

CDG ARABLE CROPS – Sectors Cereals, Oilseeds, Protein Crops
Meeting in Brussels, on 6 March 2020

Fertilizer management tools

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AGENDA

FERTILIZER MANAGEMENT TOOLS (FMTs)

- I. Context
- II. What are FMTs
- III. Examples and proven benefits
- IV. Development of FMTs
- v. Takeaways

Our mission statement as fertilizer industry

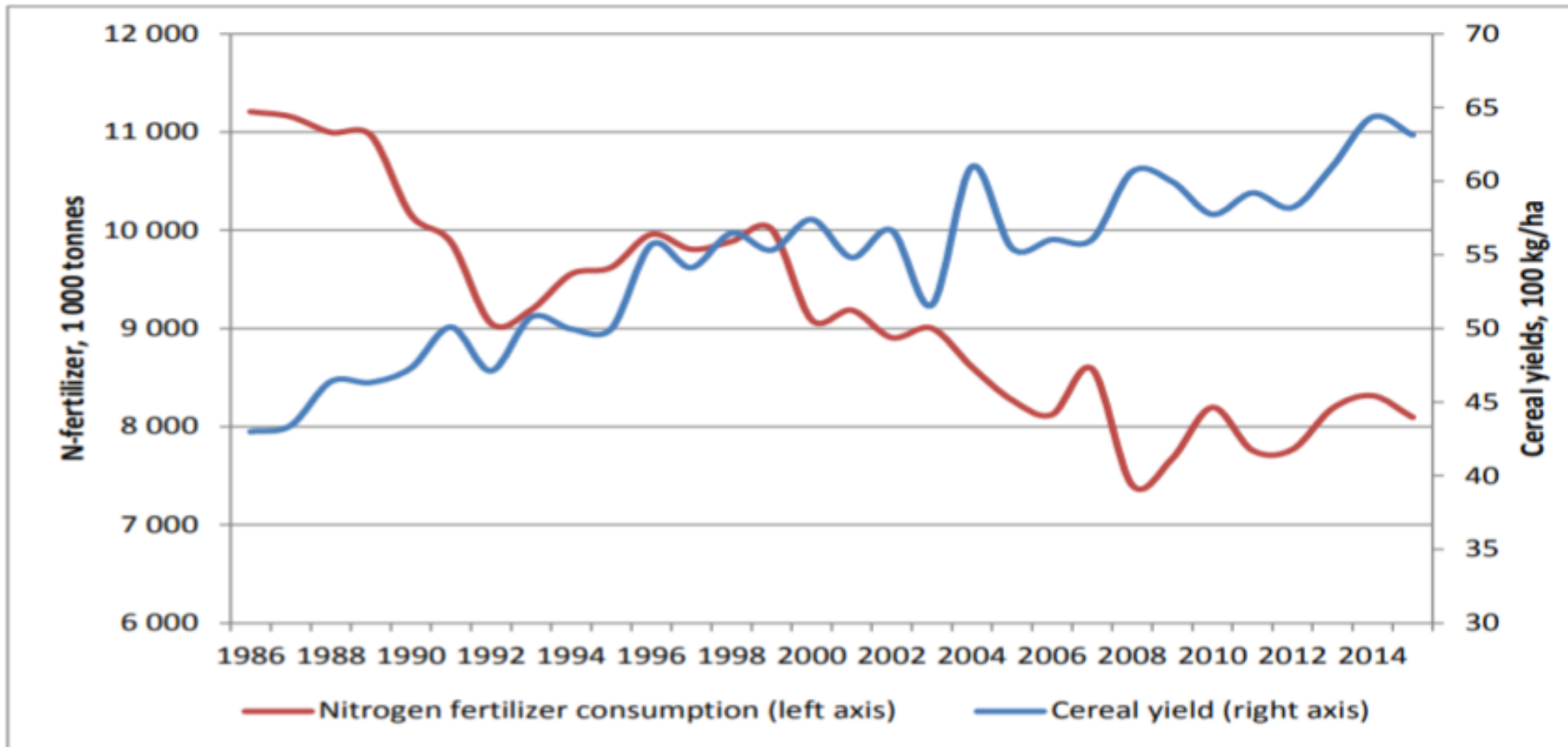
🌱 **Provide quality fertilizing products and services, so that farmers can produce high quality yields by ...**

