IFA TECHNICAL SUB-COMMITTEE AND COMMITTEE MEETING
15-17 September 1999, Novgorod, Russia

TODAY's FERTILIZER INDUSTRY CAUGHT BY EU LEGISLATION?
(The role of EFMA)

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and D. Heather, Fertilizer Manufacturers Association, United Kingdom

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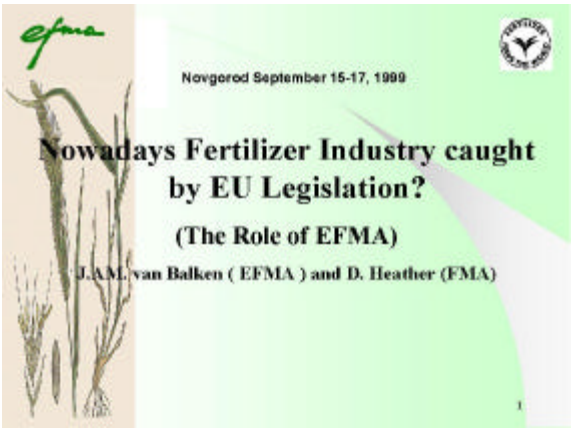


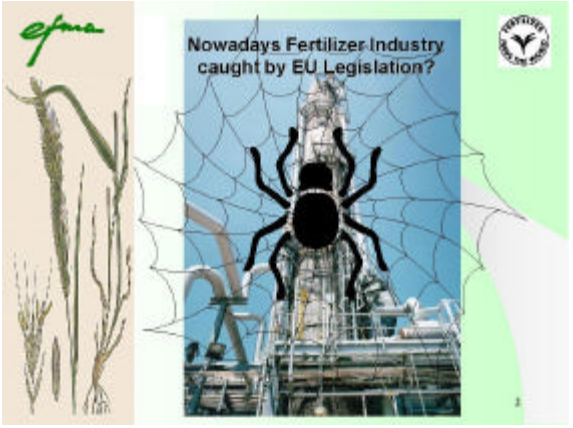
Slide 1

Introduction

Good morning ladies and gentlemen.

First of all let me thank IFA to give me the opportunity to present this paper.

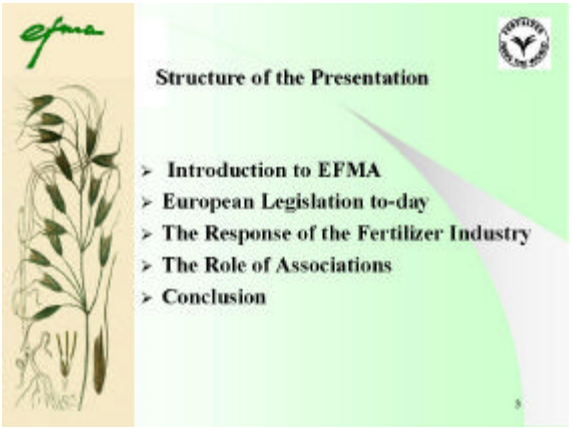
As you can see from the title of this paper (Slide 2) I am questioning whether the Fertilizer Industry of today is caught by EU legislation or not, and during my presentation I will try to give an answer to that question.



[1] *Paper presented at the IFA Technical Sub-Committee and Committee Meeting, 15-17 September 1999, Novgorod, Russia*

Slide 2

I will structure my presentation in the following way (Slide 3).



Slide 3

After a short introduction to the European Fertilizer Manufacturers Association and its linkage with National Associations, I will guide you through the process that resulted in the formation of the EU as we know it today and the legislation we, as a Fertilizer Industry, encounter.

Following that I will present the response of the Industry to this legislation and the role an Association such as EFMA plays in that process.

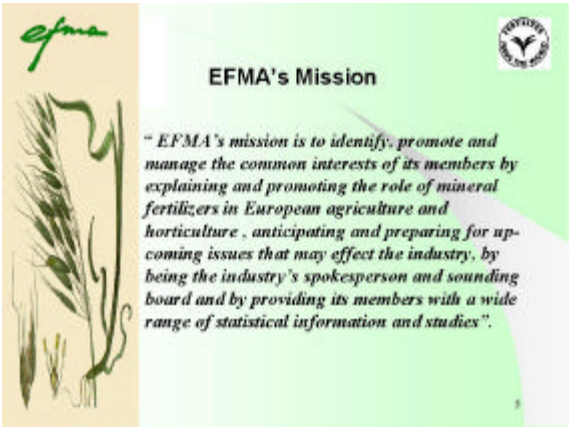
I will end my presentation with some conclusions.

