General 6

An integrated approach 8

Agriculture & food 10
Agriculture & bio-energy 14
Natural gas 16
Emission Trading Scheme 18
Industry benchmarks 20
Climate change 22

Fertilizer consumption forecast 26

EFMA Committees & Functions 27

Agriculture & Environment 28
Technology, Environment & Safety 29
Trade & Economic Policy 30
Information Services 32
EFMA Functions 33

Executive Committee 34

Members and staff 35

48% of the current world population are fed thanks to mineral fertilisers

European Fertilizer Manufacturers Association

Key facts

> Mineral fertilizers are needed to feed the world

> Agricultural land must be used in the most efficient way, to protect wildlife, water and minimise climate change

> Used correctly, fertilizers will contribute to solving climate change

> Europe today has the most efficient production plants and the most modern agriculture

> New climate change regulations must consider emissions from production as well as from agriculture – the 'life-cycle' of fertilizers

> Costly regulations will lead to carbon leakage and dependency on fertilizers from other regions

"A majority of EFMA's activities described in this year's Annual Report deal with climate change. Mitigating climate change has become an important driver of the EU's environmental, industrial and energy policies."

From the President

The European Union targets for a 20% reduction in greenhouse gases (GHGs), a 20% improvement in energy efficiency and a 20% share for renewable energy by 2020 are very ambitious but they are achievable. The European fertilizer industry has accepted these goals and is making a serious effort to meet them and deliver results on schedule.

The renewed Emission Trading Scheme for 2013-2020 has major consequences for our industry. This is regardless of manufacturing of nitrogen fertilizers being categorised as an energy intensive industry with exposure to carbon leakage and thus entitled to 100% free emission rights based on agreed benchmarks. The levels of these benchmarks are to be set by the end of 2010 and will be very ambitious. We expect that many ammonia/nitric acid plants currently operate above these benchmarks and that parts of our industry will have to purchase considerable emission allowances.

KEEPING A LEVEL PLAYING FIELD

The European fertilizer industry is very concerned about keeping a level international playing field, especially vis-à-vis those industries that operate in countries which do not apply a similar climate change policy to that of the EU. The best solution for everyone would be a binding international agreement, with similar emission reductions and allowance schemes throughout the world. But as this goal appears unrealistic and would, in any case, take many years to achieve, Europe needs to avoid carbon leakage by providing our industry with an amount of free emission rights that has been fairly agreed, as well as provide protection at EU borders.

Influencing EU decision-makers over climate change, environmental, energy and trade matters, all of which are closely interlinked, will remain EFMA's top priority for many years to come.

A YEAR OF DRASTIC CHANGE

2008 was a year of drastic change in the European fertilizer industry's operating conditions, consisting of two different aspects.

During the first half of the year, demand for fertilizers was strong both within the internal EU market and at a global level. Prices for all fertilizers were high due to the tight supply-demand balance. High food prices also stimulated the growth of land under cultivation and increased fertilizer use per hectare.

However, demand collapsed suddenly at the beginning of the last quarter, when the international financial crisis first peaked. As the financial crisis spread to the real economy, our value chain was hit. The collapse in both prices and demand forced fertilizer companies to shut down much of their production capacity.

This volatility in the fertilizer production chain does not serve anyone's best interest. As a capital intensive industry, fertilizer producers should be able to operate at full capacity all year round, fertilizers should move into the trade, and farmers should have security of supply at competitive prices. I hope that 2009 will be a more stable and predictable year than 2008.

WORLD FOOD CRISIS

The world food crisis is not necessarily over, albeit food prices have decreased over the past few months. But the financial crisis has put more people below the poverty line. The world population is growing and, in addition to food, more crops need to be produced to replace fossil fuels and other raw materials.

Agricultural investment, however, has slowed as a result of the economic crisis. In many countries, farmers can not even get short-term credit to buy fertilizers and other inputs. This situation must change rapidly. After their support for the banking system, agricultural finance should be a top priority for the different governmental institutions at national, European and global level.

At the beginning of 2008, new member corporations from Bulgaria and Romania joined EFMA. Since the beginning of the decade, EFMA has more or less doubled the size of its membership. This means that the association is in an even better position to represent the European fertilizer industry and to be recognised as serving its interests. But it also presents the industry with the challenge of growing together and being effective in the way we work and deal with each other.

We should always remember that helping EFMA is helping the European fertilizer industry.

Renso Zwiers
President, EFMA
Vice President for West & Central Europe, IFA
President CEO, DSM Agro

From the Director General

How serious is the world food crisis? Food certainly became more expensive last year in many highly populated Asian countries, with the FAO's Food Price Index almost doubling. But was the crisis principally a matter of purchasing power and is it now over?

Within the global agricultural market there are some worrying trends that have prevailed for some time. The growth in agricultural productivity has slowed down quite dramatically everywhere over the past few years and in the least developed countries production has actually declined.

The world cannot afford this. The numbers of hungry and malnourished have begun to increase and will soon reach a level of one billion people. Many experts are forecasting that a second wave of the food crisis might occur as soon as 2009/2010. If this turns out to be true, it will not be entirely explained by the current global economic difficulties but will point to an additional crisis in world agriculture.

OVERVIEW OF THE AGRICULTURE AND FERTILIZER SEASON

Against this deteriorating global scenario, agriculture in Europe generally had a good year in 2007/2008.

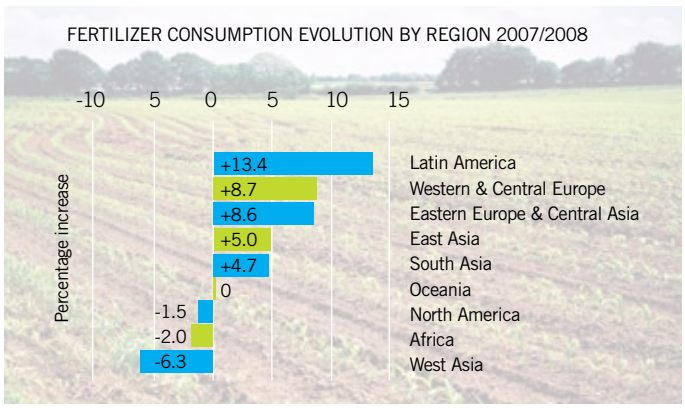
Total cereal production increased by 10.5% compared to 2006/2007, a record based on increasing grain prices as a result of tension in the global market. It was mainly achieved thanks to much higher yields (+7.1%) than the previous season, because of good weather conditions all over Europe and a significant increase (+3.1%) in the area sown.

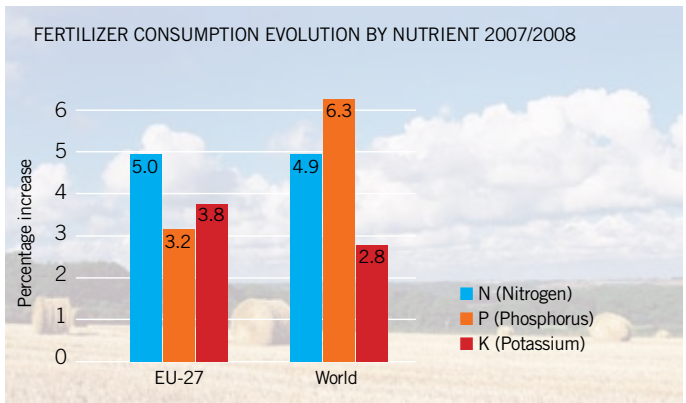
In contrast, after two years of sharp increases, the area of oil seeds under cultivation decreased by 1.5%, a stabilisation resulting from the heated debate about first generation biofuels. Reform introduced in 2006 also continued to have an important effect on EU-25 sugar production, with the area sown decreasing by 10% compared to 2006/2007, a further drop after some stabilisation last year (4% reduction on 2005/2006).

As a result, total fertilizer consumption in the EU-27 countries rose significantly in 2007/2008, increasing by some 4.5% compared to the previous year. Due to the exceptional market conditions, and contrary to previous years, consumption in the EU-15 (+ 5.4%) increased more quickly than that in the new Member States.

On the global fertilizer market, consumption also rose sharply in 2007/08, boosted by strong agricultural commodity prices during the first half of 2008 and strong policy support in many Asian countries. Aggregate world demand for nutrients was up 4.7%, reaching 168.7 million tons.

EFMA's Forecast of Food, Farming and Fertilizer Use in the European Union 2008 - 2018 predicts an increase in nitrogen consumption over the next ten years of 3.8%, higher than that predicted in our last two forecasts. This signals that, despite a possible short term (2 to 5 year) decrease due to the impact of the current economic crisis, the trend of decreasing fertilizer consumption over the past two decades has changed, albeit modestly. This is due to the expectation of an increasing demand for agricultural commodities in the form of food, feed, fibre and biomass.





"Agriculture and the world food situation received considerable attention from the general public, politicians and the media in 2008 with the "international food crisis" never far from the headlines. This was due to high market prices for agricultural commodities as the global supply/demand balance became tight and stock levels low. The prices of many agricultural inputs, including fertilizers, also remained high until the final quarter of the year."

EFMA SECRETARIAT

For the EFMA Secretariat, 2008 can be described as a year of stabilisation. We finalised the move of the EFMA database from Zurich to Brussels, trained new staff members and implemented new administrative procedures. We also intensified our cooperation and exchange of information and experience with our North American counterparts, The Fertilizer Institute in the USA and the Canadian Fertilizer Institute. Similar challenges confronting the fertilizer industries within other industrialised countries led to wider cooperation and we maintained our traditional cooperation with the International Fertilizer Industry Association (IFA).

Throughout the year, EFMA staff members were invited to make an increasing number of presentations at different seminars and conferences organised by other associations and companies. I view this as a clear indication of the recognised expertise of our staff.

I want to thank all of them wholeheartedly for their excellent performance during 2008. My thanks also go to the Board and the Executive Committee of the Board for their excellent guidance, cooperation and contribution throughout the year.

Esa Härmälä
EFMA, Director General

Productivity Self-sufficiency Long-term food supply

AGRICULTURE & FOOD

AGRICULTURE & BIO-ENERGY

Land use impact Viable biofuel production

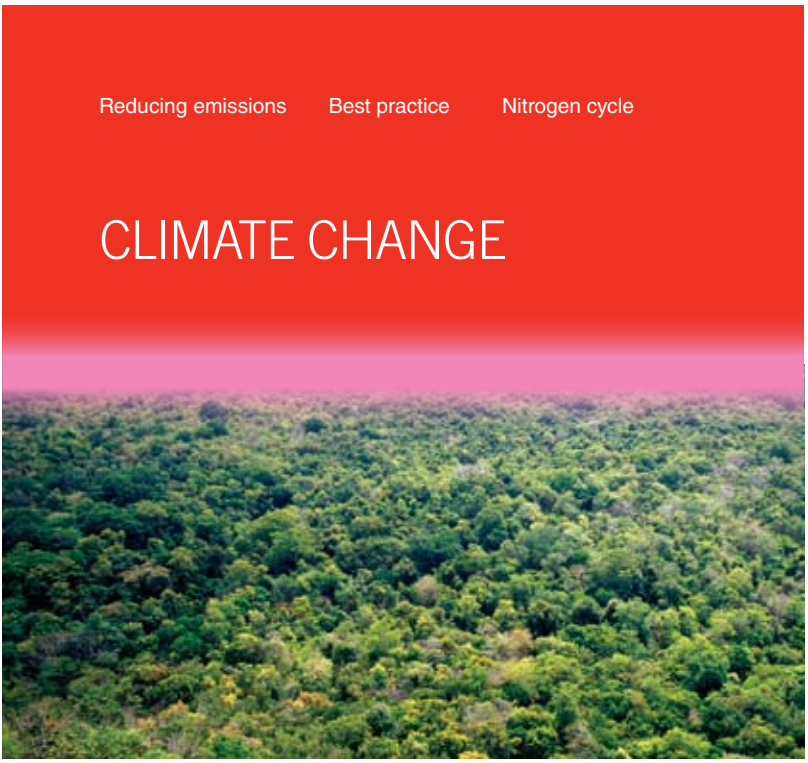
Rights allocation Declining EU Industry

EMISSION TRADING SCHEME

INDUSTRY BENCHMARKS

Energy and emissions Best available technology

Modern agriculture feeds the world and helps protect the environment



Taking an integrated approach

Meeting the challenge of feeding an increasing world population, while maintaining natural resources and mitigating climate change, requires an integrated approach as far as the European agricultural and fertilizer industries are concerned. Past 'vertical' approaches, within both the EU and the UN, have sometimes led to conclusions that are inconsistent with the overall goal. Today, however, an increasing number of initiatives are taking into account the cross-over implications when addressing individual areas of concern. EFMA is working with the various institutions to provide appropriate information on the benefits of mineral fertilizers over their entire production-to-food life cycle in order to present a balanced picture of their role in increasing agricultural productivity and meeting objectives for climate change and energy efficiency. The pages that follow look at the major challenges and EFMA activities in meeting them.