- Guaranteeing a high enough nutrient content
- Ensuring the plant availability of the nutrients
- Developing advanced fertilizing products to meet environmental challenges
- Giving farmers tools to be more resource efficient and respond to specific challenges



More efficient use of fertilizers in EU

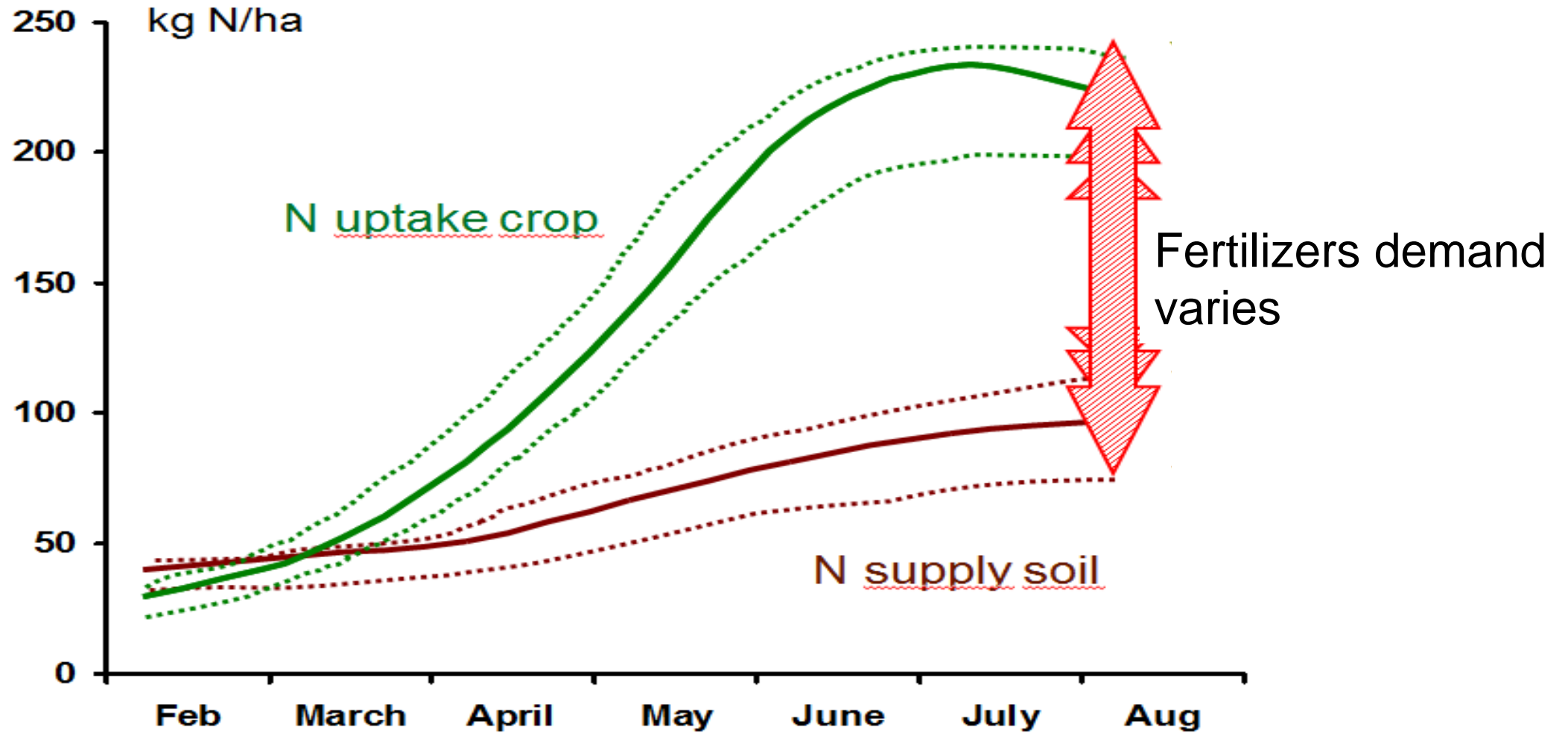
Figure 7: Cereal yields and nitrogen fertilizer consumption, EU-15



