

Nitrogen Use Efficiency (NUE)


**an indicator for the utilization of
nitrogen in food systems**

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EU Nitrogen Expert Panel

CDG Arable crop – 22 September 2015

A large, stylized blue and green swoosh that curves across the bottom of the slide.

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Content:

- 🌱 EU N Expert Panel, the rationale
- 🌱 Constitution and membership
- 🌱 First mandate: developing a NUE indicator
 - First session (15-16/09/2014): General principles
 - Second session (10-12/06/2015): Implementation
 - Adoption of main report on NUE indicator
 - Basis for NUE indicator at farm level
 - Towards NUE indicator across the food value chain

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Rationale:

- Addressing constraints/barriers to **improving NUE**, generated by the broadly shared conviction that focusing only on his expertise area is more efficient.

Objective >> Overcoming some of these barriers by bringing experts together, with dedicated leadership,

- To facilitate and accelerate solving certain key issues, **Fertilizers Europe** takes initiative to “**bridge communication**” between:
 - Scientific community,*
 - EU and national policies*
 - Industries in the food chain*

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Constitution - Membership



 Established spring 2014

 Panel consists of # 20 experts from:

- | | |
|--|----|
| – Science | 13 |
| – Policy (EU Commission) | 4 |
| – Industry: | 5 |
| >> Fertilizer industry, farmers, food industry | |

 Independent body supported by Fertilizers Europe



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Working strategy - methods



Towards actions and effectiveness

- 🌱 Working with existing materials and science
- 🌱 Looking for concrete and simple solutions, immediately applicable
- 🌱 “Making things to happen”



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First mandate - from 2014 onwards



>> To prepare a well elaborated proposal for assessing NUE in food systems in EU, to be used as indicator by policy and practice.



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First session - 15-16 September 2014



- 🌱 Agreement on a NUE indicator integrating:
 - Maximum/Minimum NUE >> resource efficiency
 - **Maximum N balance (surplus)** >> **environment**
 - *Minimum Productivity level* >> *economics*
- 🌱 Publication of “Exec Summary” of the proposal
- 🌱 Coordination with other initiatives:
 - Global NGOs (UNEP/GPNM, UN/SDGs/SDSN, IFA)
 - Global monitoring tools (Cool Farm Tool)

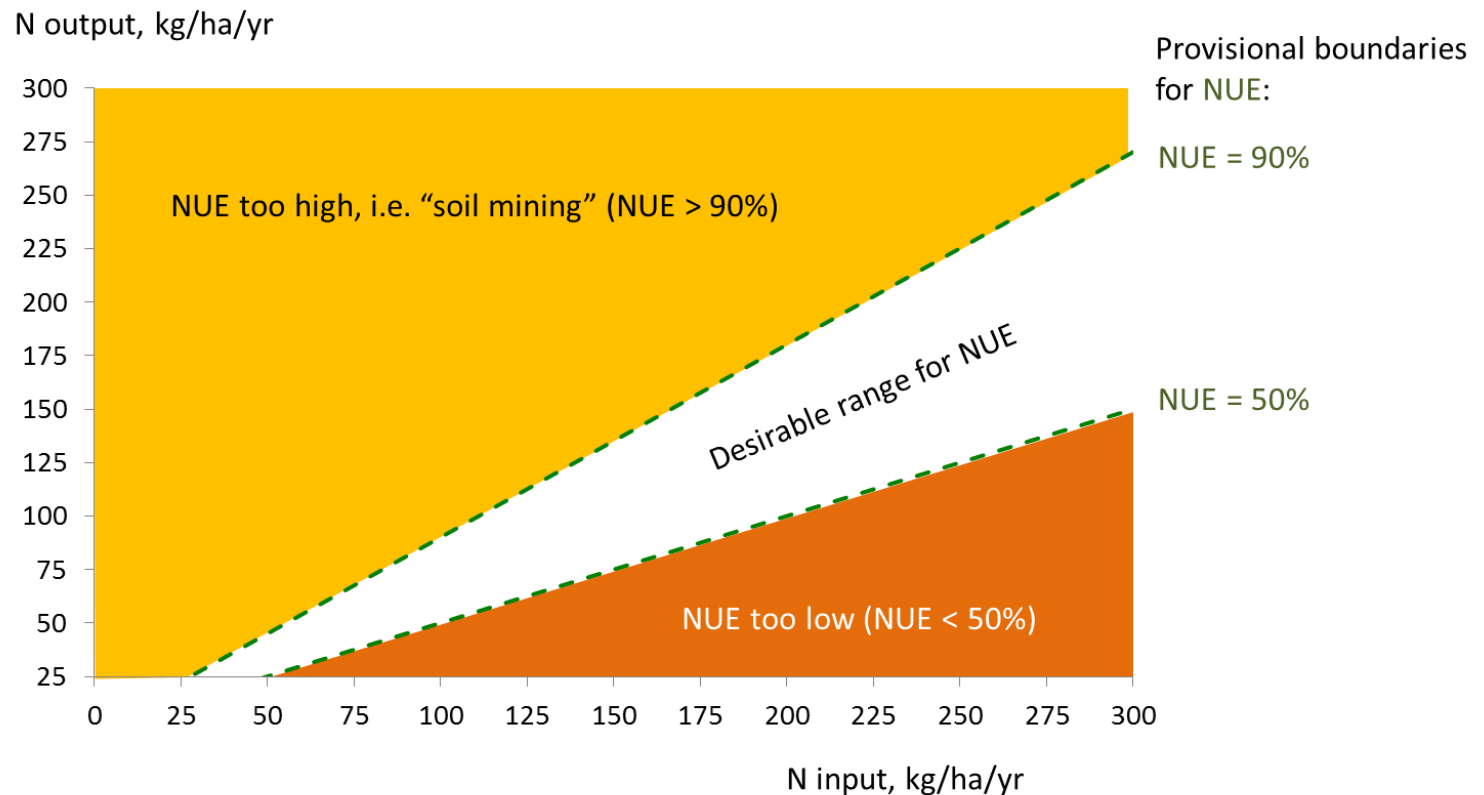
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A graphical presentation for NUE