By 2030 the world need
for cereals will rise by 50%

Plant nutrients are essential natural constituents of agricultural crops. With the harvest, these nutrients are removed from the soil and need to be replaced. The increasing global demand for food calls for greater agricultural productivity and improved crop nutrition, which can only be provided by mineral fertilizers. Their essential role is underlined by the fact that almost half of the world population is already dependent on mineral fertilizer use for its food supply.

Mineral fertilizers make an essential contribution to feeding an increasing global population

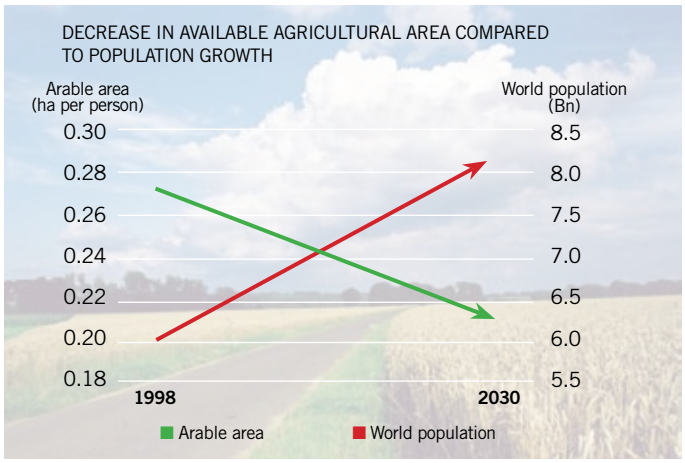
Agriculture is the lifeblood of human existence. Yet many experts are forecasting an increasing world food crisis over the next few years. The number of hungry and malnourished rose to 963 million in 2008 from 842 million in 1990-1992, when the World Food Summit and the Millennium Development Goals of halving hunger and poverty by 2015 were declared.

Approximately 75% of the world's hungry and poor live in rural areas and derive their livelihood from agriculture. The answer to alleviating hunger and poverty and the standard of living of the majority of the global population lies in accelerating agricultural growth.

Unfortunately, globally the rate of growth in agricultural productivity has been declining. According to the FAO, it is expected to fall to 1.5% between now and 2030 and further to 0.9% between 2030 and 2050, compared to 2.3% per year since 1961. In developing countries, growth in wheat yields has declined from about 5% in 1980 to 2% in 2005. Over the same period, growth in rice yields went down from 3.2% to 1.2% and in maize from 3.1% to 1%.

The area of arable land is also decreasing due to soil erosion, nutrient exhaustion, infrastructure development and urbanisation. In 1998 it was approximately 0.28 hectares per person and it is projected to drop to below 0.22 hectares by 2030. Moreover, water availability is also set to decline, particularly in the face of trends in climate change.

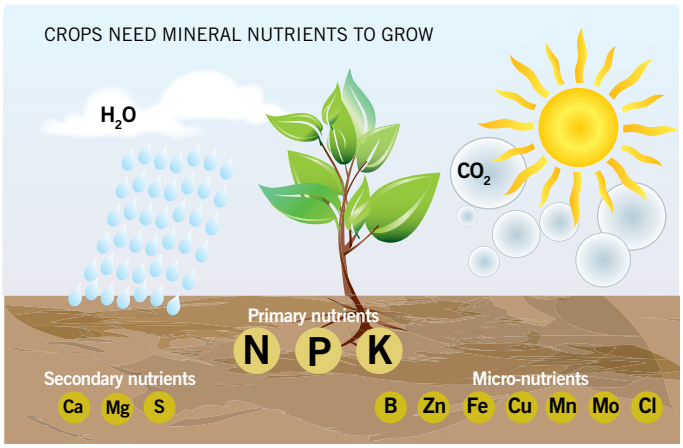
At the same time, the world population is projected to reach almost 8.5 billion by 2030 and 9.2 billion by 2050. Consequently, the world must double its food production over the next 40 years.

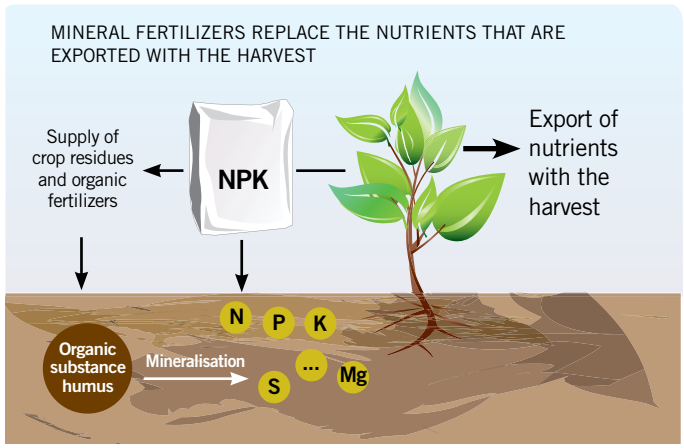


INCREASING AGRICULTURAL PRODUCTIVITY

Increasing the amount of land devoted to agriculture is one option but this has major implications for climate change, releasing large quantities of CO_2 and having an immediate effect on the natural water cycle (see section on climate change). A better option is to increase the productivity of land currently being cultivated by encouraging application of modern farming practice, the use of mineral fertilizers and crop species with more resistance to pests.

In fact, the use of mineral fertilizers is the key to increased agricultural productivity. Today almost 50% of the World population are fed thanks to the use of mineral fertilizers. Without them many would starve from a lack of food and insufficient active nitrogen to provide the nitrogen-containing protein they require.





Mineral fertilizers are made from naturally occurring raw materials which have been transformed by industrial processing into nutrients that are more availabe to plants. Nitrogen (N), from the air, is essential as an important component of proteins. Phosphorus (P) from mined ores is a component of nucleic acids and lipids, and is key to energy transfer. Potassium (K), also from mined ores, has an important role in plant metabolism, photosynthesis, activation of enzymes, regulation of osmosis and other plant functions.

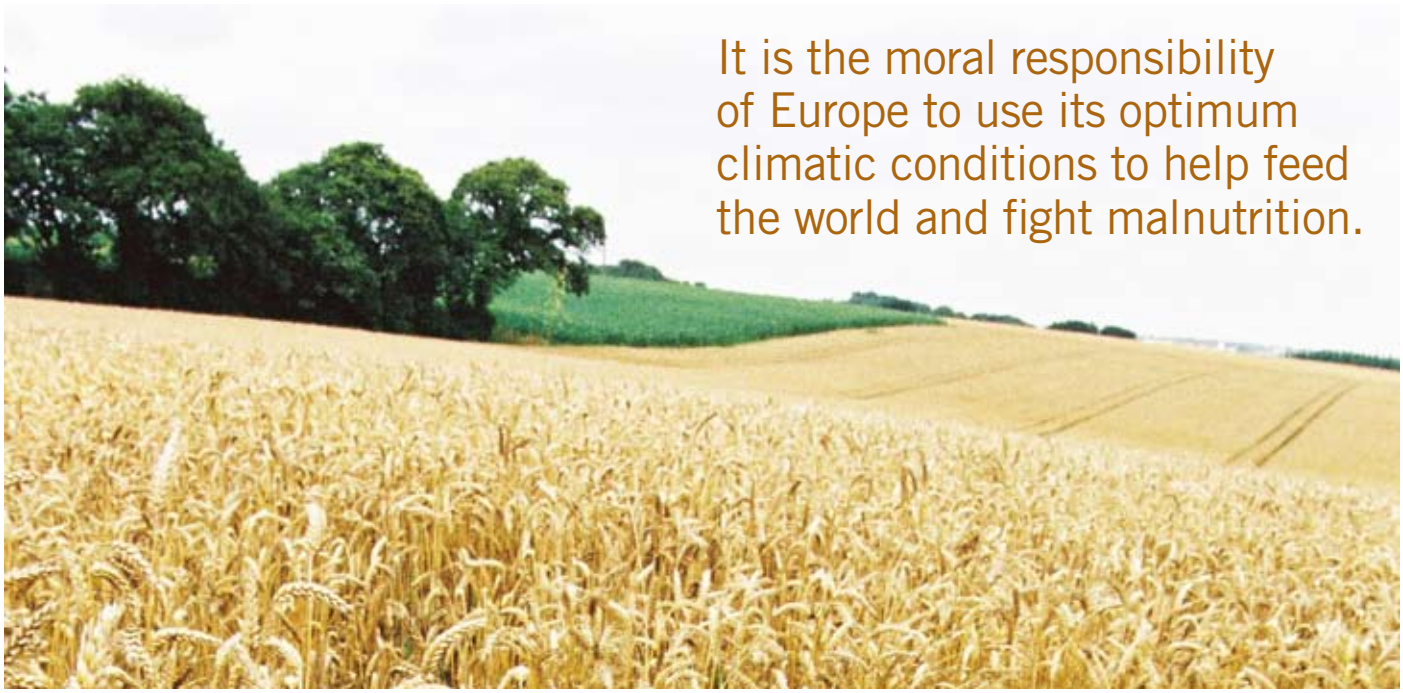
The essential role of mineral fertilizers, therefore, is to provide the soil with the vital nutrients crops need to grow and to replace those removed as successive crops are harvested. They deliver the nitrogen, phosphorus and potassium and other secondary elements to the soil in a measured dose and in a form that can be readily assimilated by the plants. Without these nutrients, the soil becomes depleted and agricultural productivity drops.

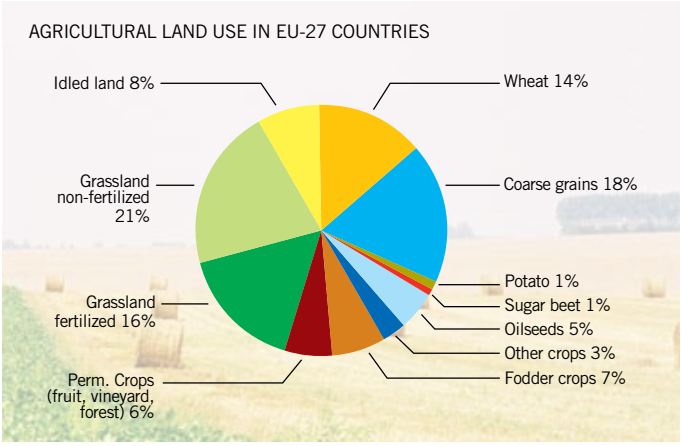
Mineral fertilizers provide 57% of the nutrients that are required for growing crops, while the remainder comes from the humus including organic matter from crop residues and organic fertilizers that comprise the top layer of the soil.

EUROPEAN SELF-SUFFICIENCY

Europe is in the enviable position of being self-reliant in food production, due to its favourable climatic conditions, a readily available supply of agricultural land and sophisticated agricultural practice and fertilizer use. It is, therefore, the moral responsibility of Europe to use these optimum conditions to help in feeding the world and fighting malnutrition.

Within the EU-27, fertilizers are currently applied to 136 million hectares of land. 68% of this is devoted to cereals, fodders, oil seeds and other crops (such as potatoes and sugar beet),





9% to permanent crops (such as fruit, vineyards and forests), and 23% to grassland.

The European agricultural industry has developed soil and crop management techniques that combine with nutrient and fertilizer application strategies to optimise yields, as well as to ensure its environmental and financial sustainability. The underlying principle as far as fertilization programmes are concerned is to closely match nutrient inputs with the needs of specific crops over the growing cycle and thus improve nutrient use efficiency.

Education of the farming community in the dosing and timing of fertilizer application is extensive and, as a result, the yields achieved with the appropriate fertilizer nutrients are very high.