Source: DG AGRI, 2015

However, 40% of all nutrients applied on agricultural land are lost to the environment. We collectively have to do better and here fertilizer management tools can help.

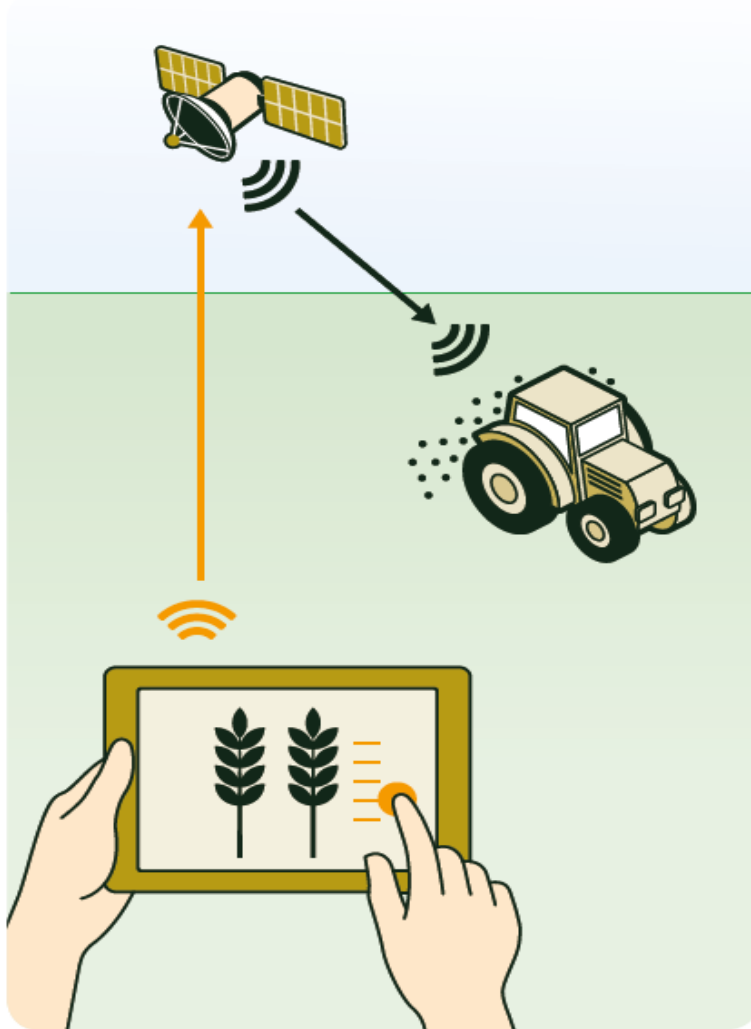
Optimum rate of fertilizer is a moving target



What are FMTs? - a definition

- ✿ Any physical device and/or information based program or combination of such
- ✿ that are designed to provide information and thus give decision support (advice)
- ✿ for fertilizing activities
- ✿ meeting the plant needs
- ✿ to achieve an improved nutrient use efficiency.