However, before doing so allow me to give you a short introduction to EFMA (Slide 4).

Slide 4

EFMA represents the major fertilizer manufacturers in Western Europe. Its members account for some 90% of their region's nitrogen fertilizer production capacity and some 70% of phosphate fertilizer production, resulting in a market share of about 75% of the Western European Fertilizer Market (EU plus EFTA). It also has as members seven national trade associations which are similarly structured and work at a single country level.

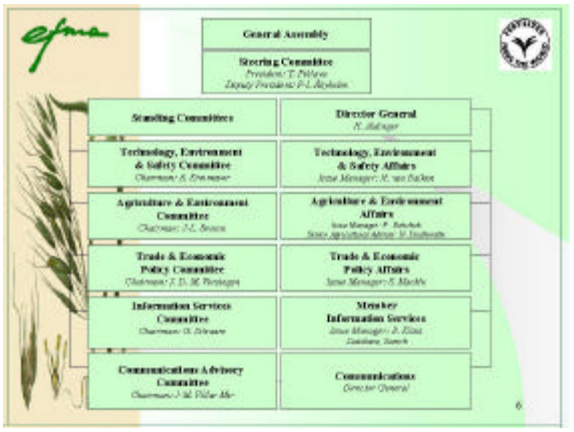
EFMA's mission (Slide 5) is to identify, promote and manage the common interests of its members by explaining and promoting the role of mineral fertilizers in European agriculture and horticulture, anticipating and preparing for upcoming issues that may affect the industry, by being the industry's spokesperson.



Slide 5

EFMA is also a sounding board for ideas and concerns and provides its members with a wide range of statistical information and studies. EFMA is an association under Swiss law and has offices in Zurich and Brussels.

The organisational structure is relatively simple (Slide 6).



Slide 6

As governing or overseeing bodies we have the General Assembly, the Steering Committee and the Presidium. The conceptual and executive work is done by standing committees to which the industry sends its representatives.

Each committee is headed by a CEO responsible for fertilizers in a member company. This CEO is supported by a professional issue manager who is usually based in Brussels. Again this format is similar in National Associations such as the Fertilizer Manufacturers Association (FMA) in the UK. However, these may have a wider membership depending on the structure of the Fertilizer Industry in the country.

EFMA's role is to support the industry's mission (slide 7)which can be characterised as follows. "The European fertilizer industry stands for a profitable and sustainable fertilizer industry in Western Europe, Safe and efficient manufacturing operations with Best Available Technology Standards and a first class

environmental performance based on the principles of Responsible Care, Sustainable Development and Best Agricultural Practices.

Slide 7

Fertilizer manufacturers also advocate the competitiveness of the agricultural economy, a secure food supply in Western Europe and an effective world market for fertilizers, their raw materials and feed stocks".

The Genesis of EU Legislation

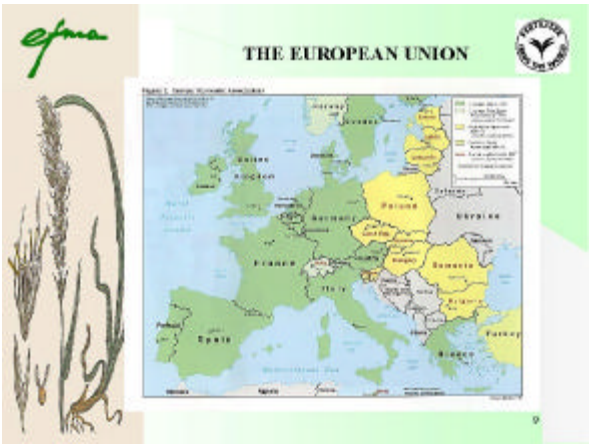
The origin of the European Union are the Treaties establishing the European Coal and Steel Community in 1951 by France, Germany, Italy, Belgium, The Netherlands and Luxembourg. As from that time the Member States have been true to the vision of the founders and have continually striven to both deepen and enlarge the Union, as you can see in this slide (Slide 8).