At the same time, the extent of their environmental impact on the soil and water supply is increasingly well managed. While basic allowances are made for factors such as soil type and crop rotation, advanced techniques are being used to establish precise nutrient demand through, for example, reflective light measurements and soil mapping linked to GPS. Best practice also takes into account the timing and dosing of fertilizers according to individual fields and crops, as well as the specific weather conditions.

The use of fertilizers has enabled Europe to boost crop yields to a point where land currently allocated for agricultural use is sufficient for food production. Uncultivated or set-aside land can be used for bio-energy crops or reforested for CO_2 sequestration, as well as for recreation areas or wild and natural habitats.

Despite the essential role of mineral fertilizers in food production, concerns are sometimes voiced about their environmental impact, both in production and use. The European fertilizer industry pays considerable attention to both these issues and EFMA's activities in each area are discussed in more detail later in this report.

ENSURING A LONG-TERM FOOD SUPPLY

Although Europe is currently self-reliant in food production, its position must be viewed within a global context as far as securing the long term food supply is concerned. Its moral obligation to respond to the increasing global demand for food means that the European agricultural industry must continue its efforts to ensure maximum productivity and the adoption of best agricultural practice.

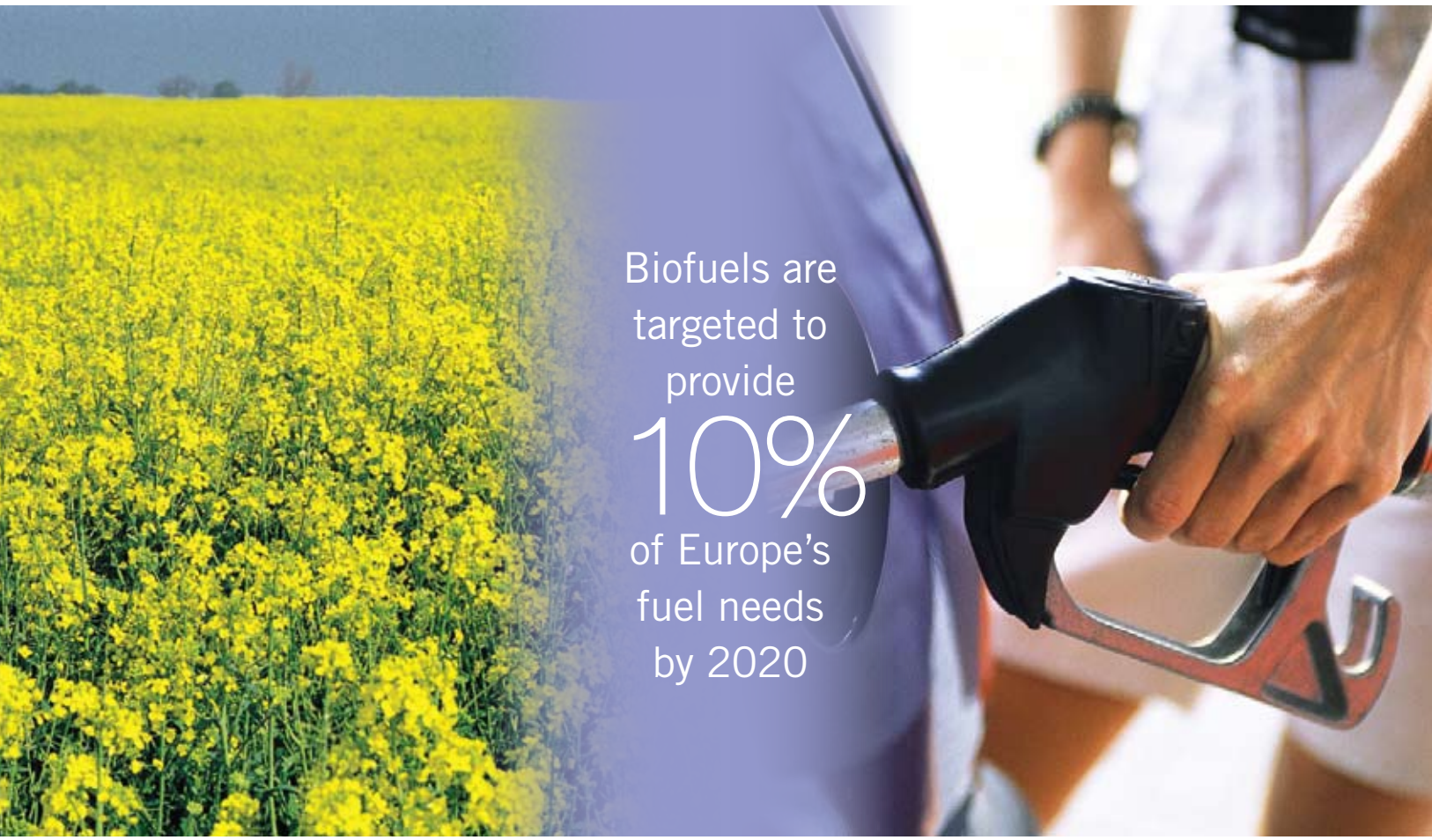
The efficient operation of the European mineral fertilizer industry, operating with a reliable supply of raw materials and unhindered by excessive environmental legislation, will ensure that Europe continues to make a major contribution to global food production.

A TYPICAL OPPORTUNITY

In Ghana, West Africa, the current requirement for 2 million tons of cocoa beans has been traditionally produced on 5 million hectares of land. Yet, by adopting modern agricultural practice including the use of mineral fertilizers, this same 2 million tons could be produced on one fifth of the land. The remaining 4 million hectares could then be used to meet any increase in cocoa demand or be reforested to increase local biodiversity and carbon sequestration.

Fertilizer use is low in many of the countries that currently suffer from food insecurity. Serious efforts are therefore needed at national and regional levels to develop the appropriate policies, technologies and capacities to address this.

Financial support for fertilizer purchase and education on agricultural best practice become a priority. But appropriate policies must also ensure that soil erosion is minimised through continuous vegetation cover and that soil fertility is not abused through excessive production or practices that could harm vulnerable ecosystems.



Biomass crops are reducing Europe's dependence on fossil fuels

The use of biomass as a renewable source of energy has become an important output for EU agricultural production. The development of bio-energy and biofuels are key elements in fighting against climate change and have a unique role to play. The EU's target of 20% renewable energy by 2020, with a 10% share for biofuels is driving this change.

The cultivation of bio-energy crops specifically for generating heat and energy or biofuels for transport presents a viable means of achieving a positive energy balance that is less dependent on fossil fuels.

Biomass is already making substantial contributions to the generation of energy in both conventional and highly efficient combined heat and power plants in many countries within the EU.

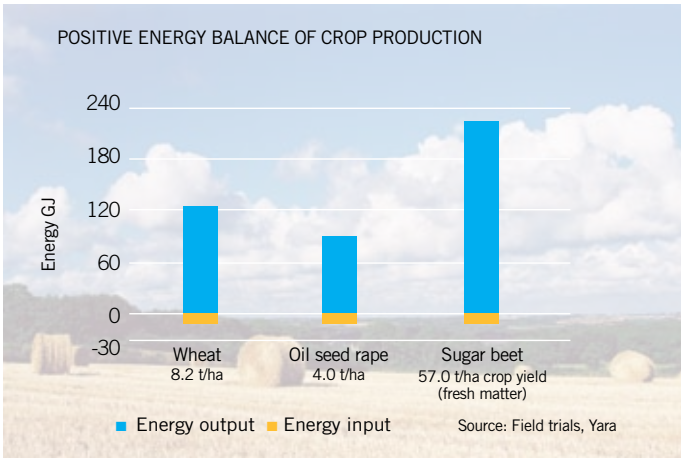
An increasing number of vehicles are being powered by fuel containing bio-components and research continues to improve its efficiency.

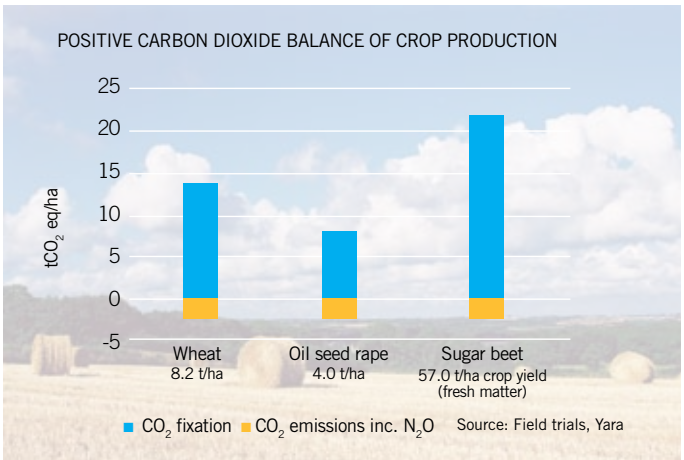
In exactly the same way as for food production, the use of mineral fertilizers increases the yield of bio-energy crops and their intrinsic value as a raw material. Both the energy and CO_2 balance of the production and use of biomass crops are positive when fertilizers are involved.

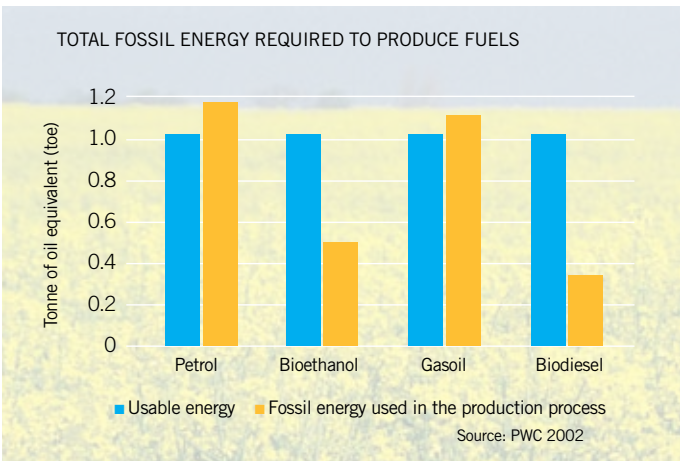
POSITIVE ENERGY BALANCE

When the complete life cycle of biofuels is also considered, they exhibit a positive energy balance. Half as much fossil energy is required to produce bioethanol compared to petrol with the same amount of usable energy and a third as much required to produce biodiesel compared to gasoil.

Mineral fertilizers also play a key role in the cultivation of crops destined to meet the ambitious renewable energy targets set by the EU. They increase the yield of bio-energy crops both in terms of tonnage and intrinsic energy content, thereby optimising land use and maximising the return on useful energy.







As a result of amendment to the EU Common Agricultural Policy, crops destined for renewable energy purposes are currently grown on 4 million hectares of set-aside or idle land in Europe. To date, therefore, they have had no real impact on land use or food availability. However, the food versus fuel debate continues in many countries and the final allocation of land for renewable energy purposes remains under review.

In 2007, after a slow start in European biofuel production, the market took off, greatly surpassing the ambitious target set in January that year. Demand was boosted by three main factors - an exploding global demand following the sudden development of bioethanol in the USA; tensions on the energy market, which kept energy prices at a high level; and the start of the implementation of a national biomass plan in EU Member States.

The related impact on the supply/demand balance induced record price rises in all agricultural commodities at the beginning of the 2008 season. However, with a falling oil price, the situation had already changed completely by the end of the year, with a general stabilisation of biofuel production. There was a dramatic drop in USA and a significant slowdown in the EU due to the debate on the impact of first generation biofuels.