Fig. 1a: Definition of acceptable boundaries for N output/input ratios giving a desirable range for NUE

(all values are provisional and only serve as examples)

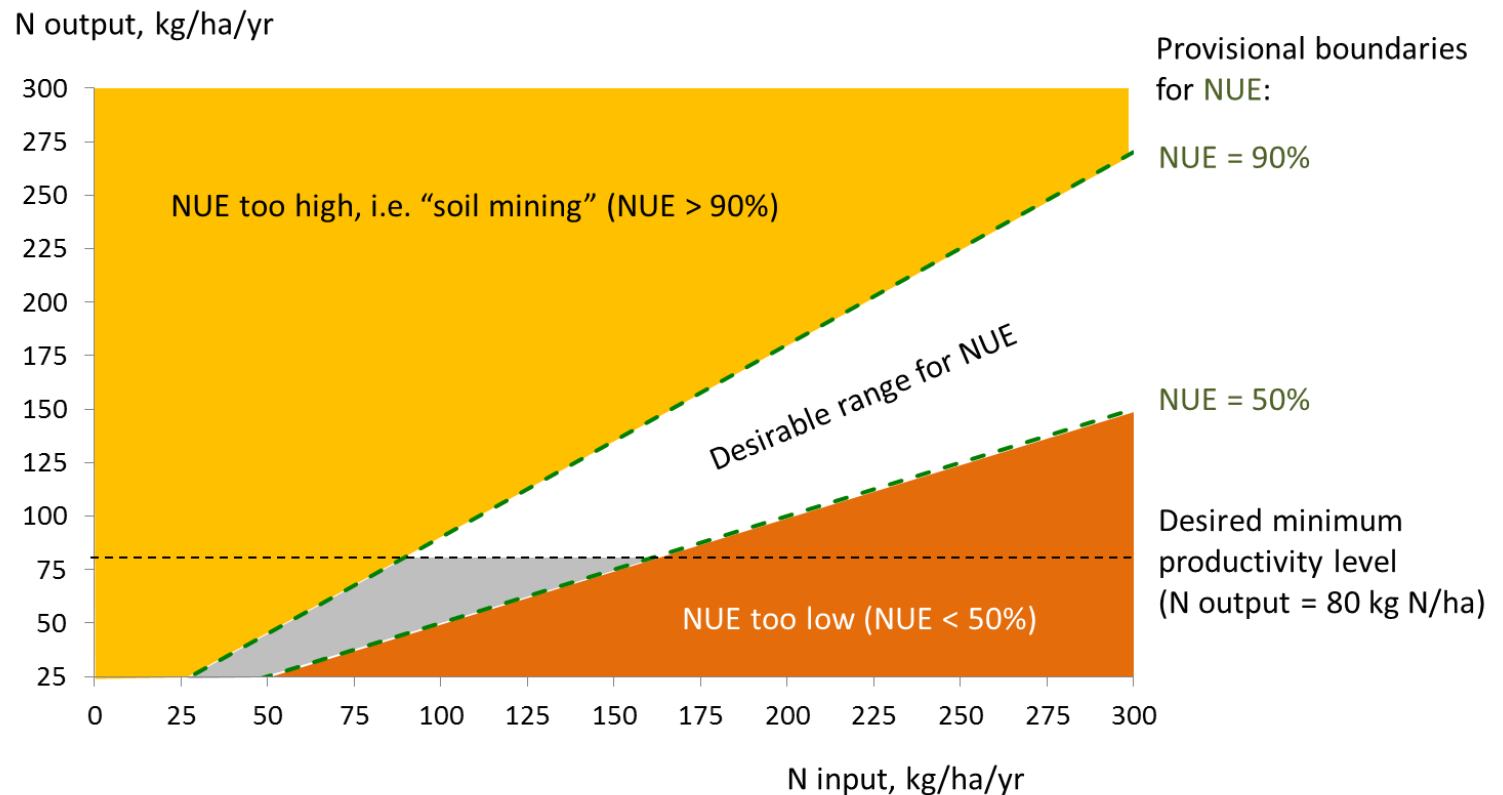


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A graphical presentation for NUE

Fig. 1b: Definition of acceptable boundaries for N output/input ratios giving a desirable range for NUE – supplemented by a desired minimum productivity level (all values are provisional and only serve as examples)