Slide 8

The concept of deepening is demonstrated most clearly by the European Single Market (1993), which brought about freedom of circulation for people, goods, capital and services, the Common Foreign and Security Policy, the Co-operation in justice and Home Affairs, and most vividly the European Economic and Monetary Union and the Euro as a Single European Currency (1999).

The tangible result of this concept is the so-called Acquis Communautaire which contains elements like EU legislation and agreements, amongst others. Those elements are continually being changed, improved and increased.

Today (slide 9) the EU has 15 Member States and the accession

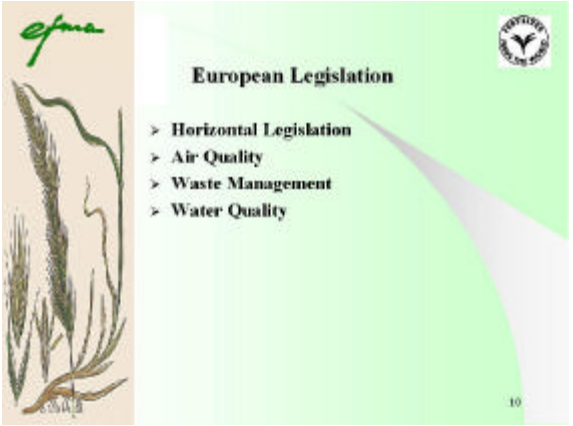


Slide 9

negotiations of Cyprus, Hungary, Estonia, the Czech Republic and Slovenia are well on the way. All of them are bound to meet the Acquis Communautaire before they can join. In exceptional circumstances temporary derogations and transitional periods may be agreed upon, with the aim to allow the new member state to gradually harmonize itself towards the Acquis Communautaire.

It is important to note however, that where there is EU legislation it replaces individual national legislation concerning the same areas. This accentuates the fact that virtually all new legislation in European Countries originates from Brussels.

EU Legislation (Slide 10)



Slide 10

Directives

The aim of having EU legislation is to establish a single market in Europe where free movements of good and fair trade are possible. There are numerous Directives in many different areas which have to be taken into account by the Fertilizer Industry today.

These Directives cover the whole range of Production, Product Quality, Storage, Transport, Marketing, and Application of Fertilizers. It is required that this EU legislation is transposed into the different National Laws.

Let me highlight the most relevant Directives as far as the Fertilizer Industry is concerned.This slide shows the areas of EU Environmental and Safety Legislation which are relevant to our Industry.

The so-called Horizontal Legislation consists of Directives that cover general environmental management issues rather than specific sectors, products or types of emissions. The three directives in this category relate to collecting and assessing of information on the environment and, in particular, on the impact of human activities on the environment.

Air quality

This group of Directives regulate the quality of the ambient air quality and is known as the Air Quality Framework Directive. It aims to achieve and maintain good ambient air quality.

Two directives are worthwhile mentioning:

The legislation on controls on stationary sources (like industrial units),I will come back to this concept of IPPC in more detail later, and the air quality standard nitrogen oxides which will be replaced by new standards under the Air Framework Directive.

This also introduces standards for ozone, CO, benzene and other atmospheric pollutants.

Waste management

The overall structure for an effective waste management regime is set out in the Waste Framework Directive (75/44/EEC) and the complementary Hazardous Waste Directive (91/689/EEC).

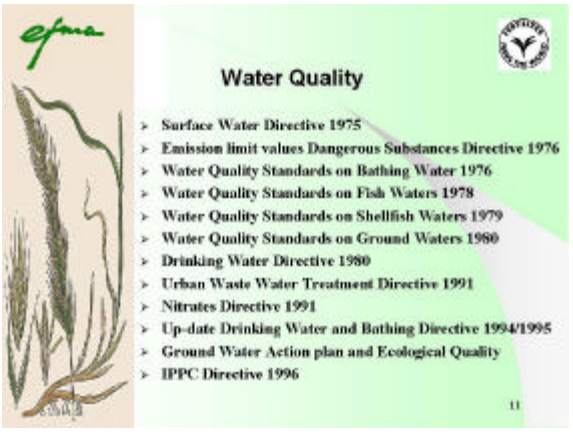
These directives establish the framework for waste management structures, which have been elaborated by two subordinate or “daughter” Directives.