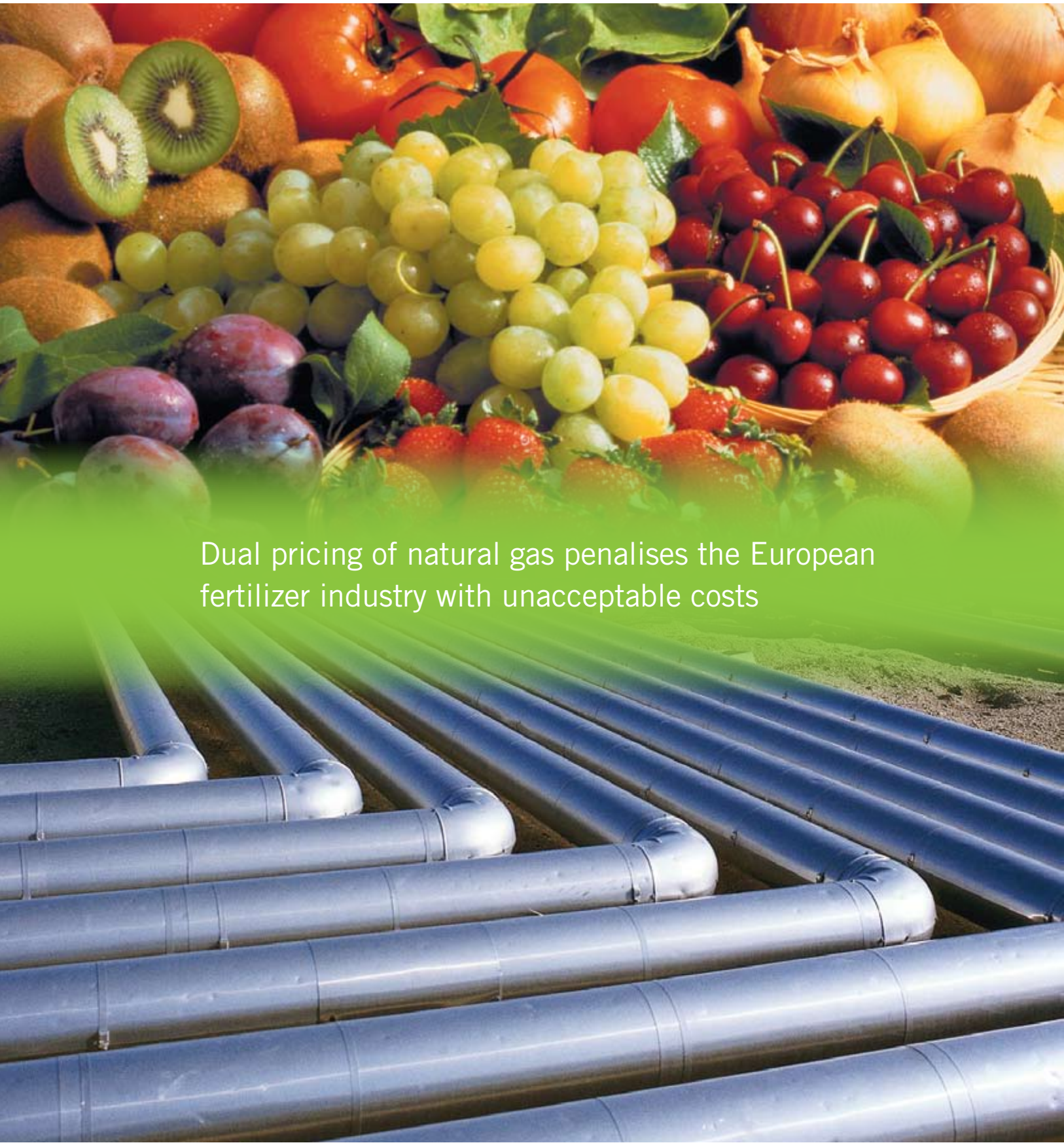
VIABLE BIOFUEL PRODUCTION

For the immediate future, biofuels represent the only viable substitute for fossil fuels that can be produced relatively simply and on a large enough scale. Other technologies such as hydrogen, have enormous potential. However, they are far way from large-scale viability and will require major changes to both vehicles and fuel distribution systems.

The EU's transport system is virtually wholly dependent on oil. Changing the fuel mix is important because most of the oil is imported, much of it from politically unstable parts of the world. Oil is the energy source that represents the most severe security of supply challenge for Europe.

The need for greenhouse gas savings from transport is also particularly pressing, because emissions are expected to grow substantially between now and 2020 – three times as much as in any other sector. Thus, increasing biofuel production offers benefits both for security of supply and for climate change. There is a need, however, to ensure that EU biofuel policy operates with a high degree of efficiency and creates a framework which gives investors the confidence to invest in better, capital-intensive forms of production.

The commercialisation of "second-generation" biofuel production techniques, including the use of forestry products and other types of organic waste, also promise more positive energy balances and substantial reductions in emissions.



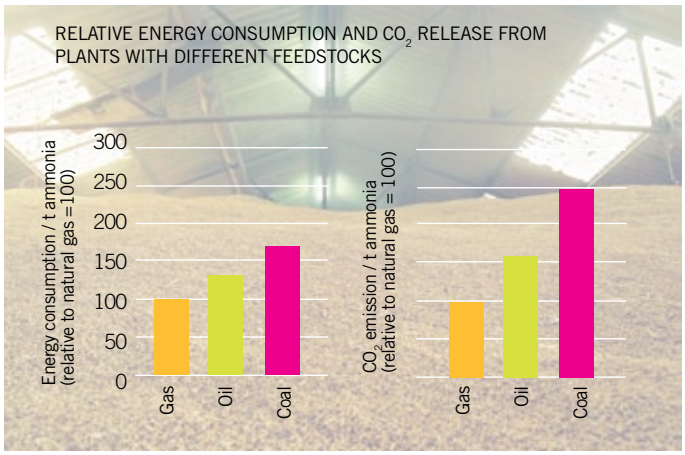
Dual pricing of natural gas penalises the European fertilizer industry with unacceptable costs

The security of the European fertilizer industry and Europe's food security is wholly dependent on a freely available and competitively priced supply of natural gas. Natural gas is an essential raw material for European production of mineral fertilizers which uses modern processes that conserve energy and reduce emissions. The practice of "dual pricing" of gas by Russia and some other producers remains a problem for the industry.

Natural gas is an essential raw material for mineral fertilizers

The European fertilizer industry is the biggest single industrial user of natural gas in the European Union. Suppliers such as Russia, Egypt and a number of other countries currently operate a dual pricing policy on natural gas, whereby the price for domestic commercial and household users is heavily subsidised. In contrast, export prices for gas are set at a premium. This puts the European fertilizer industry at cost disadvantage to local producers in the global market, and has a major impact on the long term viability of the industry and Europe's food and fuel supply.

Natural gas is a fundamental raw material for modern fertilizer production and represents 50-70% of total feedstock costs. It is combined with nitrogen from the air to form ammonia, the principal building block of nitrogen fertilizers. Alternative production methods involving oil or coal are often less competitive and carry environmental disadvantages.



FREE TRADE AND BETTER INFRASTRUCTURE

One of the guiding principles of the EU is the maintenance of free and fair trade. The reluctance of Russia to change its dual pricing policy on natural gas presents an obstacle to free trade and to its membership of the WTO. The country has again delayed its gas price reform programme to a new target date of 2015. At that time the government claims that prices inside Russia will be set on the basis of equivalence to export prices to the EU, less transport costs netbacked to Russia. One of the current challenges is to restore a constructive dialogue based on compliance with "free market economy" principles.

In addition, there are a number of practical measures that can improve gas costs in Europe. There is an obvious need for new gas pipelines and LNG projects to supply the European market. A stronger infrastructure, based on strategic hubs with the appropriate pricing mechanisms, should provide greater access to gas producers/suppliers and lead to lower prices for consumers.

LIBERALISATION OF ENERGY MARKETS

A number of EU gas reforms are under consideration to improve supplies and lower costs. The most important of these is the 3rd Gas Market Directive which covers ownership unbundling. This is proposed in three ways:

1) full ownership unbundling - a complete separation of generation/ supply and transmission;
2) ISO (Independent System Operator), whereby assets can still be owned by the generation/supply company but control is transferred to an independent company;
3) ITO (Independent Transmission Operator), whereby the generation/ supply company may still own and control the transmission operators but separate companies must be set up with separate interests and rules on asset management, staffing, identity and compliance control.

Current amendments to the original proposal include some important additional aspects. These cover support for low-carbon technologies, establishing European networks of transmission system operators, opening of gas storage to market players, transparent tariffs for use of transmission networks and gas storage, quality standards and better cross-border trade.

The establishment of new distribution companies, stronger independent national regulators, and a European agency to champion and control competitive conditions with reinforced powers, including sanctions, will encourage a more competitive gas market throughout Europe and benefit the European fertilizer industry and European agriculture.

ETS will have a significant impact on European food production

The European Union has been the leading player in the global context in its efforts to reduce greenhouse gas (GHG) emissions. In 1997, it signed the Kyoto Protocol which committed it to reduce CO_2 emissions by 8% compared to those in 1990. To help it achieve this target, at the beginning of 2005 the European Commission created a trading mechanism for emissions allowances.

Current EU environmental targets are for a 20% reduction in GHGs, a 20% improvement in energy efficiency and a 20% share for renewable energy by 2020. To help meet these, the Commission's review of its Emission Trading Scheme (ETS III) for the period starting in 2013 calls for a wider auctioning of GHG emission allowances. More companies will face the direct cost of their emissions, which will considerably affect their market competitiveness, especially in highly energy intensive industries, such as the European fertilizer industry.

The cost pressure on the industry is greatest among nitrogen fertilizer manufacturers, who are some of the most efficient in the world. They will face increasing costs from several directions. Direct costs will come from the effects of the ETS on ammonia and nitric acid production, both of which are essential intermediates in the manufacturing process. Production costs are also highly affected by natural gas prices, and the cost of electricity will also increase as a result of emissions trading.

FREE ALLOCATION OF RIGHTS BASED ON BENCHMARKS

EFMA accepts the target of a 20% reduction in CO_2 by 2020. But in the absence of a level International playing field with regards to carbon reduction legislation, it advocates a 100% free allocation of emission rights for the European fertilizer industry, based on agreed industry benchmarks. More details of these benchmarks can be found in the following section of this report.

In the face of a world food shortage, Europe needs to remain sufficiently self-reliant in food production and its main farm inputs. It should not endanger the existence of its own fertilizer industry and depend on external fertilizer sources from Russia, North Africa or the Middle East. In the absence of a binding international agreement on global GHG reduction, emissions trading should not become such a burden for the European fertilizer industry that it loses its competitiveness.

CO_2 is an unavoidable by-product in the production of nitrogen fertilizers, and so the full auctioning of emission allowances will impose significant pressures on the industry. According to the Pellervo Economic Research Institute, nitrogen fertilizer industry producer prices will need to increase by between 20 to 30% to compensate for the increased manufacturing costs.

In addition, Europe is an integral part of the world fertilizer market, so companies cannot increase their prices without taking into account global competition from elsewhere, typically the USA, Africa, the Black Sea and Asia. The supply and demand balance in the world market dictates prices, so fertilizer manufacturers in the EU are unlikely to be able to pass on additional environmental costs.

The biggest impact will be on ammonia and nitric acid production. Urea fertilizers are manufactured directly from ammonia, whereas typical European nitrogen compound fertilizers are manufactured from ammonia via nitric acid. Although nitric acid's share of the total nitrogen fertilizer manufacturing costs is relatively small, the combined cost effects of ETS are still significantly higher for nitrate-based nitrogen fertilizer than for urea.

As a result of full auctioning of emission allowances in Europe, many European ammonia and nitric acid plants, which are some of the most efficient in the world, would loose their competitiveness and have to close. This lost production capacity would result in the expansion of capacity in other regions of the world with less efficient plants and more polluting energy industries. Although such closures would be effective in reducing CO_2 emissions in Europe, they would lead to an overall increase in global GHG emissions.

DECLINING INDUSTRY WITHIN THE EU

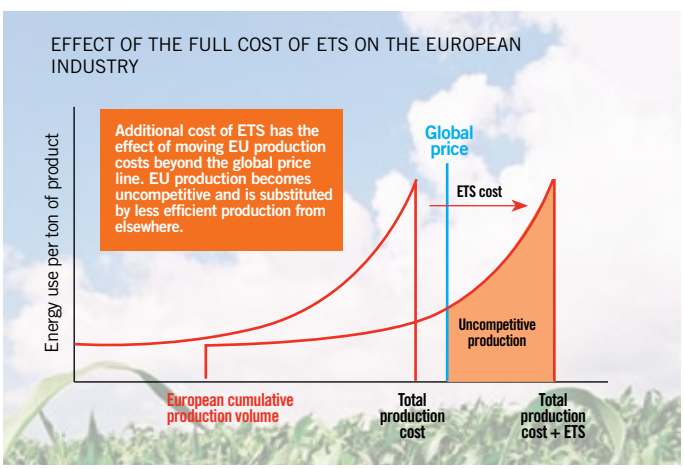
European fertilizer production has been declining within the EU, mainly because of decreasing demand from agriculture, the lack of natural gas within the EU and its high price from abroad. Although the most recent EFMA forecast shows a slight increase in demand, the extra cost of ETS III would cause this long term decline to continue.

