



# Fertilizer Best Management Practices in the context of Product Stewardship

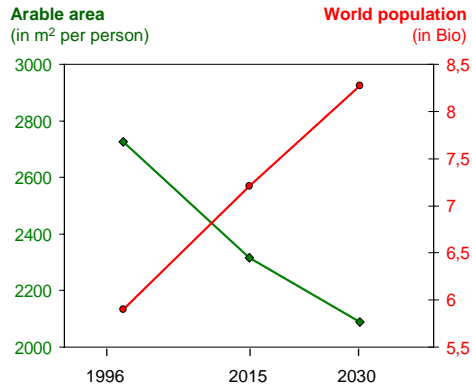
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## Structure of the presentation

- Agriculture and Product Stewardship in Europe
- The European fertilizer industry support Fertilizer Best Management Practice (FBMP)
- Impact of FBMP on the European fertilizer industry



## Global Trend: The intensity of agricultural production has to increase



- World population increases up to 8.27 Billion people in 2030.
- In the same time the arable area can, according to FAO, only be extended by about 7%.
- Thus, the arable area per person decreases rapidly and the intensity of agricultural production has to increase.

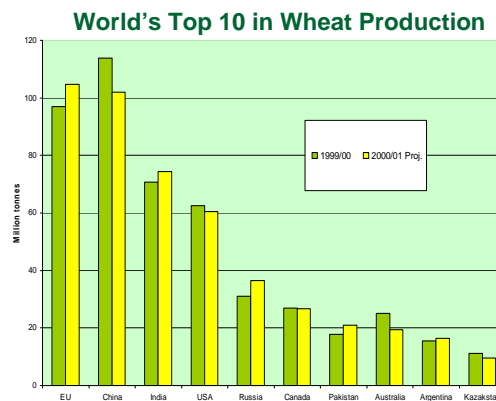


Source: FAO; Towards 2015/30; Final report 2002



## Europe's role in agricultural production is important

- Good natural growing conditions
- Production of sufficient, affordable and safe food
- Production of bio-energy
- Efficient logistics close to the markets
- Skilled farmers



## Agriculture is not held in high esteem by the European society

- The European society seem to ignore the tremendous benefits of a safe, nutritious, and affordable food supply
- Little recognition of the improvements in environmental stewardship in agriculture
  - Like the substantial increases in fertilizer and water use efficiencies
- In EU15 only 5% of the population is engaged in agricultural production (and declining)
- Policies are determined by the majority of the urban population who lack direct knowledge of agriculture
- Negative portrayal of agriculture in popular press, if at all agriculture is seen as the cause of environmental problems and food scandals



## The Challenge: To align farmers' interests with those of urban population

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| <ul style="list-style-type: none"><li>• <b>Farmers' interests</b><ul style="list-style-type: none"><li>– Higher and more stable produce prices</li><li>– Greater yields with lower input costs</li><li>– Greater respect for the farming profession</li></ul></li></ul> | <ul style="list-style-type: none"><li>• <b>Society interests</b><ul style="list-style-type: none"><li>– Plentiful, affordable, safe, nutritious food</li><li>– Clean water and air</li><li>– Conservation of wildlife and biodiversity</li><li>– Affordable and reliable energy supplies</li></ul></li></ul> |
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EFMA launched Product Stewardship to support agriculture and and take actions for a correct and safe use of fertilizers

What is Product Stewardship?

“To make sure that fertilizers and their raw materials, additives and intermediate products are processed and manufactured, handled, stored, distributed and used in a safe way with regard to health, environment and safety”



## EFMA's Commitment to Product Stewardship

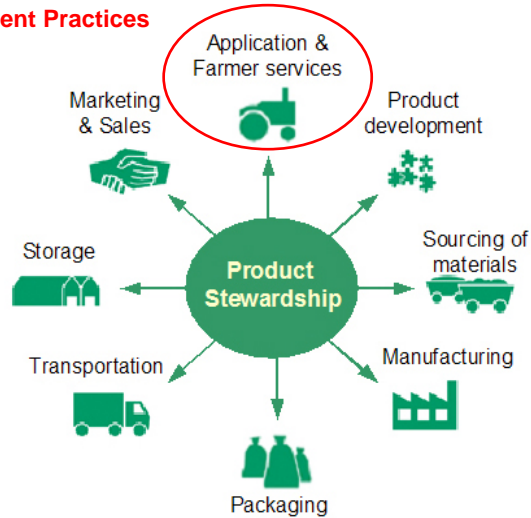
- Make and sell safe products
- Operate plants based on best manufacturing practices
- Store and distribute our products under rigorous control
- Openly share our knowledge on Health, Safety and Environment for our products with the community
- Use scientific facts and risk-based assessments to contribute to the development of regulations
- **Work together with others in the supply chain to ensure the efficient, safe and environmental correct use of fertilizers**



## EFMA's Product Stewardship Program

### Fertilizer Best Management Practices

- Launched in 2003
- Covers whole value chain
- Legal & EFMA requirements
- Mandatory to EFMA members
- Regularly audited