One group sets down requirements for the permitting and operations–of waste disposal facilities and the other group deals with specific types of waste such as oils, packaging and batteries.

Water quality

Water is one of the most comprehensively regulated areas of environmental legislation.

Early European water policy began in the seventies with the First Environmental Action Programme in 1973, followed by a first wave of legislation which started in 1975 as can be seen on the next slide **(Slide 11).**



Slide 11

It became clear that an efficient protection of water needed an emission limit value legislation as well as a water quality standards legislation, i.e. a so-called combined approach which takes all this into account.

This has resulted in a Proposal for a Water Frame Work Directive with the aim to achieve a good status for all ground waters and surface waters by the year 2010 at the latest.

Industrial Pollution Control and Risk Management (Slide 12)

Slide 12

The first covered area includes directives which establish requirements for permits for the operation of certain industrial facilities in order to control releases into air and water and wastes.

The directives include:

- Integrated Pollution Prevention and Control Directive (IPPC) 96/61/EEC.
- The Emissions from large Combustion Plants Directive 88/609/EEC.
- Air Pollution from Industrial Plants Directive 84/360/EEC (this directive will be replaced by a much broader IPPC Directive in 2007).

The goal of the directive is to achieve integrated prevention and control of pollution arising from a wide range of activities. This means measures to prevent, or, where it is not practical, to reduce, emissions from industrial facilities into air, water and land, including measures concerning waste, in order to achieve a high level of protection of the environment as a whole.

The second area covers the Control of Major Accidents Hazards (COMAH) Directive 96/82/EC.

This Directive requires industrial plant operators and those providing storage to identify major accident hazards for those products classified as “dangerous” and hold in quantities above specified threshold levels and forces them to take steps to control the risks and limit effects both on site and in the surrounding area and to the environment.

Chemicals (Slide 13)

In this area I will mention only the most important directives regulating the transport and marketing of products.

Slide 13

Recommendations for the transport of dangerous goods by road (ADR), by Rail (RID) and water (IMO) are given by the UN. The Council Directive 94/55/EC on the Transport of Dangerous Goods by Road made the requirements of the ADR Convention applicable, not only to international transport into the EU but to any transport of dangerous goods by road within the EU.

As to marketing, the Council Directive 67/548/EEC deals with the testing, classification, packaging and labelling of chemicals which are dangerous to man and the environment, while Council Directive 88/337/EEC deals with dangerous preparations (i.e. mixtures of chemicals).

Noise **(Slide 14)**

Slide 14

In the 'noise' categories it is worth mentioning Directive 84/532/EEC. This directive sets out the sound power levels permitted for construction plants and equipment. Seven separate "daughter" directives cover requirements for specific equipment, such as compressors and power generators.

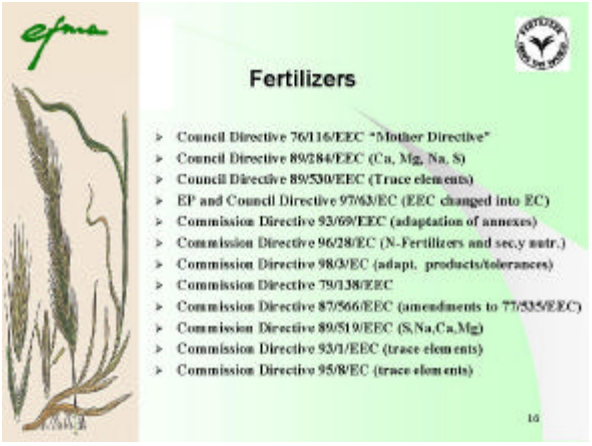
Fertilizers (slide 15)

Slide 15

The 'mother' fertilizer directive 76/116/EEC applies to products which are mark~~et~~ed as fertilizers and designated "EC Fertilizer". These are granted free circulation throughout the Community.