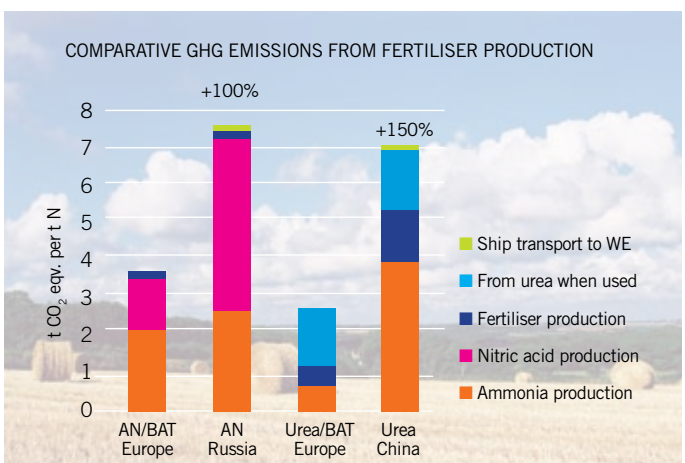
Increasing demand for urea N-fertilizer combined with declining production of nitrogen fertilizers within the EU, as a result of extra cost of ETS, would result in increased imports from low-cost natural gas regions and increased carbon leakage. Europe would become highly dependent on the production of Eastern European and Central Asian countries and their policy and pricing.

The global agricultural situation is critical. Farmers are expected to produce more food and bio-energy crops to satisfy global demand, yet their energy and other input costs have increased significantly due to a tight supply/demand balance. Increasing the price of fertilizers through additional emission costs would therefore have a very harmful effect on European agricultural productivity. Europe's capacity to respond to increased agricultural demand, and even its own food security, could be endangered.

The fertilizer industry is very capital intensive and its capital earnings would also be endangered by an increased carbon cost. Investment would be redirected away from Europe and eventually the industry could leave completely. As a consequence, carbon leakage would certainly increase, employment in Europe would suffer and there could be a serious threat of fertilizer shortages due to overdependence on imports.

In the absence of an international binding agreement that levels the playing field for carbon reduction, only a 100% free allocation of emission rights based on agreed industry benchmarks, can safeguard the competitiveness of the European fertilizer industry and prevent sizeable carbon leakage. EFMA is closely working with the relevant authorities to reach a sensible and fair solution.





The European fertilizer industry is one of the world's most efficient

EFMA collects energy efficiency and emissions data annually from European fertilizer producers from which it publishes a variety of industry benchmarks. These not only enable EFMA members to compare their performance against others in the industry, but also form an industry point-of-reference in discussions with European and other legislative bodies.

ENERGY AND EMISSIONS DATA

On the environmental front, EFMA's latest Ammonia Energy Efficiency and CO_2 Emissions benchmark 2006/2007 was published in 2008. This benchmark is fully in line with the International Fertilizer Manufacturers Association's IFA Global Benchmark in which EFMA participates.

The emission data for CO_2 is currently playing a vital role in discussions with the European Commission's DG Environment about the third phase of the ETS III Emission Trading Scheme (see preceding section).

The EFMA Emission benchmark monitors emissions to air and water of a large number of substances and the data for N_2O is also playing its part in the ETS III proposals. Further use of this data includes discussions with the European Commission on its Integrated Pollution Prevention and Control (IPPC) Directive and the underlying EU BAT document Ammonia, Acids and Fertilizers. The benchmark was produced in 2007 and is due for revision in 2010.

Europe has some of the world's most modern ammonia and nitric acid plants. For ammonia, steam reforming natural gas technology is close to the theoretical minimum in terms of energy reduction and CO_2 emissions. In nitric acid plants, N_2O abatement technologies offer the potential for low levels of N_2O emissions. To ensure the European fertilizer industry remains competitive, EFMA is advocating allocation of emission allowances up to agreed industry benchmarks.

BEST AVAILABLE TECHNOLOGY

The two benchmarks show that the industry average is not far off the Best Available Technology of existing plants and provides a fair basis on which decisions affecting the industry can be based.

Ammonia forms the basis for nitrogen mineral fertilizers and is produced by high pressure synthesis of nitrogen from the air and hydrogen from natural gas, oil or coal. CO_2 is liberated as an integral part of the production process. EFMA members operate ammonia plants in Europe based on natural gas, which are the most energy efficient and have the lowest CO_2 emissions.

Energy consumption based on Best Available Technology (EU BAT) for existing natural gas plants is 31.8 GJ per ton of ammonia, which generates 1.8 tons of CO_2. Since existing European plants are among the most energy efficient worldwide, further improvements will only be incremental. Total CO_2 emissions are approximately18 million tons.

The industry's nitric acid plants have total N_2O emissions equivalent to approximately 33 million tons of CO_2. Two proven N_2O abatement technologies exist (catalytic decomposition of N_2O immediately on formation in the burner or in the tail gas) with high reduction potential. However, taking into account the large variety of low, medium and high pressure nitric acid process technologies in use, not all of them will achieve the same level of benefit.

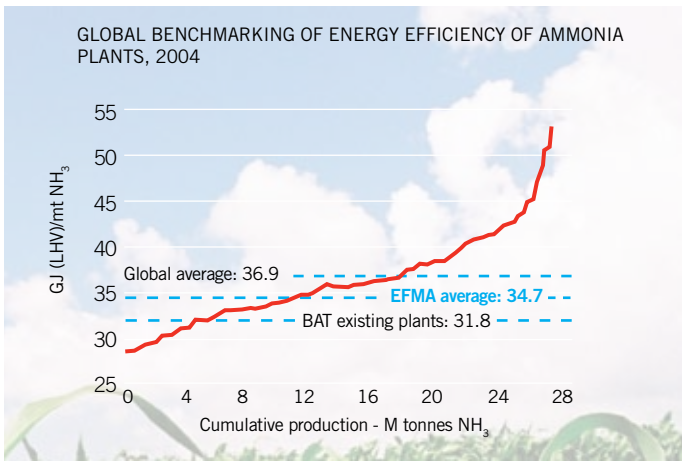
Depending on the process technology, N_2O emissions EU BAT is between 1.85 - 2.5 kg N_2O per ton of nitric acid.

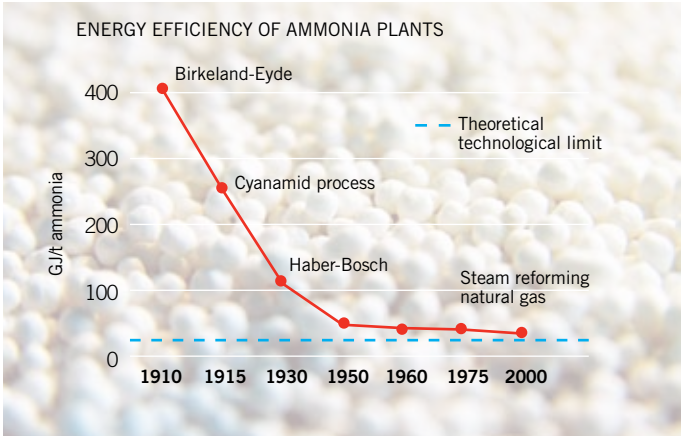
SIGNIFICANT REDUCTION IN EMISSIONS

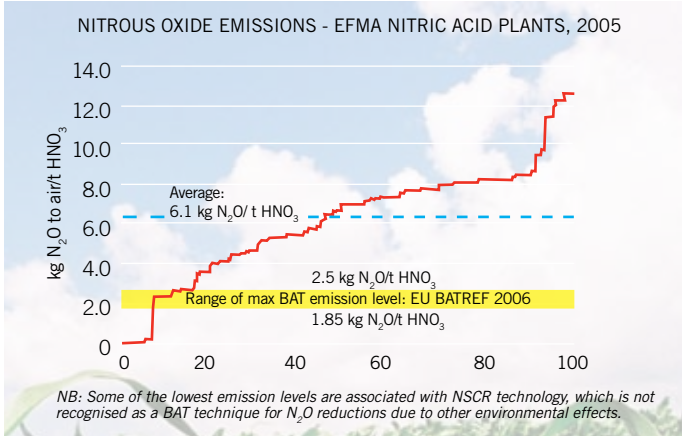
The emission levels defined in the BAT documents for existing ammonia and nitric acid plants, indicate that, compared to 2005, a 9% reduction in CO_2 emissions based on energy efficiency is technically feasible by 2020 in ammonia plants and a reduction of N_2O emissions of approximately 70% in nitric acid plants.

Based on these figures, the European fertilizer industry could deliver more than a 30% reduction in its GHG emissions by this date. The necessary technical improvements, however, will require significant investment and time to implement.

EFMA therefore favours a stepwise reduction in emission allowances from 2013 onwards based on the 2005 average industry benchmark for ammonia production and a uniform 1.85 kg N_2O per ton of nitric acid benchmark for European nitric acid plants.








12% of global greenhouse gas emissions are attributable to changes in land use

Globally, agriculture accounts for 25.5% of total man-made greenhouse gas (GHG) emissions, 12% of which are due to changes in land use. Agriculture in the EU-27 accounts for 9.2% of GHG emissions and reducing these has become an important driver of the EU's environmental, industrial and energy policies. To meet EU targets requires a more efficient use of existing farmland and the adoption of good agricultural practice. EFMA continues to promote productive soil management techniques and the use of mineral fertilizers as an effective means of reducing GHG emissions.

Striking the balance between optimum food production and environmental protection

Keeping pace with feeding a growing world population is the biggest challenge facing agriculture. But from an environmental perspective, greater agricultural activity also increases emissions of greenhouse gases such as carbon dioxide, nitrous oxide and methane, which contribute to climate change. The question facing the agricultural industry worldwide is how to produce the required quantity of food with the lowest possible GHG emissions?

The growing demand for food can be met in two ways: either by increasing the productivity of existing farmland or by expanding the overall land area under cultivation.

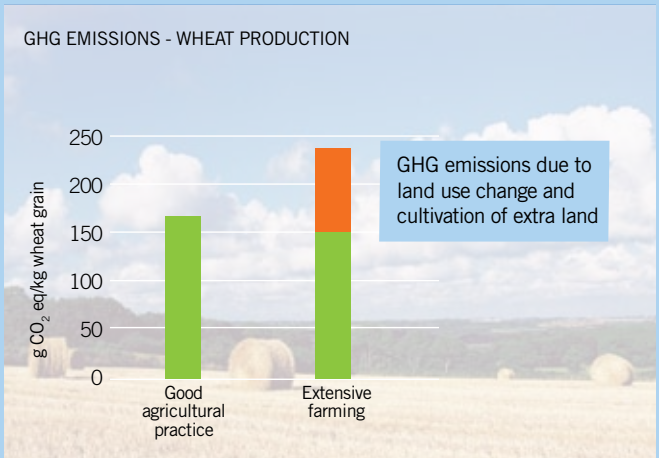
Increasing, or even maintaining, yields from existing farmland is only possible with modern cultivation methods, including the optimal use of fertilizers to replace the nutrients removed from the soil when crops are harvested. A more extensive farming system relies on lower yields from a greater land area to meet the food requirement.

IMPACT OF AGRICULTURAL EXPANSION

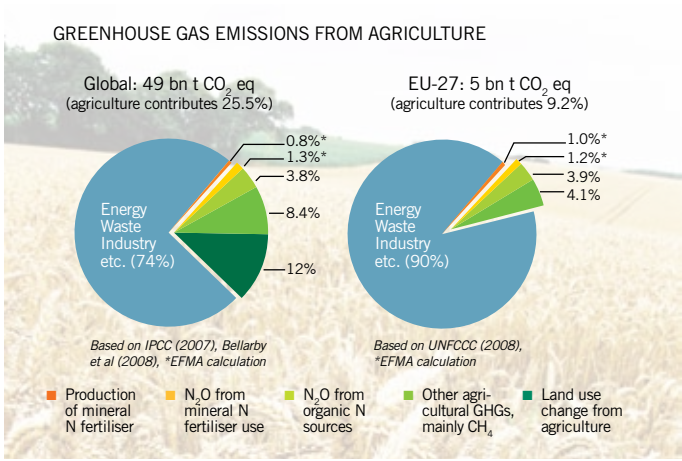
The continued expansion of farmland, however, has a major environmental impact. It decreases biodiversity through the destruction of ecologically valuable natural environments, such as forests, natural grasslands and moors. In addition, deforestation and depletion of the humus releases large quantities of CO_2 from the carbon bound in the trees and the soil's organic matter. Furthermore, deforestation has an immediate impact on the natural water cycle, resulting in a greater likelihood of flooding or drought - an ever more common occurrence in many parts of the world.