FMTs – a practical help to improve fertilization accuracy



Fertilizer industry is developing practical tools

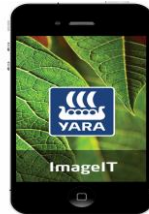
Best indicator of nutrient supply comes from crop itself

FMTs - some examples

NutriGuide
Your Crop Nutrition Advisor



N-Tester



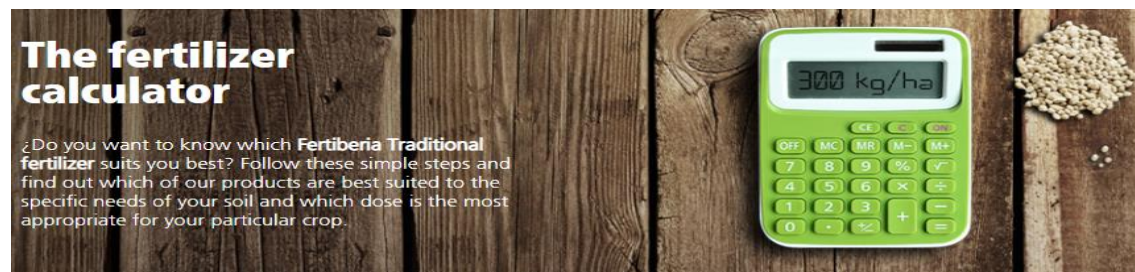
ImageIT



Water Sensor



N-Sensor



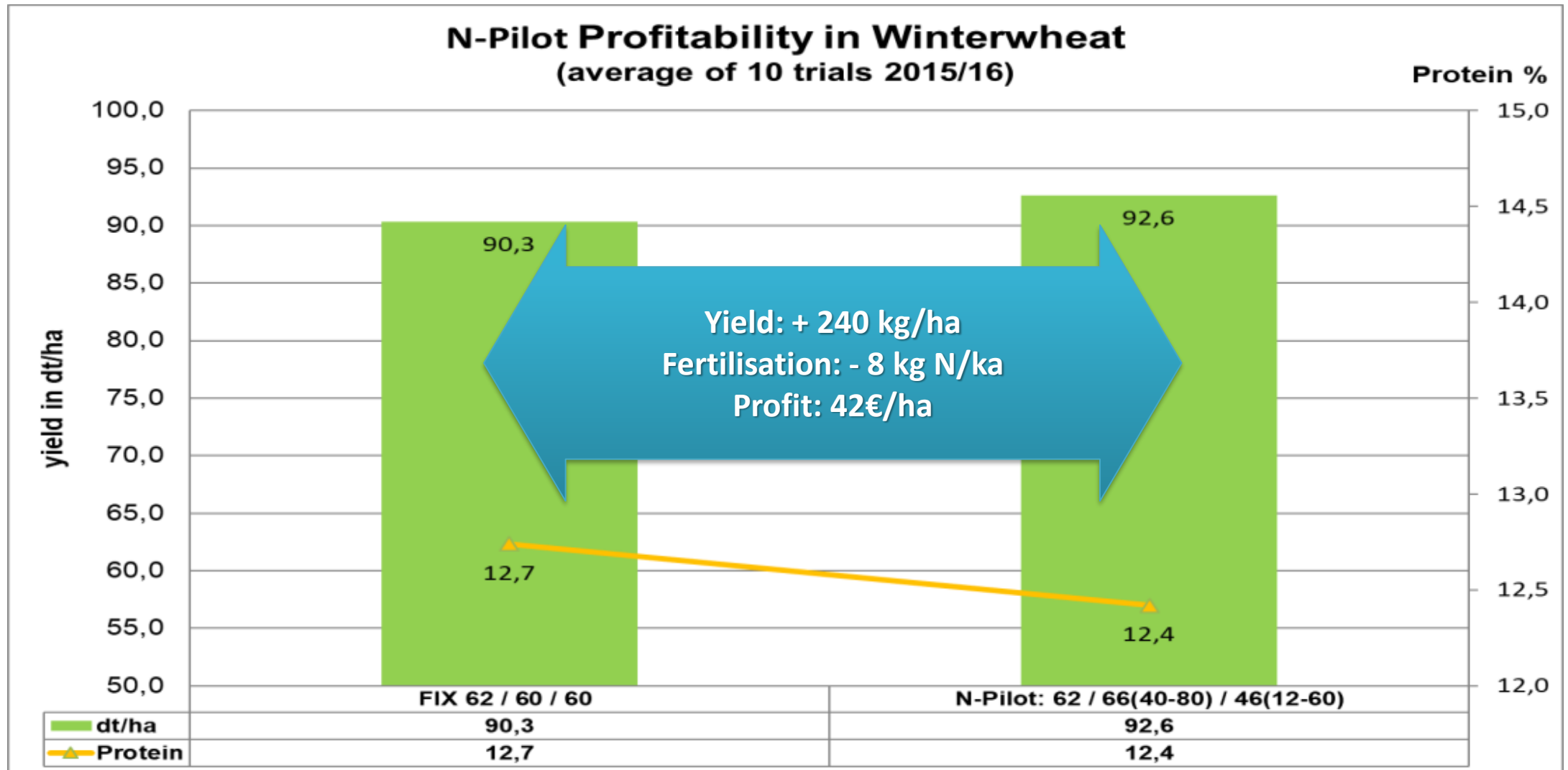
N-Prognos



Proven benefits of FMTs

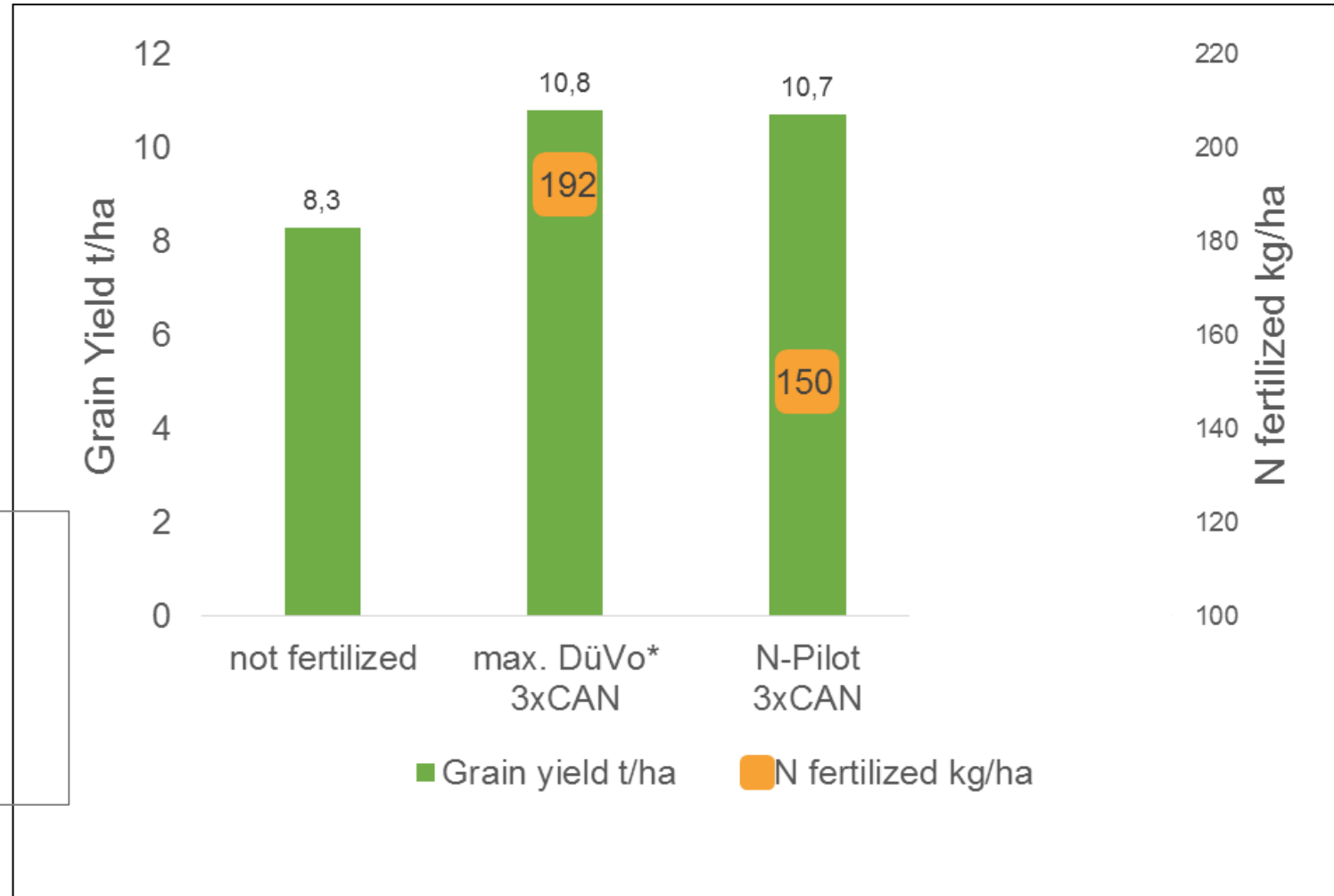
- 🌱 For the farmer
- 🌱 For the environment