The member states have to ensure that the designation "EC Fertilizer" may only be used for fertilizers belonging to one of the solid inorganic fertilizer types listed in the directive's Annexes and which comply with the conditions laid out in Annexes II and III.

This directive has been amended several times for the addition of other types of fertilizers such as fluids, secondary and trace elements. Sampling and analytical methods are featured in a further series of directives. These can be seen in the next slide (Slide 16).



Slide 16

The merging into one new Directive of all former Directives and their amendments is in progress.

Miscellaneous

There are many other directives related to fertilizers but I cannot possibly review them all here today.

The most important are those dealing with the subjects of safety and health of workers from the risk related to chemicals, greenhouse gases, and energy.

Other initiatives leading to the legislative process

The process leading to the establishment of EU legislation involves the dialogue between the European Commission and the Member States bilaterally or multilateral.

Let me show you some initiatives that have had a major impact on the National and EU legislation.

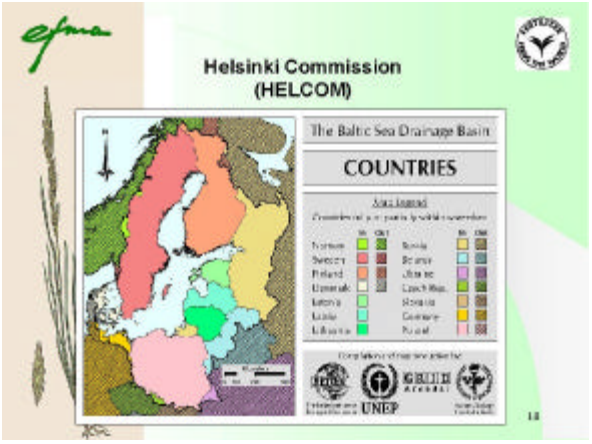
HELCOM (Helsinki Commission, Slide 17)

The Helsinki Convention of 1974 was issued to protect the marine environment of the Baltic Sea and was the first international agreement to cover all sources of pollution, both from land and from ships as well as from the air.

Slide 17

To accomplish this aim, the Convention gives recommendations to curb various sources of pollution to be incorporated into the national legislation of the member states.

In 1992 a new Convention was signed by all countries bordering the Baltic sea (Slide 18) and by The European Economic Community.



Slide 18

Recommendations were made concerning measures to control agricultural as well as industrial pollution.

These Recommendation were taken into account by the EU when drafting Directives like The Nitrates Directive 91/676 (concerning the Protection of Waters against pollution caused by nitrates from agricultural sources), the IPPC Directive 96/61/EC (concerning integrated pollution prevention and control) and the Sewage Sludge Directive (on the protection of the environment, and in particular of the soil when sewage sludge is used in agriculture).

OSPARCOM **(Oslo and Paris Commission)**

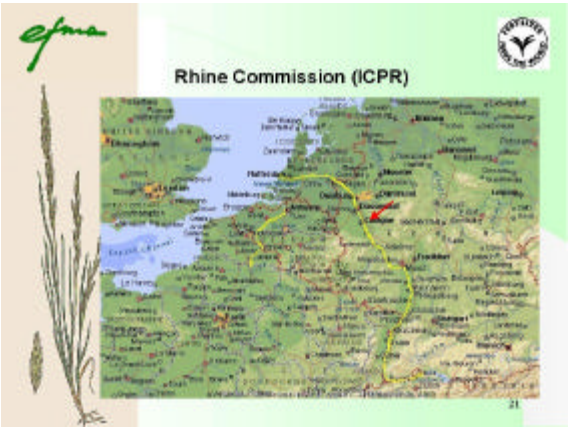
The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) opened for signature at the Ministerial Meeting of the Oslo and Paris Commissions in Paris on 22 September, 1992. The Convention entered into force on 25 March, 1998. Finland, EU, France, Germany, Iceland, Ireland, The Netherlands, Norway, Portugal, Spain, Sweden, UK and Northern Ireland participate.

The Convention deals with:

- Prevention and elimination of pollution from land-based sources.
- Prevention and elimination of pollution by dumping or incineration.
- Prevention and elimination of pollution from off-shore sources.