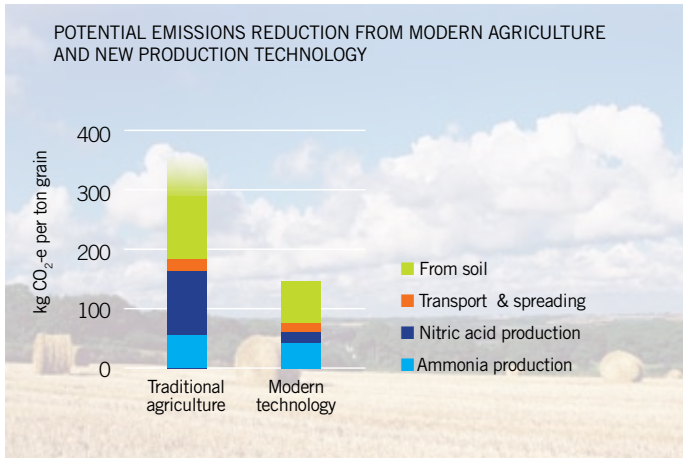
Some 25.5% of total of global GHG emissions can be currently attributed to agriculture. 12% of these are due to change in land use and, with extended agricultural production, this percentage would rise considerably. Further extension of the agricultural land area, therefore, should be kept to a minimum.

The calculation below based on a model for wheat production shows that the required displacement of natural environment by farmland to compensate for lower yields resulting from reduced fertilization, would lead to increased GHG emissions per unit of food produced.



The calculation makes the following assumptions:
- N applied as Ammonium Nitrate (AN), produced using Best Available Technique (BAT) (i.e. incl. N_2O catalyst)
- Half rate N fertilization applied in extensive farming, compared to good agricultural practice (GAP)
- Yield with GAP: 9.25 t/ha; yield with extensive farming: 7.11 t/ha
- Additional farmland needed to compensate for yield difference displaces forest.





The agricultural industry is, in fact, the most threatened by climate change as farmers are fully dependant on climatic conditions. Extreme weather and the increasing variability of seasonality, bringing new plant and animal diseases, could lead to a contraction of production in a context where there is a clear need to produce more at world level.

The task for farmers everywhere, therefore, is to increase the productivity of their land while preserving the forests and natural areas to mitigate climate change.

DECLINING EMISSIONS

The EU-27 countries currently contribute 9.2% of total GHG emissions but the percentage is declining due to better farm practice and fertilizer production techniques. CO_2 emissions from land use change are not large in Europe and the most relevant GHGs are nitrous oxide (N_2O) from soil applied nitrogen and fertilizer production, and methane (CH_4) from cattle.

N_2O emitted from the soil represents some 50% of total agricultural emissions. Even when it is not being farmed, the soil naturally releases GHGs.

N_2O is generated as a by-product of microbiological activities that convert ammonium into nitrate (nitrification) or nitrate into nitrogen gas N_2 (dinitrification). Both processes are influenced and controlled by environmental conditions. They are independent of the origin of the nitrogen, whether from organic or mineral fertilizers, or soil organic matter.

Emissions increase with agricultural activity, partly as a result of nitrogen input from manure, mineral fertilizers, or the cultivation of legumes which capture nitrogen from the air.

The Intergovernmental Panel on Climate Change (IPCC) estimates that, on average, direct N_2O emissions from any nitrogen input into the soil are 1% of the quantity of nitrogen applied.

As the emissions are the consequence of natural processes, they are difficult to control. The most appropriate way for agriculture to reduce them is to increase nitrogen use efficiency.

Agricultural research bodies, European legislators and the European fertilizer industry have worked hard to promote good fertilizer management practices in Europe, where nitrogen use efficiency has increased by 45% since 1985.

Today, European agriculture produces more crops with less nitrogen fertilizer than 20 years ago and its nitrogen use efficiency is the highest in the world.

Despite this, the industry is committed to further improvement. In addition to its efforts to reduce emissions from fertilizer manufacture, where new cleaning technology now enable N_2O emissions to be reduced by some 70 - 90%, it is playing a fundamental role in helping farmers to reduce emissions per unit of production.

DEVELOPING GOOD PRACTICE

Developing sustainability in EU agriculture is closely linked to developing good agricultural practice (GAP) and promoting it to all the players in the agricultural chain, including official bodies and policy makers. Since fertilizer industry agronomists have developed recommendations for the application of new 'tailor-made' nitrogen fertilizers, the main focus of future GHG mitigation efforts will be on emissions resulting from farming practice.

GAP is designed to maximize the efficient use of inputs through soil, crop and nutrient management programmes. It can also make a significant contribution at low cost to increasing soil carbon sinks, reducing direct GHG emissions and to contributing biomass feedstock for energy use.

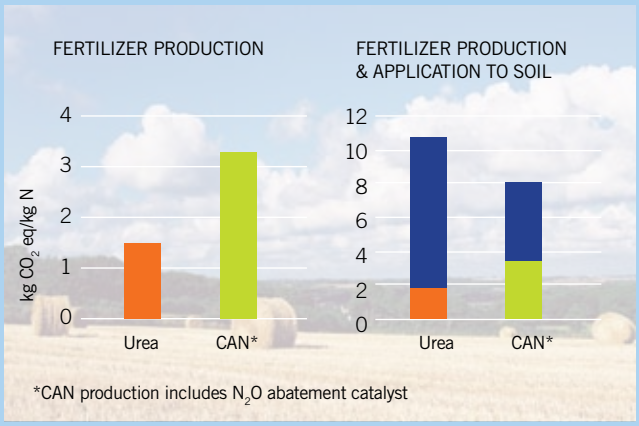
These GHG mitigation options are cost competitive with those in other sectors, with agriculture showing similar potential to manufacturing and energy supply and a higher potential compared to transport and waste. Improved energy efficiency in agriculture can also make an important contribution.

As there is currently no universally applicable list of mitigation practices, these need to be evaluated for individual agricultural systems and settings. As a consequence, further investment will be required to develop these throughout the whole EU farming community and associated industries, in order to combine the need for increased productivity with environmental considerations.

NITROGEN CYCLE

Both the EU and the UN have initiated important projects and working groups which consider the whole nitrogen cycle and its environmental impact in cascade. In the EU's energy and climate change package, the life-cycle approach has already been practically applied to evaluate sustainability criteria for biofuels.

More generally, the European Commission has launched a "Life Cycle Assessment" database, offering detailed reference data on energy consumption and GHG emissions for all the main industrial sectors including fertilizer production.



LIFE-CYCLE PERSPECTIVE

Different fertilizers have different environmental impacts, as can be seen from the comparison between the production and use of urea and CAN (Calcium Ammonium Nitrate). Urea is the most important straight nitrogen fertilizer globally and its use is increasing in Europe.

Most of the increase in world consumption of nitrogen over the past 30 years has been in the form of urea, whose higher nitrogen concentration can reduce distribution, storage and handling costs per unit of nutrient. Its share in developing countries represents 67% of total nitrogen consumption, compared with only 16% in western Europe.

The dominance of urea in many countries, however, is often due more to logistics and economics rather than to agronomic suitability and environmental impact. From an environmental perspective, although urea production has a lower environmental footprint than that of nitrate fertilizers, when soil emissions related to its application are included in the equation, the picture is reversed. This demonstrates the importance of a complete life-cycle perspective when looking at the environmental impact of different fertilizers.

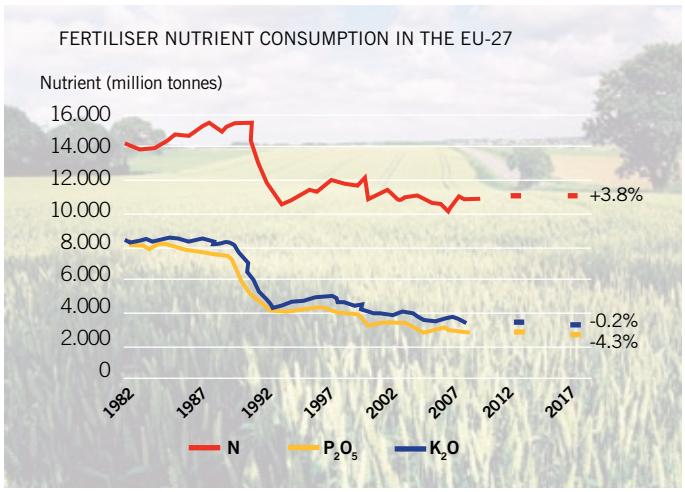
Forecast 2008 - 2018

EFMA experts have carried out a thorough analysis of the available data in order to provide a considered outlook on the evolution of farming and fertilizer use in the enlarged EU-27 over the next ten years. The main findings are set out below, but EFMA also issues an annual publication, Forecast of Food, Farming and Fertilizer Use in the European Union, which provides further detail and highlights some major issues and figures.

As a starting point, EFMA's forecasting group carefully considers the agricultural trends identified by international organisations. These include the OECD agricultural department, the US Department of Agriculture (USDA), the Food and Agricultural Policy Research Institute from Iowa State University (FAPRI) and the EU's DG Agriculture and Rural Development, with whom EFMA maintains a close and productive collaboration.

The EU's decision to abandon compulsory set-aside in response to the global scarcity of raw materials, and agricultural commodities in particular, was anticipated in last year's forecast and plays a major part in this year's scenario. It will lead to a 1.9% increase in the sown area for cereals (3.4% in the EU-15 and -0.3% in the EU-12) and a 16% increase in oil seeds (22% is in the EU-15 and 6.4% in the EU-12).

Cropping patterns vary. In the EU-12, the wheat area will increase slightly by around 3.3% and maize by 7.5%, while that for other coarse cereals will decrease by 6.0%. Oil seed rape will increase by 20% almost equally in the EU-15 and EU-12. The area dedicated to sugar beet will continue to decline (with production dropping by 3%, despite a 14% increase in yield) as a consequence of the new EU sugar regime after 2009. This is only partly compensated by the development of bioethanol.



GENERAL DECREASE IN EU-15

A decrease in fertilizer use is predicted in the majority of EU-15 countries. However, a slight increase in nitrogen fertilizer use in Sweden, Denmark and Austria is due to the expected development of energy crops there (production of biofuels and biogas). In Spain, the general increase is partly the consequence of the development of irrigated areas and, in particular, land dedicated to olives, vines and citrus fruit, which require increased fertilization. It is also due to an evolving use from a current low base. In France and Germany, a stable outlook for nitrogen fertilizers is the result of the development of cereals and energy crops on set-aside land.

Overall, the forecast predicts a continuation of the general downward trend in fertilizer use in the EU-15. Over the next ten years, consumption of nitrogen will broadly remain stable at -0.3% and that of phosphorus and potassium will decline by 13.6% and 8.0% respectively.

For the last three seasons, fertilizers carrying an average of 8.3 million tonnes of nitrogen, 2.4 million tonnes of phosphorus and 2.8 million tonnes of potassium per season have been applied to 92.3 million hectares of farmland (42.1 million hectares are not fertilized). By 2017/18, the forecast expects these figures to reach 8.3, 2.1 and 2.6 million tonnes respectively, applied to 96.3 million hectares (4 million hectares coming from set-aside).

SIGNIFICANT INCREASE FOR EU-12

For the 12 new EU Member States, there will be a significant increase in nutrient consumption: 18% for nitrogen, 27% for phosphorus and 30% for potassium, coupled with an expected 13% increase in cereal production. This figure is much higher for phosphorus and potassium than the 2007 forecast and reflects the difficulty in balancing rational agronomic considerations about crop needs with elasticity of demand based on fertilizer prices.

The overall increase in fertilizer consumption in the EU-12 (0.83 million tonnes for N+P+K) still remains higher in absolute terms than the decrease in the EU-15 (0.57 million tonnes).