## Fertilizer Best Management Practices within Product Stewardship

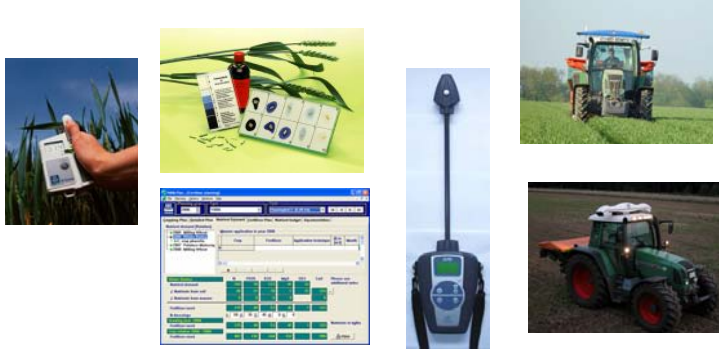
Ensuring the dissemination of Good Fertilization Practice to farmers by:

- Developing collaboration with all farmer associations
- Supporting initiatives which aim at developing Sustainable Farming:
  - Covering the whole farm activity
  - Addressing all farmers and all markets in Europe
- Helping these organisations to:
  - Improve recommendations for Good Fertilization Practice
  - Define a framework for Sustainable Farming Systems at EU level
  - Promote and gain recognition for these systems by the EU farming community



## EFMA members have develop tools to support Best Fertilizer Management Practices

Fertilizer planners and crop monitoring tools to calculate the right nutrient demand for each crop and each field **are introduced in agriculture**

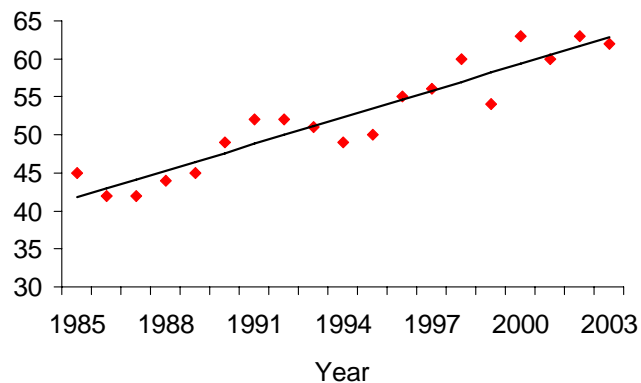


=> these tools helped to improve nutrient use efficiency



As a consequence the nitrogen use efficiency in Europe has increased over the last 20 years

Nitrogen use efficiency in cereals (kg grain/kg N)

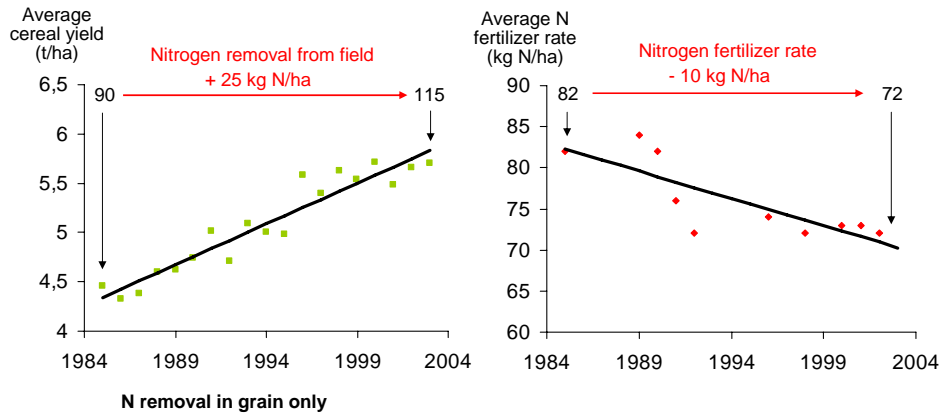


Source: Dobermann, 2005

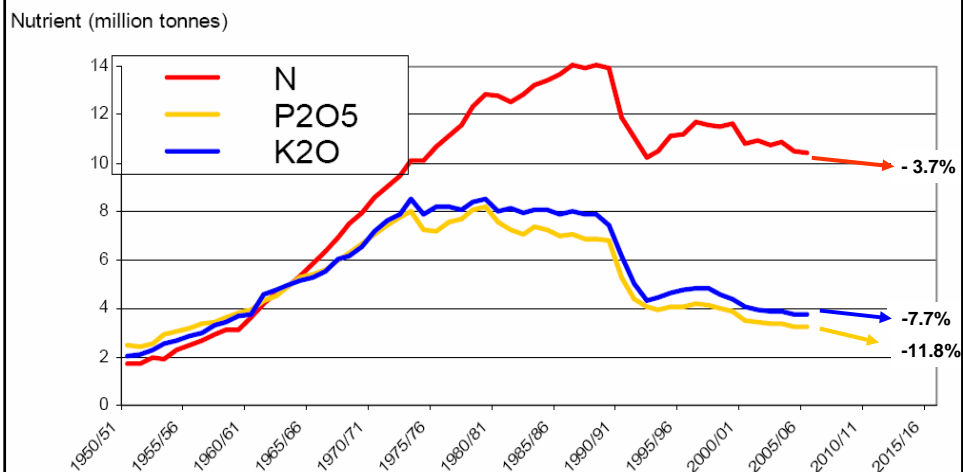


## Increase in nitrogen use efficiency mean higher crop yield with less or the same amount of fertilizers

Example: Cereal production in Western Europe (EU15)



## Development and Forecast of Fertilizer Use in the European Union (EU 25) 2005-2015



## Summary

- Best Fertilizer Management Practices will contribute to align intensive crop production with the society target of a low environmental impact from agriculture.
- To introduce Fertilizer Best Management Practices is an important way to improve fertilizer use efficiency.
- Estimations of the future global growth rate of mineral fertilizer consumption has to take into account the efforts of the fertilizer industry to increase nutrient use efficiency.