Rhine Commission **(ICPR)**

The river Rhine (Slide 19) (the yellow marked river on the right side) flows from the Swiss mountains through Austria, Germany, France, Luxembourg to The Netherlands.



Slide 19

With an area of 185,000 km^2 and a mean annual discharge of 2,200 cubic metres per second, the Rhine is one of the most important river basins of Europe.

The International Commission for the protection of the Rhine against Pollution (like heavy metals, organic pollutants and ammonia), was founded on 11 July, 1950.

In 1976 the European Economic Community joined as a contracting party and in 1987, the Ministers approved the implementation of the Rhine Action Programme (RAP) by the year 2000.

The tasks assigned to the ICPR are:

- Analyses of the state of the River Rhine.
- Proposals for clean-up measures.
- Preparation of International Conventions.
- Carrying out the tasks decided on by the Ministers' Conferences.

The basis of this Convention are the Dutch complaints about the contents of phenol and salt in the River Rhine and the Sandoz accident on 11 November, 1986, which caused the death of numerous fishes and animals.

The Schelde Commission **(ICPB)**

The river Schelde (the yellow marked river on the slide 19 left side) flows from France, through Belgium to The Netherlands.

On 26 April, 1994, France, Belgium and The Netherlands signed the Treaty of Charleville. The International Commission for the protection of the River Schelde (ICPB) aims at the inventory of the quality of the River Schelde and recommends measures to prevent accidents, to improve quality and to restore the Eco-system. Major parties that have an impact on the quality are the industry, agriculture and discharge of untreated municipal waste-water.

It might become clear to you that this whole package of measures on national and EU level has a major impact on the Fertilizer Industry and brings along substantial costs.

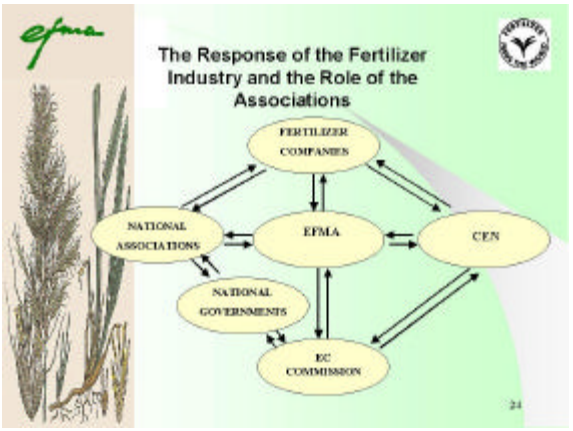
However, nowadays modern industry has learnt or has to learn to cope with this as I will show you in the next part of my presentation.

The Response of the Fertilizer Industry and the Role of the Associations

An active National and European legislative scene calls for an active participating Fertilizer Industry.

In the past the response of the Industry has been far too much re-active instead of pro-active.

It has been proven though that the best results can be obtained by a pro-active attitude of the Fertilizer Industry and many aspects can best be done in association (Slide 20).



Slide 20

National Associations

National Associations can play an important role at national level by their proactive participation in discussions with national authorities on various aspects of risk management, seeking to promote a balanced judgement between environmental, economic and practical arguments.

The way most national associations are structured guarantee an efficient process.

European Association

EFMA plays a similar role at European level. EFMA is aware of all aspects of the European fertilizer industry, and can speak on its behalf on topics ranging from technical, environmental, health, safety, economic and agricultural to trade.

At the same time, EFMA understands the EU legislative process and has regular contacts with those who are involved in this process, e.g. the Commission and European Parliament.

EFMA's activities in this field can be summarised as follows:

- Pro-active participation in discussions at national level with corporate and national association members and on EU level with the member states and the European Commission. EFMA is, of course, in constant dialogue with the Commission, as are its member National Associations with their national Administrator who are party to the decision making process in the Brussels Commission.
- Activities to improve existing legislation.

CEN

A third important party in this process is the European Committee for Standardization (CEN). European standards are technical specifications, for example related to fertilizers, adopted by the European Committee

for Standardisation (CEN). Every Member State of the European Union is represented on CEN, through its national standards organisation, as are the EFTA countries.