Over the next ten years at the EU-27 level, consumption of nitrogen will increase by 0.40 million tonnes, while phosphorus will fall slightly by 0.13 million tonnes and potassium will remain stable.

Serving the needs of the industry

EFMA examines a wide range of issues that affect the fertilizer industry. Its four Committees and its horizontal Functions delegate specific studies to specialised task forces composed of highly experienced members of EFMA staff and external industry experts. Committee findings, information and recommendations are presented to the appropriate Directorates within the European Commission and to other institutions to achieve the best possible consolidation of ideas and constructive action.

Agriculture & Environment

EFMA's A&E Committee has been preoccupied with the climate change issue, which became the main environmental concern within the EU, surpassing all other policies, either in the environmental area or in agricultural policy and product regulations. A fair amount of attention has also been given to other on-going concerns.

CLIMATE CHANGE

The Committee has implemented a particularly heavy programme in the area of climate change, which is a priority concern for both the EU and EFMA. Activities included:

- A two-day workshop in April to best approach the impact of fertilizer production and use on EU GHG emissions, as well as to define the main direction for actions to mitigate these emissions in fertilizer use;
- Preparation of the "Agriculture, Fertilizers & Climate Change" conference, held in 2009, to share concerns and potential solutions with all stakeholders involved in the farming industry;
- Development of several guidance and communication tools:

  "Modern agriculture feeds the world …": targeting a very large audience, this leaflet puts in perspective the essential contribution of mineral fertilizers to global food production, with their unavoidable but limited impact on climate change.

  "Mind the…GAP": targeted at the farming community, this more technical leaflet lists the main agronomic principles which help mitigate GHG emissions and all factors that improve nutrient use efficiency.

  Interactive software to facilitate the evaluation of GHG emissions from all arable cropping is being developed. A simplified version of the software will be made publicly available in 2009.

SUSTAINABILITY

The Committee has also directed its attention to the latest EU concern of applying life-cycle principles when addressing product impact on the environment. EFMA has contributed to a number of key activities:

- The EU Life Cycle Assesment platform, which makes public reference data on GHG and energy consumption for most important industries.
- Two projects on the nitrogen cycle: ENA (European Nitrogen Assessment), a EU funded project, and the new UN Task Force on reactive Nitrogen.

EFMA has also participated in EUROCROP, an EU-funded project addressing innovation in arable cropping.

FOOD, BIO-ENERGY AND GOOD AGRICULTURAL PRACTICE

Through its involvement in EAFN, a group of associations that includes the main players in the food chain from agricultural input to food processing, EFMA is now working on new issues of concern to the final consumer: the carbon footprint and sustainability of food consumption and production.

The role of biomass as a renewable source of energy has become increasingly important. This year has seen the publication of the proposed legislative package on energy and climate change. An important contribution from EFMA has been participation in the development of sustainability criteria for biofuels through its input into the 'Well to Wheels' project.

In line with the current EU priority to develop and promote Good Agricultural Practice (GAP), EFMA set up a specialised working group to produce a publication that indicates how GHG emissions can be mitigated by applying GAP.

AGRICULTURE MARKET AND AGRICULTURAL POLICIES

The principal task in 2008 has been to follow the negotiations of the CAP Health Check, the mid-way revision of the Common Agricultural Policy, and to analyse the possible impact on crop production and fertilizer consumption. As usual, the main outcome of this mission has been the publication of the "EFMA Forecast for Food, Farming and Fertilizer Use in the EU 2008 - 2018".

OTHER AREAS OF ENVIRONMENTAL PROTECTION

EFMA has also been concerned with the introduction of new legislation on water and air protection, and waste recycling:

Water: Ground Water Directive - work on possible definition of threshold values for the main pollutants. Water Framework Directive - follow up of measures and action plans concerning phosphates.

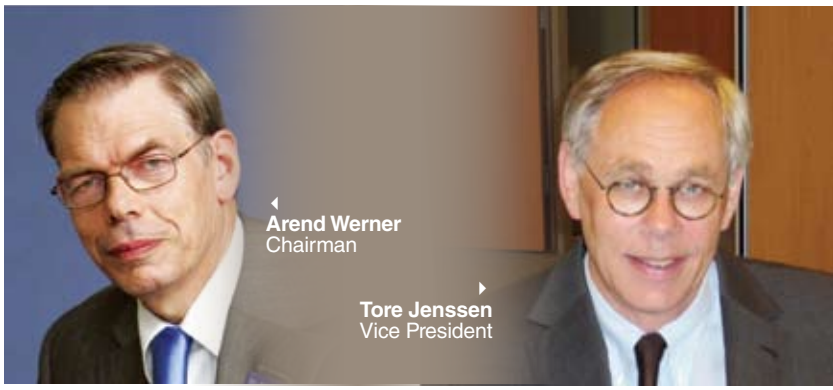
Air: In parallel with the enforcement of the CAFÉ Directive, the decision in the UN ECE to initiate revision of certain guidance documents published under the Gothenburg protocol.

Waste: EFMA and other National Associations have followed closely the initial publication of the framework Directive that opens up discussion on biowaste and the recycling of other organic waste.

Soil: No major advance has occurred on the proposed Soil Framework Directive, which was halted by the EU Council at the end of 2007. This has remained dormant in spite of an attempt by the French presidency to reactivate negotiations.

Technology, Environment & Safety

The activities of the TESC Committee are concerned with all aspects of production, transport and storage of fertilizers. Dedicated task forces prepare detailed information and guidance for different Working Groups within the European Commission to ensure that new legislation takes into consideration factors that could affect the efficiency of the fertilizer industry.



SECURITY

The misuse of certain chemicals, including some fertilizers, for terrorist purposes, has continued to receive close attention from DG Justice, Freedom and Security. EFMA has influenced the debate within the DG Justice Precursor Work Group and its introduction of new legislation amending Council Directive 76/769/EEC on the restriction of marketing and use of ammonium nitrate fertilizers. Products that contain 16% or more N by mass, in relation to ammonium nitrate, may not be placed on the market for supply to the general public as a substance, or in preparations. Discussions are due to continue on other precursors.

SAFETY

Interpretation of the entries for ammonium nitrate in 2003/105/EC remains difficult for some member states. Our classification task force has prepared an EFMA position on how to interpret this Directive. It subsequently defended this position in a meeting with the French Ministère de l'Ecologie, de l'Energie, du Développement durable et de l'Aménagement du territoire (MEDAT). The revision of the Directive has started and EFMA will secure participation in the debate to ensure its proper future interpretation.

Safety Seminar

In October 2008, experts from EFMA member companies met for the 11th time in Brussels to exchange experiences under the theme "Fire hazards and behaviour-based aspects of safety". Valuable presentations have been distributed to members on a CD-ROM.

EFMA Incident Database

A database of as many as 700 incidents that occur in the industry each year is updated and distributed to our members to help prevent their repetition. Reports of incidents gathered by the Committee and the Permanent Working Group of Product Safety and Transport (PWG&PST) serve as the basis of the EFMA Safety Seminar.

ENVIRONMENT

The EFMA task force on Limit Values for nutrients in fertilizers has prepared a position document for discussion in the Fertilizer Working Group (DG Enterprise) that is recommending amendments to the EU Fertilizer Law EC2003/2003 for primary and secondary nutrients. The outcome of the discussion will affect limit values for micronutrients and values for tolerances of nutrients.

GUIDANCE DOCUMENTS

A guidance document for periodic in-service inspection of atmospheric, refrigerated ammonia storage tanks has been produced, replacing recommendations published in 2002. It is concerned with tanks located in Europe that operate at or near atmospheric pressure and -33°C. Another document has been released on the inspection and detection of leaks in liquid ammonia pipelines and focusing on the transportation of cold or warm liquid ammonia.

The first part of the "Guidance for the preparation of safety data sheets for fertilizer materials" has been released by EFMA to facilitate compliance with the current REACH legislation on data sheets according to Regulation EC1907/2006. A second part on model SDSs for fertilizer materials, which seeks common language and phrases among EFMA members, will be released in 2009.

BENCHMARK STUDIES

EFMA publishes a number of benchmark studies covering safety, the environment and energy, which are of great value both to members and external bodies.

EFMA's Safety Statistic Survey provides a good performance indicator for safety in terms of Lost Time Injury Rate (LTIR) figures, which represent the number of accidents per 1,000,000 hours worked. Since 1996, EFMA members have benchmarked the safety performance of their employees and contractors on an annual basis. Although the initial decrease in LTIRs was impressive, the trend line stabilised in the period 2005-2007 and even shows a slight increase. Therefore, challenging targets have been set and EFMA companies are requested to draw up safety improvement plans.

Climate change

EFMA's annual Emission benchmark, with data on N_2O emissions, and its Ammonia Energy Efficiency and CO_2 Emissions benchmark are being used in discussions with the EC's DG Environment on the third phase of its Emission Trading Scheme (ETS III) 2012-2020.

PRODUCT STEWARDSHIP

Product Stewardship received extensive attention from EFMA in 2008 with an audit, which all members passed, a training session held in July for new EFMA members, and posting of the updated Program on the EFMA website in August. The next full audit of all existing EFMA members is planned in 2010/2011.

HEALTH

High Production Volume (HPV) Chemicals: Data on nitric acid was submitted and approved in 2008 in the ICCA/HPV programme, which provides a good basis for approval of substances under REACH. Work was completed on nitrate, phosphate and sulphate groups in 2007 and is scheduled for phosphoric acid in 2009.

REACH

EFMA has facilitated the formation of the Fertilizer and Related Materials (FARM) consortium under REACH. A steering committee has been formed to make the important decisions, while technical committees are available to assist companies with technical questions.

Lead companies, assisted by companies who have an interest in the substance at stake, have the responsibility to prepare the dossier to be submitted to the European Chemical Bureau. The FARM consortium is now open to non-EFMA members.

EFMA's REACH Task Force plays no further role in the FARM Consortium apart from being a data holder (see HPV Chemicals). However, in order to assist EFMA members in the FARM consortium, it has recently taken on preparatory work on Exposure Scenarios, which are needed for some classified materials.

SAFETY, HEALTH AND ENVIRONMENT

EFMA's Safety, Health and Environment (SHE) activities are highlighted in the 2008 EFMA SHE Report, which follows the three earlier reports published over the period 2005-2007.

Trade & Economic Policy

Efforts to create a level playing field for world fertilizer markets and actions on trade defence dominated the Trade and Economic Policy Committee's activities over the past year. Integration of the new EFMA members from Romania and Bulgaria was another defining feature.

Major elements affecting the European fertilizer market included the failure of the Doha Round negotiations, Ukraine's WTO membership, finalisation of the EC's 3rd Gas Directive, and climate change's arrival as a new factor in industry competitiveness due to the proposed new Emissions Trading Scheme (ETS III). There was also a significant step-up in the EU's "Global Europe" programme for new and deeper Free Trade Areas.

WORLD TRADE

Prior to the failure of the Doha Round, EFMA supported the policy of maintaining EU tariffs until all the major fertilizer economies, including India, China and Brazil, had agreed to the same reductions. This direct reciprocity is vital to ensure rational trade flows in the highly transparent commodity fertilizer markets.

EFMA's other Doha interest - effective and efficient trade defence instruments - was buried beneath priority issues concerning agricultural and industrial market access and arguments over trade defence. Following the EU's own trade defence review, the WTO is likely to strengthen these instruments as global competition intensifies and the cost of unfair trade becomes increasingly unacceptable.

Ukraine joined the WTO in May 2008. Although EU negotiators took into account EFMA's earlier input on gas market structural reforms, in the final Accession Treaty Ukraine admitted that it could not move to a full market economy as it still has a special concessionary gas price agreement with Russia. The issues of price and structural reform now move to the EU-Ukraine Partnership and Co-Operation Agreement, where EFMA is contributing to the "energy chapter" regarding transit, pricing and market structure.

EU "GLOBAL EUROPE" POLICY AND BI-LATERAL RELATIONS

The EU's "Global Europe" programme and "good neighbour" policy, promoting new free trade areas and deeper economic integration, moved forward. Partly prompted by the failure of the Doha round, negotiations progressed with India, China and South Korea, the Mercosur countries, and Ukraine and Georgia. Finalisation of the EU-Gulf Co-operation Council Free Trade Area, however, again promised in 2008, faltered.

