Increasing NUE

To improve agriculture productivity

Fertilizers Europe

19th IFMA Congress
Warsaw - 26 July 2013

Agriculture

Partnership for growth
Sustainable agriculture in Europe

Nitrogen Use Efficiency and Agriculture productivity

XIX IFMA congress – Warsaw – 26 July 2013

Fertilizers Europe

Actions initiated by the industry to address Nitrogen Use Efficiency And agriculture productivity

>> from Good Agriculture Practice to Product development and Innovation

Nitrogen Use Efficiency and Agriculture productivity

XIX IFMA congress – Warsaw – 26 July 2013

Good Fertilization Practice towards a more productive agriculture

- **Best practice and balanced fertilization**
  - Improving and monitoring Nitrogen Use Efficiency
    development of an indicator under work
  - Use of precision farming techniques (*right rate at right time*)
  - Localization and/or incorporation (*right place*)

- **Integrated approach of environmental protection**
  - Vertical: Life Cycle approach
  - Horizontal: Interactions between environmental compartments

  >> towards **Sustainable Farming Systems (IFM)**

- **The Key issue: bringing science to the fields**

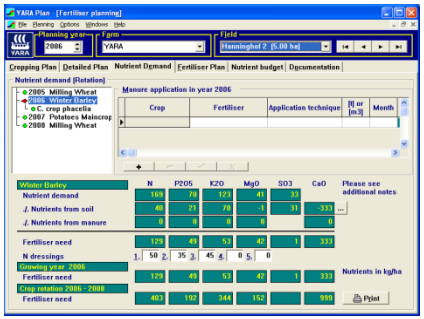
  Improve extension of scientific and practical knowledge onto farm:
  >> a policy, organizational and communication issue

Nitrogen Use Efficiency and Agriculture productivity

XIX IFMA congress – Warsaw – 26 July 2013

Precision farming tools towards Good Fertilization Practice

Software and crop monitoring tools help to calculate the right nutrient rate and apply it at the right time



=> these tools helped to improve Nitrogen Use Efficiency

Nitrogen Use Efficiency and Agriculture productivity

XIX IFMA congress – Warsaw – 26 July 2013

Product development

- **Improved understanding and use of recycled products on farm**
  Better use efficiency of their nutrients
  - Coordinated use of all nutrient sources - **Fully applicable for P**
  - Can be facilitated by new regulation

- **Improving nutrient release**
  - Better control of nutrient availability:
    - **Urease inhibitors**
    - **Nitrification inhibitors**

- **Using the appropriate nitrogen form (*right product*)**

The DAN* Fertilizer campaign

(nitrate vs urea)

- **Directly Available Nitrogen**

DAN fertilizer campaign

- Society requires solutions:
  - Higher productivity in European agriculture
  - Better environmental protection
  - Sustainable use of natural resources in agriculture

Providing solutions - #yesweDAN

Environment and Health

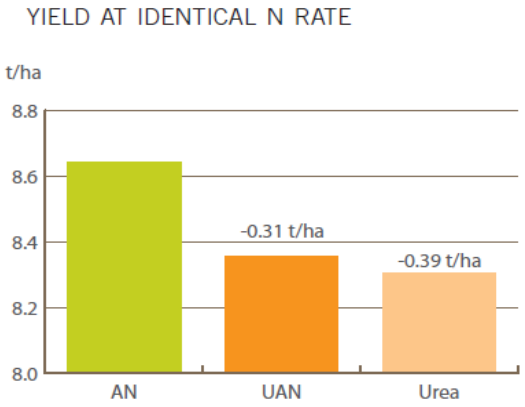
- **DAN** fertilizers have a 25% lower carbon footprint over their life-cycle.
- **DAN** fertilizers have demonstrated very low ammonia emissions compared to other N forms.
- Volatilized ammonia contributes to the formation of micro particles (PM 2.5) which can lead to health problems.

Providing benefits #yesweDAN

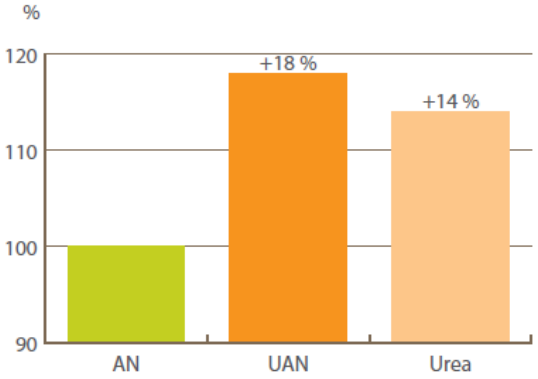
Agronomic

- **DAN** fertilizers are directly available to plants.
- **DAN** fertilizers suit all weather conditions.
- **DAN** fertilizers have a better Nitrogen Use Efficiency (NUE)
- **DAN** fertilizers produce more food.

Providing benefits - #yesweDAN

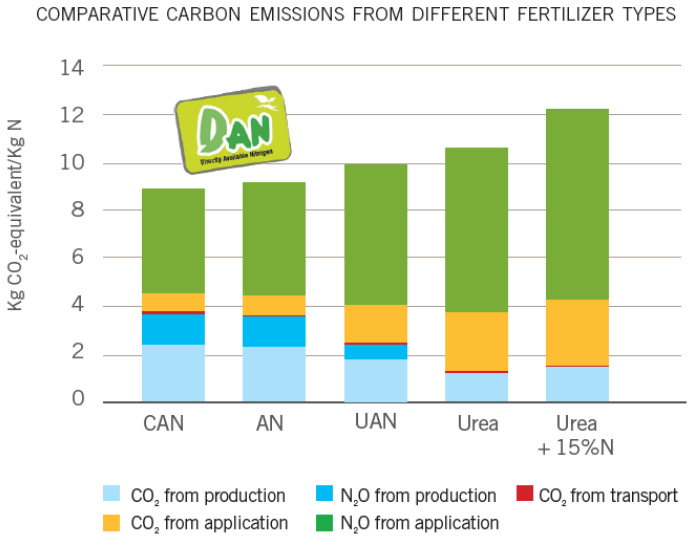


Yield was also lower with urea and UAN than with ammonium nitrate [ref. 5].



To maintain the same yield, significantly more nitrogen was needed from urea and UAN than from ammonium nitrate [ref. 5].

Directly Available Nitrogen (DAN) fertilizers offer the best means of increasing food production in an environmental way.



The life-cycle carbon footprint for ammonium nitrate is lower than for urea and UAN. When compensating for the lower efficiency of urea and UAN with a higher dosage, the difference is even more marked [ref. 15].

Providing solutions #yesweDAN

EU wide campaign

- 4-8 March.
- Full roll-out across member states.

Brussels DAN Team

Thank you!

Christian Palliere
christian@fertilizerseurope.com

www.facebook.com/fertilizerseuropepage

www.twitter.com/FertilizersEuro

http://www.youtube.com/user/FertilizersEurope

Group Fertilizers Europe

www.fertilizerseurope.com
www.productstewardship.eu
www.memberslounge.eu

fertilizers europe

Partnership for growth
Sustainable agriculture in Europe