FORECAST OF FOOD, FARMING AND FERTILIZER USE IN THE EUROPEAN UNION 2005-2015
FORECAST OF FERTILIZER USE IN THE EU-25

HOW THE FORECAST IS PRODUCED

The EFMA Forecast is produced annually using the following method:
• In spring, a European scenario is developed using quantitative information (e.g. from USDA, FAPRI, and the European Commission) and qualitative analyses made by the EFMA experts.
• Subsequently, each national Forecaster adapts this general scenario to the specific situation in his country. The resulting national forecasts are then jointly analysed by all experts and integrated into the overall EFMA Forecast.

The EFMA Forecast is based on a crop approach for all the EU-25 countries and fertilizer consumption for each crop is evaluated by assessing area and specific nutrient application rates.
• In 16 countries (EU-15 and Poland), representing 88% of the EU-25 agricultural area, the Forecast is based on a comprehensive expert approach using the national forecasts produced by our members.
• However in the 9 remaining countries, the evaluation of the production and crop area is solely based on the European Commission’s agro-economic model. N, P and K application rates on each crop are based on our own expert model.

In this report, volumes of P and K are expressed as phosphate (P$_2$O$_5$) and potash (K$_2$O).

Please note that the years in this report refer to the calendar years when the campaign ends.
OVERVIEW FOR 2015

On average between 2002 and 2005, mineral fertilizers carrying 10.7 million tonnes (Mt) nitrogen, 3.3 Mt phosphorus and 3.8 Mt potassium were applied by European farmers each year.

In the next ten years, use of nitrogen, phosphorus and potassium in the EU-25 is expected to decline by 3.5%, 9.9% and 6.6% respectively. By 2015, the EFMA Forecasters expect fertilizers to supply European farmers with 10.3 Mt nitrogen, 3.0 Mt phosphorus and 3.6 Mt potassium.

This is a substantial negative trend from the consumption peak of the Seventies and the Eighties. By 2015, nitrogen will decrease by 27% in the EU-25, compared to 1986 when the nitrogen consumption peaked. There will also be a decrease of 64% phosphorus and 58% potassium, compared to 1979 when the consumption of phosphorus and potassium peaked.

However, when comparing the long-term Forecast (2014/2015) to the last three seasons, we now predict a general decrease of all nutrients in the EU-15 countries. The only exception is a slight increase in nitrogen consumption in France due to its strong commitment to develop biofuels.

In the EU-10, on the other hand, consumption for all nutrients will increase. In sum, the variation among countries is particularly important for P and K.

Forecast changes in regional fertilizer use

Poland, for instance, the biggest agricultural country (accounting for approximately 50% of the nutrient consumption in the EU-10), foresees a rather flat development despite a significant improvement in grain production.

Clearly, the positive development of nutrient consumption in the EU-10 will not compensate the general negative trend of the EU-15.

Likewise, the development of energy crops (biomass and biofuels) throughout the EU-25 will only moderate the negative impact of the CAP reform on fertilizer consumption.
THE CROPPING PATTERN
The agricultural area throughout the EU-25 is very diverse. The current situation is illustrated in the pie charts on this page. In EU-15, arable crops account for nearly 60% of the total agricultural area, (cereals represent 37%, fodders 9%) and grassland covers 30%. Permanent crops (fruits, vines) account for 9%.

In the EU-10, the fertilized area represents 32 Mio ha, of which arable crops account for nearly 75%, (cereals represent 49%, fodders 15%) and grassland 24%. Permanent crops (fruits, vines) account for 1%.

The aggregated figures for the EU-25 show that the fertilized area represents 132 Mio ha, of which arable crops account for nearly 61%, (cereals 39%, fodders 11%) and grassland 28%. Permanent crops (fruits, vines) account for 8%.

THE FUTURE
Over the next ten years, the new Common Agricultural Policy will bring significant changes to the acreage of arable crops in Europe. Barley and rye acreage will decrease by 8% and 2% respectively, whereas the area dedicated to wheat will increase by 2%. The acreage for sugar beet will decrease by 24% due to the implementation of the new Sugar Regime.
However, due to the development of energy crops, the area dedicated to oilseed rape will increase by 47%, and a part will be cropped on set-aside areas.

Within the EU-25, fertilized and non-fertilized grassland will remain fairly stable.