FMTs improve yields and secure quality



FMTs enable higher Nitrogen Use Efficiency

Field Trials (LK NRW, Germany, Kerpen-Buir 2018)



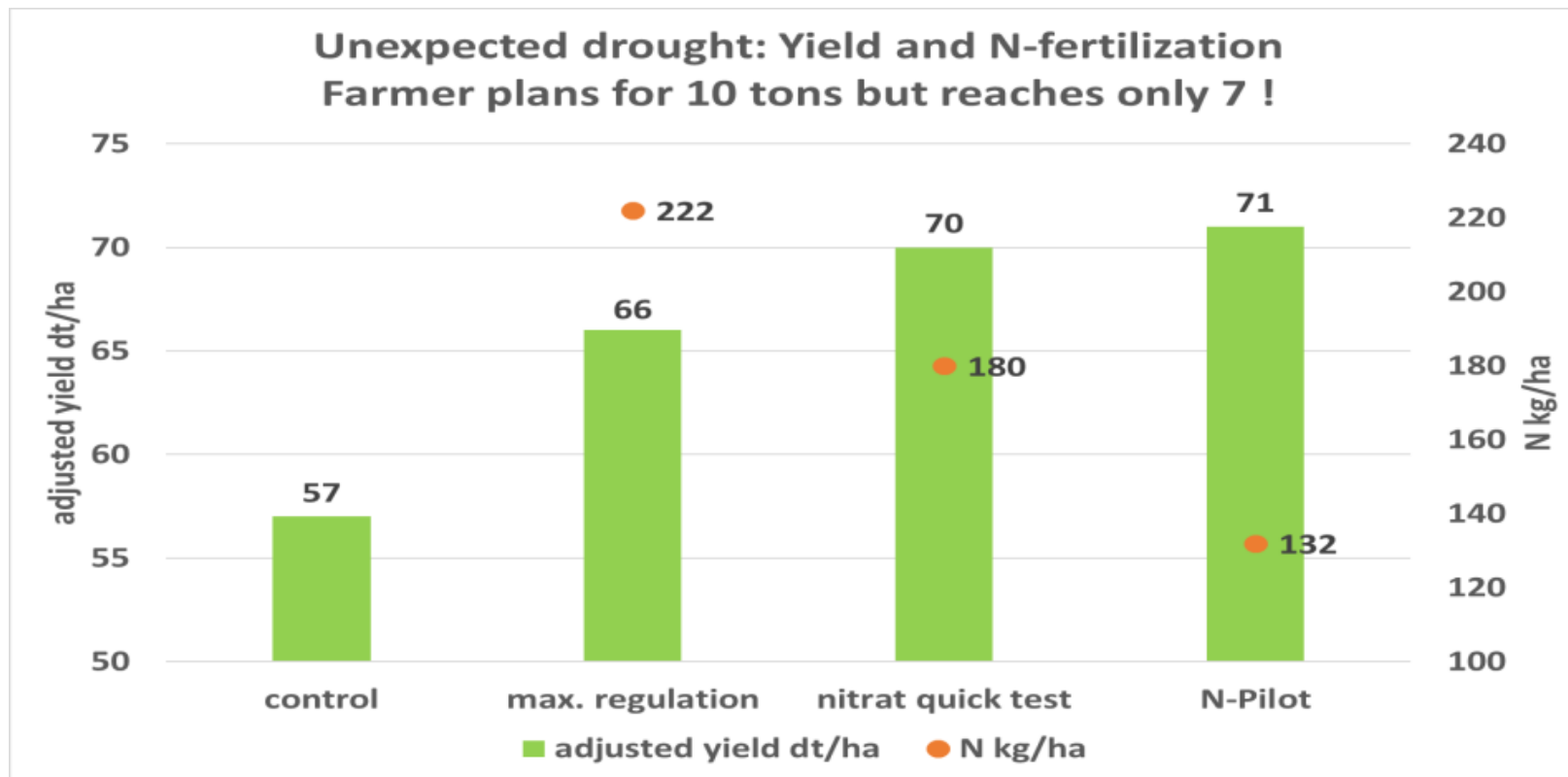
*max. DüVo = maximum N fertilization according to the German Fertilizer Ordinance