Let me continue now to give you some examples of issues handled by the Fertilizer Industry in association (Slide 21):

Slide 21

Voluntary agreements

The instrument of voluntary agreements is a popular tool to achieve environmental objectives like reductions in emissions and it gains popularity. It is an agreement between industry and authorities.

Because of its voluntary nature it will not necessarily substitute legislation. In contrast to this, negotiated agreements are much more binding. The EU Member States are good for about 300 voluntary agreements today.

Examples are the unilateral commitments from the European Chemical Industry to reduce its specific energy consumption by a further 20% between 1990 and 2005 provided that no additional taxes are introduced. Another example is EFMA's proposal for a voluntary agreement on Cadmium levels in Fertilizers in 1996.

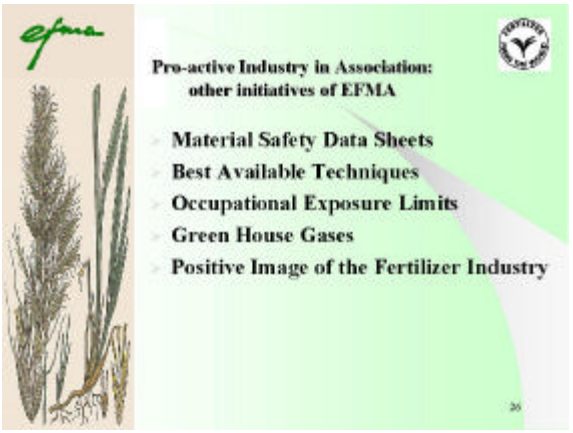
Responsible Care Concept

Responsible Care is a global chemical initiative which calls on companies to demonstrate their commitment to improve all aspects of their performance which relate to protection of Health, Safety and the Environment. 16 Core parameters in the field of Safety, Health and Environment are measured and published to show improvements that have been achieved.

EFMA reports their environmental performances for the purpose of internal benchmarking and setting levels of Best Available Techniques to be used in the discussions with the Commission.

In addition EFMA reports on absence of work and on accidents that have happened with the purpose to analyse the data in EFMA's yearly Safety Seminars, share experiences and to give recommendations. Quite often these recommendations result in easy-to-read booklets like for example EFMA's guidelines for safe handling and transport of nitric acid.

Other EFMA initiatives (Slide 22)



Slide 22

Material Safety Data Sheets

In the early nineties EFMA's members companies started to compile HEDSETS (Harmonized Electronic Data Sets) of 17 fertilizers and their intermediates.

These HEDSETS contain information on composition, hazards, physical properties, toxicological aspects, etc., and can now be used as input for an even broader set of data: the SIDS (Screening Information Data) for High Production Volume Compounds which is an initiative of ICCA .

Based on the data in the HEDSETS, EFMA produced material Safety Data sheets as an easy-to-read booklet for anyone on the shop-floor in day-to-day use.

The work was completed in 1995. These initiatives are supported and repeated at national levels.

Best Available Techniques

The European Commission's Integrated Pollution Prevention and Control Directive (IPPC) aims at streamlining policies governing the control of industrial emissions, requiring companies to obtain an integrated operating permit which will stipulate emission values into air, water and land.

The directive refers to Best Available Techniques, which covers both the technology applied and the operational practices employed. Even long before this Directive came into force EFMA pioneered with work on Best Available Techniques (BAT), founding a Taskforce in 1993 to define BAT for the production processes of intermediates and finished fertilizers.

The products covered in EFMA's BAT booklets :

- Ammonia.
- Nitric Acid.
- Sulphuric Acid.
- Phosphoric Acid.
- Urea and UAN.
- AN and CAN.
- NPKs produced by the mixed acids route.
- NPKs produced by the nitrophosphate route.

These booklets were completed in 1995 and up-dates are realised in 1999. They describe state-of-the-art operating conditions in Western Europe and give recommendations for BAT emission values for existing and

new plants. They have been published in order to share knowledge about BAT between the fertilizer manufactures as well as with the regulatory Authorities.