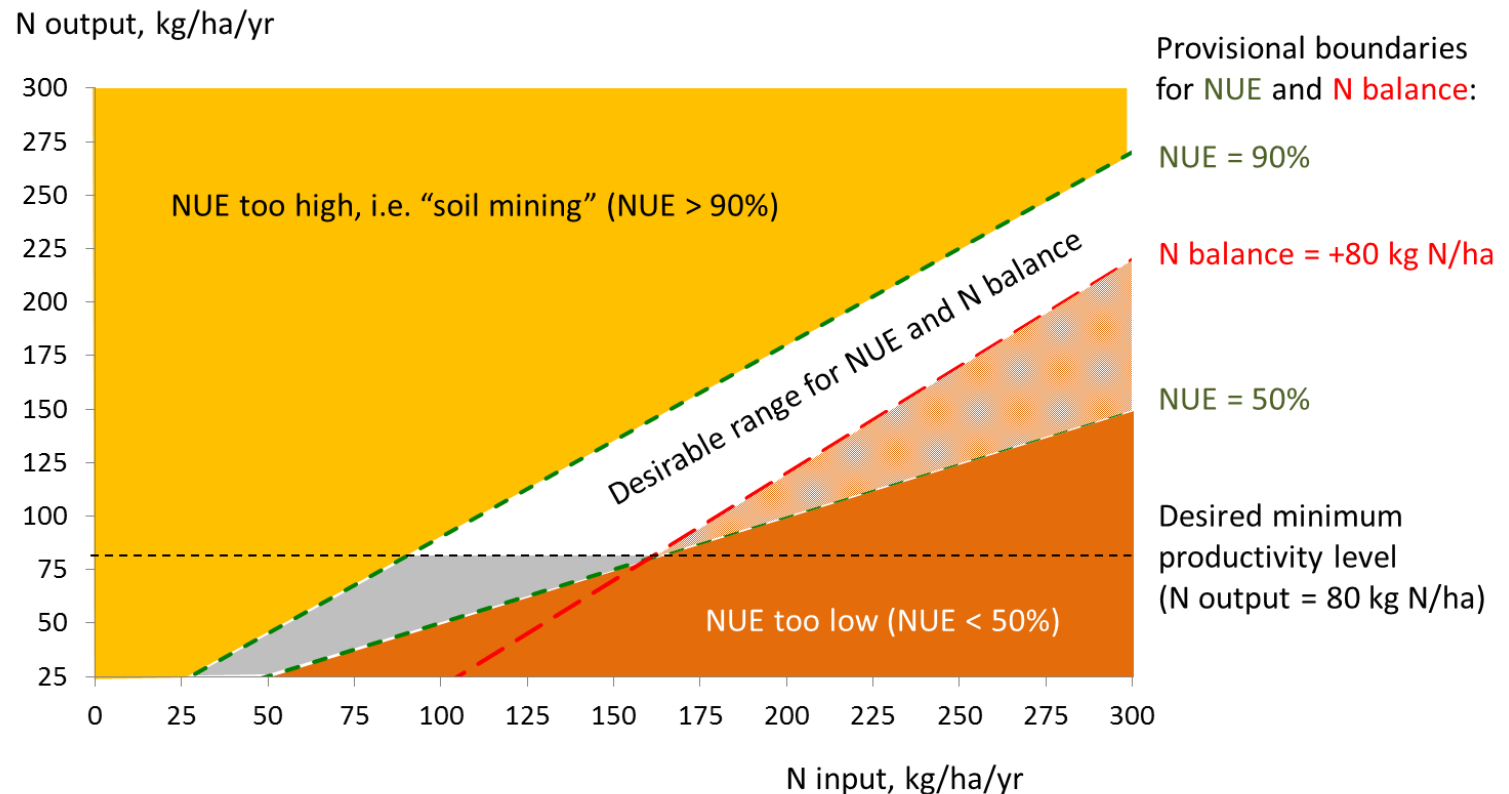


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A graphical presentation for NUE

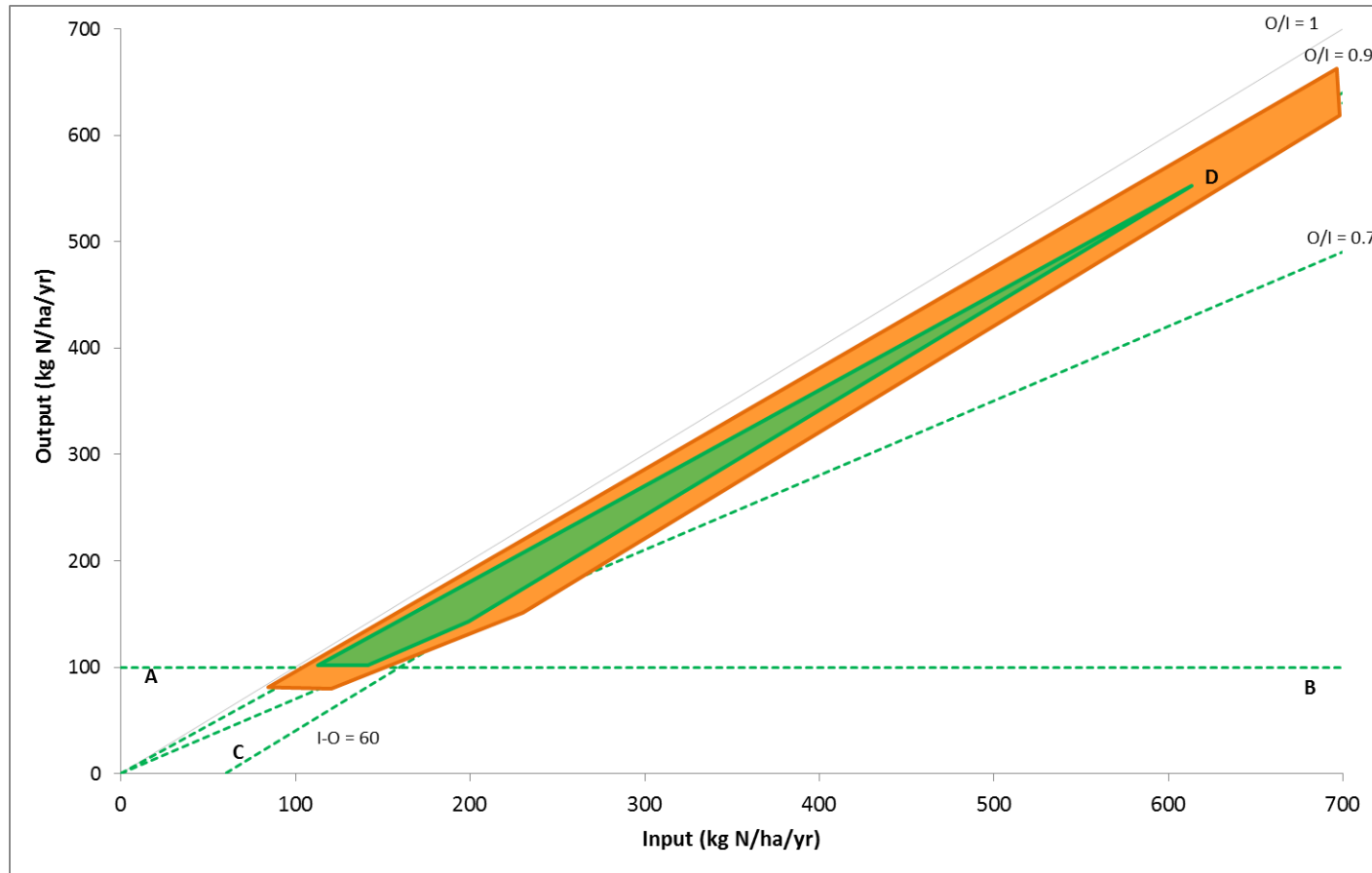


Fig. 1c: Definition of acceptable boundaries for N output/input ratios giving a desirable range for NUE – supplemented by an acceptable N balance surplus (all values are provisional and only serve as examples)