Negotiations with Russia, after the war with Georgia, recommenced in October 2008. EFMA continued to push for implementation of the WTO "cost + profit + investment" deal agreed in May 2004 by the EU and Russia, as well as for the end of Russia's official dual-pricing of gas. Both objectives seem far from being achieved, with the USA and Georgia blocking Russia's WTO entry and Russia delaying yet again its gas price reform programme until 2015.

Government statements claim that by this target date, gas prices within Russia will be based on equivalent EU export prices - less transport costs netbacked to Russia. The lack of any significant correction in Russia's dual-pricing policies and its continued sale of gas to Russian manufacturers at prices below JSC Gazprom's full costs, however, partly contributed to the continuation of several EU anti-dumping measures.

EU GAS MARKET: 3RD GAS DIRECTIVE

Allied with CEFIC and IFIEC, in early 2008 EFMA took three special initiatives to secure speedy agreement by the EU on the 3rd Gas Directive. These were an EFMA-CEFIC-IFIEC presentation to the European Parliament's Energy Forum group in January, a major EFMA gas conference in February and a consultation meeting with DG TREN in April to ascertain whether further improvements to the legislative proposals could be made.

By the June 2008 Energy Council, however, proposals for full ownership unbundling were dropped from the Directive, with its supporters accepting a compromise that the issue would be revisited in a general review of the Directive's effectiveness two years after implementation. Despite this, EFMA continues to ask for the rapid implementation of the Directive as an important step towards a more transparent and competitive gas market.

CLIMATE CHANGE: NEW ETS PROPOSALS

With the EC proposal for the 2013 ETS scheme including fertilizer production facilities, the concern that EU producers would be disadvantaged by a carbon charge, which those outside the EU do not pay led to the formation of TEPC's Carbon Leakage task force. Its first job has been to define the carbon leakage problem. This is not easy, as unknowns include the participation in any international agreement, the nature of bi-lateral EU initiatives with near neighbours, the specific working of the ETS scheme and the cost of carbon at any one time.

Nevertheless, the problem is a very real one and the task force will endeavour to address the most competitive solution, taking account of the forthcoming benchmarks, the need for and workability of border tax adjustments, and related and linked carbon systems.

TRADE DEFENCE

Despite the positive business conditions for the first three quarters of 2008, trade defence remained a strong pillar of TEPC activity. Regulatory reviews cover much of the activity and EFMA actioned two sunset reviews. The first addressed a five year sunset on ammonium nitrate from Russia and the second a urea sunset on imports from Belarus, Croatia, Libya and Ukraine. The exporters also launched five "changed circumstance" reviews.

Continued deep structural problems in Russia and the Ukraine, with the catastrophic collapse of domestic demand for fertilizers and a resulting massive export capacity backed by artificially fixed gas prices, meant that many of the reviews resulted in no, or only minor, changes to existing anti-dumping duties.

Importantly, the EU decided to continue its €47/mt anti-dumping duty on ammonium nitrate from Russia. In a separate but related proceeding, JSC Eurochem gained a reduction to €32/mt in the anti-dumping duty it pays. During the favourable European fertilizer market conditions, the European Commission entered into private price/quota agreements with certain exporters, most notably JSC Cherkassy in the Ukraine, JSC Acron in Russia, and JSC Eurochem.

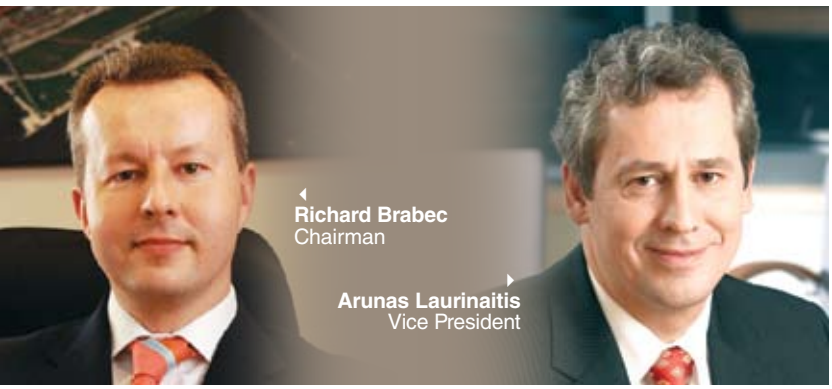
The positive market environment for urea meant that the EU removed all anti-dumping duties on the fertilizer in March 2008. Because of the history of urea being dumped on the EU market, however, the European Commission continues to monitor prices and volumes. This should allow it and EFMA to move rapidly against unfair or subsidised imports.

The year finished with the international collapse of fertilizer markets.

The year ahead suggests that trade defence will be even more active. EFMA has already improved its statistical and working infrastructures to address potential new cases for product areas such as CAN, NPK and additional new types of ammonium nitrate.

Information Services

EFMA's information systems are the responsibility of the Information Services Committee, which ensures the quality, depth, reliability and accessibility of EFMA statistics and its comprehensive database. They cover three main areas: statistics (database), AC Fiduciaire statistics and collection of anti-dumping data. All statistical and related activities strictly respect EU competition laws and their compliance is regularly checked by an independent law firm.



The ISC is the depositary of the EFMA database and its yearly activities consist of collecting, customising and interpreting statistical data, as well as working on ad hoc projects. Its mandate is to supply the association with correct and verifiable data in a transparent manner, using consistent and clear definitions. The objective is to provide a reliable picture of the current situation and expected developments within the fertilizer business.

INDUSTRY STATISTICS

The move of the database from Zurich to Brussels was finalised during the year and new analysts trained. It is now fully operational in Brussels and creating synergies between EFMA's different activities and its staff. Industry statistics have been distributed to EFMA members throughout the year to support their forecasting and benchmarking exercises.

Regular publications included the statistical handbook, figures relating to production, exports and imports, production costs, and product deliveries. The reference book "Standard Statistics Issued by and for EFMA", containing the full inventory of EFMA statistics, was distributed to members.

FERTILIZER CONSUMPTION

ISC has also supported the A&E Committee in producing EFMA's annual fertilizer consumption forecast (reported in the previous section) and supported the work of TESC by providing benchmarking exercises. In addition, it has provided regular support for the activities of TEPC, especially with statistics for trade cases.

EFMA members have reported deliveries of nitrogen-containing fertilizers (in million tons N) as follows:

	2004/05	2005/06	2006/07	2007/08	% change
EU-27	7.488	7.455	7.094	7.306	+1.02
Rest of the World	1.037	1.028	1.106	1.077	- 0.99
Total World	8.525	8.483	8.200	8.383	+1.02

Provisional EU-27 import figures for all N-containing fertilizers from countries outside the EU show that these totalled 2.565 million tonnes N in 2007/08 compared to 2.449 million tonnes in 2006/2007, 0.116 million tonnes more than the previous year. These accounted for 19.9% of consumption (including products used for technical purposes) compared to 19.4% in 2006/07.

PRODUCTION COSTS

EFMA produced its yearly survey of members' (aggregated) production costs for the main fertilizer products. This survey identifies trends within the industry as a whole, as well as serving as a benchmarking tool.

EFMA's statistical database is available online for members and has now been fully expanded to provide data at the EU-27 level.

EFMA Functions

EFMA's four horizontal functions - Advocacy, Branding, Knowledge and Facilitation - operate across its vertical committees to achieve internal synergy and to make efficient use of common information and ideas when addressing individual issues. Members of the Executive Committee of the Board, nominated as Vice Presidents or Supporting Vice Presidents of the functions give strength to this cross-fertilization.

EFMA now operates more horizontally than in the past with the implementation of the four functions. This is not only due to the functions themselves but also to the nature of the specific issues on the agenda. Climate change, for example, affects many different issues and its implications must be taken into account by all EFMA committees. Emphasising the horizontality of issues and related work has become an integral part of the management of the association.

ADVOCACY

Advocacy is the most important reason for EFMA's existence. It involves the daily contact between EFMA representatives and the European Institutions and is chaired by the President Renso Zwiers and Deputy President Tor Holba. This activity has become increasingly necessary as the European Parliament faces up to climate issues and prepares guidelines and legislation of direct consequence to the fertilizer industry. A large part of EFMA activity is conducted in close cooperation with CEFIC, the European Chemical Industry Council.

BRANDING

EFMA branding, under the chairmanship of Javier Goñi del Gacho, gained strength and visibility during 2008. Our active participation in the debate on the world food crisis gave us increased visibility within European agricultural circles and at the same time helped promote productive agriculture as a response to global food challenges.

We have learned that our work is highly respected within the Commission and EFMA representatives are being asked to make presentations in numerous seminars and conferences organised by different associations or companies. Our Communications Department has generated many publications to educate and influence specific target audiences and recently upgraded the EFMA website both in terms of look and content.

KNOWLEDGE

Our Knowledge function, guided by Richard Brabec and Arunas Laurinaitis, Vice President and Supporting Vice President respectively, is directed at the quality, depth, reliability and accessibility of EFMA information, statistics and databases. Transfer of our database from Zurich to Brussels and addition of new staff has contributed the flow of information to all areas of our work.

FACILITATION

Facilitation is increasing cooperation and cohesion between EFMA members. This work involves the addition of new members and the integration of members from the new EU Member States. It is also concerned with maximising the benefits of membership in relationship to the tasks that EFMA undertakes on their behalf and, as with any association, providing more benefit to members who participate more actively and devote more resources to the work of the association. Allocation of extra resources and opportunities for increased efficiency will help the distribution of information from the EFMA secretariat to all members.

Executive Committee of the Board

Renso Zwiers
President
DSM Agro

Tor Holba
Deputy President
Yara International

Richard Brabec
Chairman of the Information Services Committee
Vice President
Lovochemie

Javier Goñi del Cacho
Chairman of the Branding Function
Vice President
Fertiberia

Daniel Grasset
Chairman of the Agriculture and Environment Committee
Vice President
GPN

Tore Jenssen
Supporting Vice President to the Technology, Environment and Safety Committee
Yara International

Arunas Laurinaitis
Supporting Vice President to the Information Services Committee
Achema

Wojciech Lubiewa-Wielezynski
Supporting Vice President to the Agriculture and Environment Committee
PIPC

Paul Thompson
Chairman of the Trade and Economic Policy Committee
Vice President
GrowHow

Willem van der Weiden
Supporting Vice President to the Trade and Economic Policy Committee
Yara International

Arend Werner
Chairman of the Technology, Environment and Safety Committee
Vice President
BASF SE

Esa Härmälä
Director General and Chairman of the Facilitation Function
EFMA

Members

Corporate Members

AB Achema, Lithuania
Agropolychim, Bulgaria
Ami Agrolinz Melamine International GmbH, Austria
Anwil SA, Poland
Azomures, Romania
BASF AG SE, Germany
CUF Adubos de Portugal SA, Portugal
DSM Agro BV, The Netherlands
Fertiberia SA, Spain
GPN, France
GrowHow UK Ltd, United Kingdom
Lovochemie AS, Czech Republic
Neochim, Bulgaria
Nitrogénmüvek Zrt, Hungary
Zaklady Azotowe Pulawy SA, Poland
Zaklady Chemiczne Police SA, Poland
Yara International ASA, Belgium

Association Members

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

EFMA staff

Esa Härmälä
Director General

Hans van Balken
Director, Technology, Environment & Safety

Gabor Marton
Trade & Business Analyst

Jurga Lenktaityte
Trade & Business Analyst

Patricia Everaert
Senior Secretary

Marjolaine Jaquet
Manager, Administration & HR

Felipe Lemus
Information Services Issue Manager

Sean Mackle
Director, Trade & Economic Policy

Christian Pallière
Director, Agriculture & Environment

Mark Cryans
Head of Communications

Sabrina Tawfik
Trade & Business Analyst

Michal Wendolowski
Trade & Business Analyst

“...the last drop of oil should be consumed by a tractor spreading nitrogen fertilizers made from the last drop of natural gas!”

Renso Zwiers, President EFMA

efma

European Fertilizer Manufacturers Association

Avenue E. van Nieuwenhuyse 4/6
B-1160, Brussels, Belgium
Tel: +32 2 675 3550
Fax: +32 2 675 3961
E-mail: main@efma.be

www.efma.org