The information will be used in the development of EU guidelines for BATs relating to the Industrial sector**.**

Occupational Exposure Limits (OEL)

The safety and health of workers in the EU is regulated by several Directives and their Amendments. These Directives gives measures to encourage improvements in the safety and health of workers should there be a risk of exposure to chemicals, carcinogens, and ionising radiation.

In addition they give measures to project workers from injuries by prescribing proper personal protective equipment and measures how to use machinery in a safe way.EFMA and the Commission are discussing the safe levels of exposure of NO_2 based on:

- Scientific studies.
- Presence and reliability of measurement methods.
- Availability of abatement technologies.
- Socio-Economical feasibility.

Green house Gases

N_2O is an important Green House Gas because it contributes to the Global Warming. Main sources of emissions are agricultural land, forests and oceans on the one hand and man made activities like production of adipic acid and other organic compounds and fertilizers on the other hand.

Available emission data vary widely but it can be reliably claimed that the contribution of the fertilizer industry is less than 10 %.

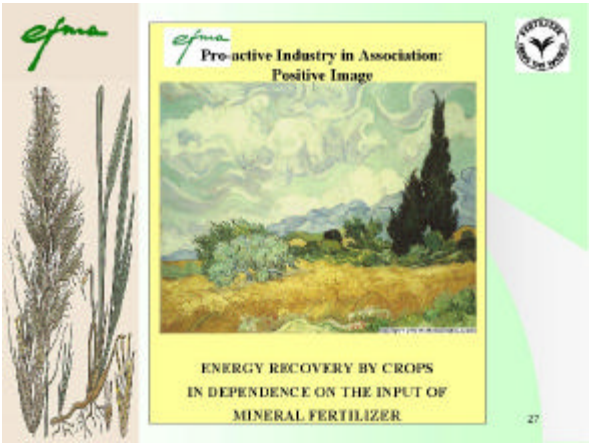
EFMA's efforts are focused on putting things in a better perspective before starting discussions with the Commission on the reduction of the targets.

Positive Image of the Fertilizer Industry

EFMA is of the opinion that there are positive stories that can be told. At the request of EFMA, the Martin Luther University of Halle Wittenburg in Germany has performed a study with the purpose to find out whether there is a net energy gain in the use of fertilizers.

In a kind of Life Cycle approach the Energy Balance starting from mining and production and transport to the farm, up to the harvest of crops is determined.

The results (Slide 23) are very promising and EFMA considers publication.



Slide 23

Energy Efficiency

From the limited studies that are performed in the public domain it is clear that the West European Fertilizer Industry is one of the most energy-efficient in the world.

Recently EFMA has started an Energy benchmark amongst her members with the purpose of Internal Benchmarking and to obtain background material in the EU Commission on Best Available Techniques and Energy Taxation.

Activities Related to EU Enlargement

For four years now EFMA organised together with the Commission the so-called “East-West “Seminars. The purpose of these seminars is to inform fertilizer producers and ministries in the Eastern European countries on EU legislation and the legislative process and to assist them in their preparations to adapt to EU requirements as part of the accession process.

This year we have invited young managers from fertilizer producers in Eastern European Countries for a tailor made Summer Course in our offices in Brussels during the whole month of June.

Besides intensive introductions in technical-, environmental-, safety-, agronomic-, trade-, economical- and statistical issues, the participants are also introduced to the EU legislation and legislative processes and what is needed in the accession process of the Eastern European countries. Of course, there have been also visits to some Western European fertilizer production plants and to farms.

These are only a few examples, but these initiatives have resulted in a lot of credibility with National Governments the EU Commission. Next to that the proactive role of the Fertilizer Industry in Western Europe has lead to a competitive, state of the art Industry.

Because of efficient processes, less lost work hours, shorter shut-down periods and less complaints about a qualitatively good product, substantial cost savings have been made.

Conclusion

There are always two sides of a coin (Slide 24). On the one hand legislation increasingly puts pressure on the Fertilizer Industry in Europe both in production as well as in application of fertilizers. On the other hand a proactive response of the Western European

Slide 24

Fertilizer Industry has resulted in a state of the art, environmental and safe sound, responsible, competitive Industry.

Coming to think of it, there is third side (Slide 25) showing that this can best be achieved by actions jointly with all the members and their National Associations.

Slide 25

Thank you .