The developments in the crop-area combined with the application rates give us the following results: today, cereals account for 48% of total nutrient consumption, of which 22% is wheat. Grasslands and fodders account for 27%. Over the next ten years, we foresee that nutrient consumption will decrease by 6% for coarse grains (barley and rye). With regards to sugar beet, fertilizer use will drop by 22%.

Nutrient use for oilseeds will increase by 35%, and even by 49% for oilseed rape. This is due to an increase in biodiesel production.

Nutrient consumption will decrease by 11% for fodder crops and by 13% for grassland because of the probable extensification in the beef sector related to the Single Farm Payment policy. Another reason for this decrease is the augmented use of organic fertilizers and manure as nutrient sources.
GREATER UNCERTAINTIES
The implementation of the new CAP started in 2005. 10 Member States are already applying the full Single Farm Payment scheme (SFP). Our analysis this year seems to confirm our assumptions from last year: we foresee that the SFP will have a significant impact on the cereal area in the EU-15 as this will decrease by more than 6%. However, the foreseen impact varies significantly from one Member State to another. All Member States that have to apply the full SFP (18 out of 25 until 2009) have reported their modalities for implementation, and it is clear that no two schemes are alike.

While we are confident when evaluating the impact of the new CAP’s market measures including the new Sugar Reform, it is worth noting that there are three other areas which are difficult to assess and which will have a major impact on European agriculture:

• The implementation of Cross Compliance. There are many uncertainties regarding how each Member State will implement and control this second key measure of the CAP. It is possible that this measure will lead to unjustified restrictions on certain farm inputs. For example, the obligation for Member States to set controls on phosphate levels (according to the Water Framework Directive) has induced some countries to set unnecessary limitations on P, which may even threaten soil fertility in certain cases.

• Production of biofuels. The Commission’s strategy and resulting regulations now seem to bear fruit and the development is really taking on a new pace. Ambitious national action plans are now implemented in some Member States. The new EU Action Plan for Biomass has been published and a Green Paper on Biofuels is expected in spring 2006. Some Member States may also use this development to fulfill their obligations concerning the Kyoto Protocol. However, it is possible that the production of energy crops will affect food production unreasonably, as areas originally used to produce food may now be used to grow energy crops.

• The WTO Doha discussions. The outcome of the WTO Doha discussions and how these outcomes will be implemented are currently difficult to assess, but it is clear that they will have an impact on European agriculture.

NITROGEN, PHOSPHORUS AND POTASSIUM ARE THE THREE MAIN NUTRIENTS OF PLANTS
Mineral fertilizers are made from naturally-occurring raw materials which have been transformed into a more plant-available form by industrial processing.

• Nitrogen (N), taken from the air, is essential as an important component of proteins.
• Phosphorus (P), extracted from mined ores, is a component of nucleic acids and lipids, and is key to the transfer of energy in cells.
• Potassium (K), extracted from mined ores, has an important role in plant metabolism, for photosynthesis, activation of enzymes, osmoregulation, etc.
GOOD NUTRIENT PRACTICE TO SUSTAIN FERTILE AND PRODUCTIVE SOILS

Good practices for fertilizer production, distribution and usage are the basis for sustainable fertilization. The fertilizer industry has over the past years conducted and funded a considerable volume of research concerning efficient and environmentally-compatible soil management and crop production. The result of this research has contributed in a significant way to the establishment of Good Nutrient Practice. At the same time, the fertilizer industry also has developed and introduced many tools, both basic and very advanced, to assist the farmer in applying these good practices.

Once established in specific protocols for certain farm activities, the implementation of these good practices is a proven, viable way to striking an acceptable balance between the needs for high-yield agricultural production and a well-managed environment.

Good nutrient, soil and environmental practices are also a core part of the Integrated Farm Management (IFM) approach, now adopted by leading farmers throughout Europe.

To better present these principles and good practices, EFMA has written a reference document about Good Agricultural Practice applied in crop nutrition, which will be published during the spring of 2006.

This publication presents and explains currently used Good Nutrient Practice. Emphasis is made on the tools developed by the industry and the scientific community in order to help farmers address their numerous tasks and obligations. At the same time, the book also gives very hands-on examples and advice on how farmers can apply these practices on their farms.

Finally, the document also includes examples and profiles of different farm types across Europe which follow Good Nutrient Practice.