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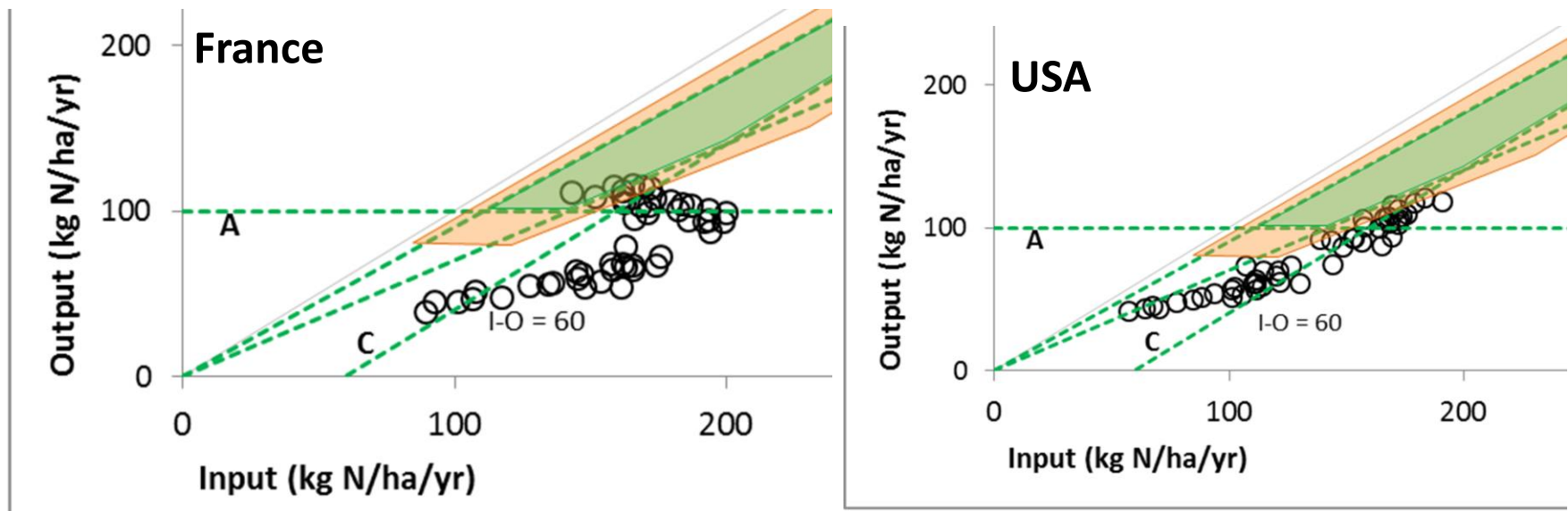
Example of use: Introducing “variances”



User friendly : Towards a « traffic light indicator »

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Example of use: plotting historical data



Evolution over time could be plotted on the NUE 2D graph:
>> Identifying area for improvements

Data from Lassaletta et al., 2014

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Second session - 10-12 June 2015



New membership:

- Integration of farmers (COPA COGECA)
- Link with Cool Farm Alliance (Aberdeen University)
- First contact with Food Industry (*for next session*)

Progress on NUE mandate:

- Partial adoption/Validation of main NUE report
- First phases towards implementation:
 - Basis for a NUE indicator to be used at farm level
 - Towards using a NUE indicator across the food value chain



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Second session - follow up



Next steps:

– On current session:

- Validation of main report
- Official presentation at [Milano2015](#) (10 September 2015)

– For next session:

- Integration of **food industry** as “**EU N Expert Panel**” member
- Finalizing proposals of a NUE indicator at farm level
- Finalizing principles to develop a NUE indicator across the food chain
- Integration of a **NUE indicator** in **Cool Farm Tool**
- Developing coordination on NUE with other global initiatives



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First mandate - from 2014 onwards



Conclusions

- “Nitrogen is essential for life”
- “EU nitrogen experts have joined forces to promote efficient nitrogen use in food production”
- “The ambition is to encourage best use of nitrogen to mitigate threats to our health and the environment”



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Thank you for your attention!

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Secretariat



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