Source: Borealis

FMTs help to adapt to special situations

extreme weather conditions (e.g. draught):

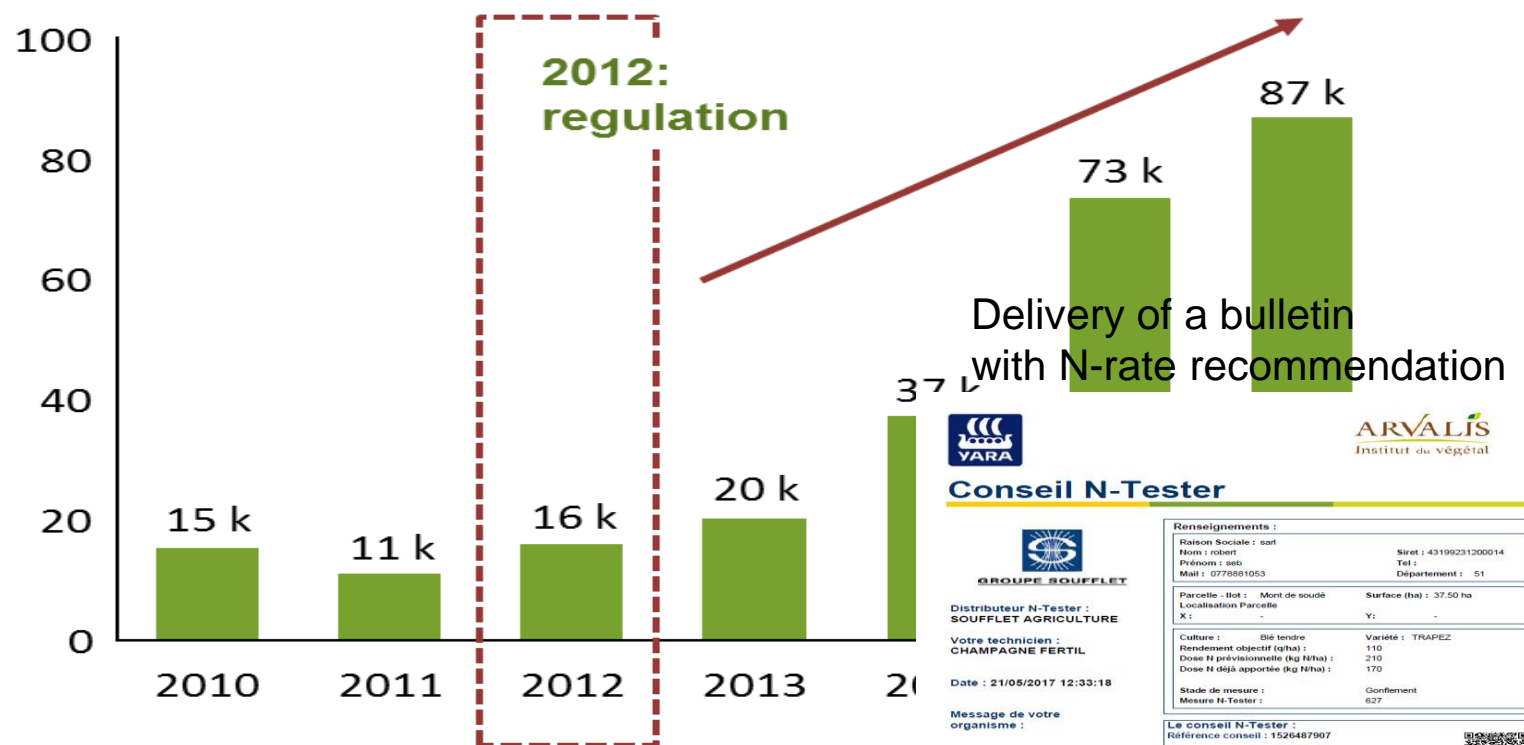
nutrient assessment leads to precise fertilization recommendation



Source: Fechner 2017/2018,
Ag. Chamber NRW, GE

FMTs facilitate regulatory compliance

No. of Yara N-Tester recommendations in France covering approx. 14% of the winter wheat area in 2016



- Legal framework can help implementation of precision farming practices.
- Environment and productivity can meet through policy.

Conseil N-Tester

Renseignements :

Raison Sociale : sart	Siret : 43199231200014
Nom : robert	Tel :
Prénom : seb	Département : 51
Mail : 0776861053	

Parcelle - Plot : Mont de soudé
Localisation Parcelle : X: Y: Surface (ha) : 37.50 ha

Culture : Blé tendre
Rendement objectif (q/ha) : 110
Dose N prévisionnelle (kg N/ha) : 210
Dose N déjà apportée (kg N/ha) : 170

Stade de mesure : Gonflement
Mesure N-Tester : 627

Le conseil N-Tester :
 Référence conseil : 1526487907

Optimisation rendement :
 Apportez 30 kg d'azote (N) /ha soit 90 kg d'ammonitrate 33.5 %

Optimisation rendement et protéines :
 Apportez 40 kg d'azote (N) /ha soit 119 kg d'ammonitrate 33.5 %

Rappel : la fiabilité maximale de la Méthode N-Tester suppose le respect strict de l'intégrité de la démarche. Pour plus de renseignements sur les conditions de validité du diagnostic consultez services.yara.fr

Development of fertilizing practices and FMTs

- 🌱 Dynamic development and integration of new technologies,
- 🌱 enabling better balanced plant nutrition planning
- 🌱 and more precise application
- 🌱 increasing dissemination of availability
- 🌱 at declining cost (for services and devices)
- 🌱 what leads to improved nutrient use efficiency
- 🌱 resulting in better farm economics
- 🌱 and contributes to protection of environmental resources

key takeaways

 **Balanced plant nutrition with the help of FMTs contributes to:**

- improve yields and secure quality
- enable higher Nitrogen Use Efficiency (i.e. save resources)
- help to adapt to special situations
- facilitate regulatory compliance

THANK YOU VERY MUCH FOR YOUR ATTENTION !

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