

25-26 June 2019 in Lisieux,  
Normandy - France

Thematic Session 1: How to reduce the use of inputs as a way to increase the self-sufficiency of farms?

## Workshop 1.3: Plant nutrition

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<https://www.reseaurural.fr/Sommet-agri-innovation-2019>

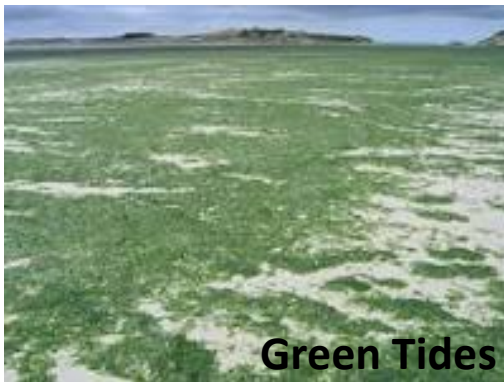
<https://ec.europa.eu/eip/agriculture/en/event/agri-innovation-summit-2019>

# State of art

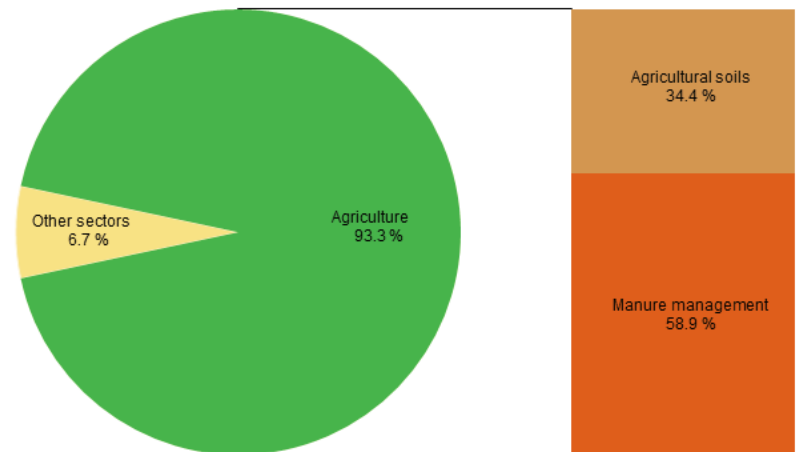
Inappropriate fertilization practices have negative environmental impacts

## Water, Air and Soils quality

Nitrates affect over 33% of the area of groundwater bodies in France and 18 % in Europe



European waters, Assessment of status and pressures 2018, EEA Report No 7/2018



60% of Ammonia emissions in Europe are due to manure management

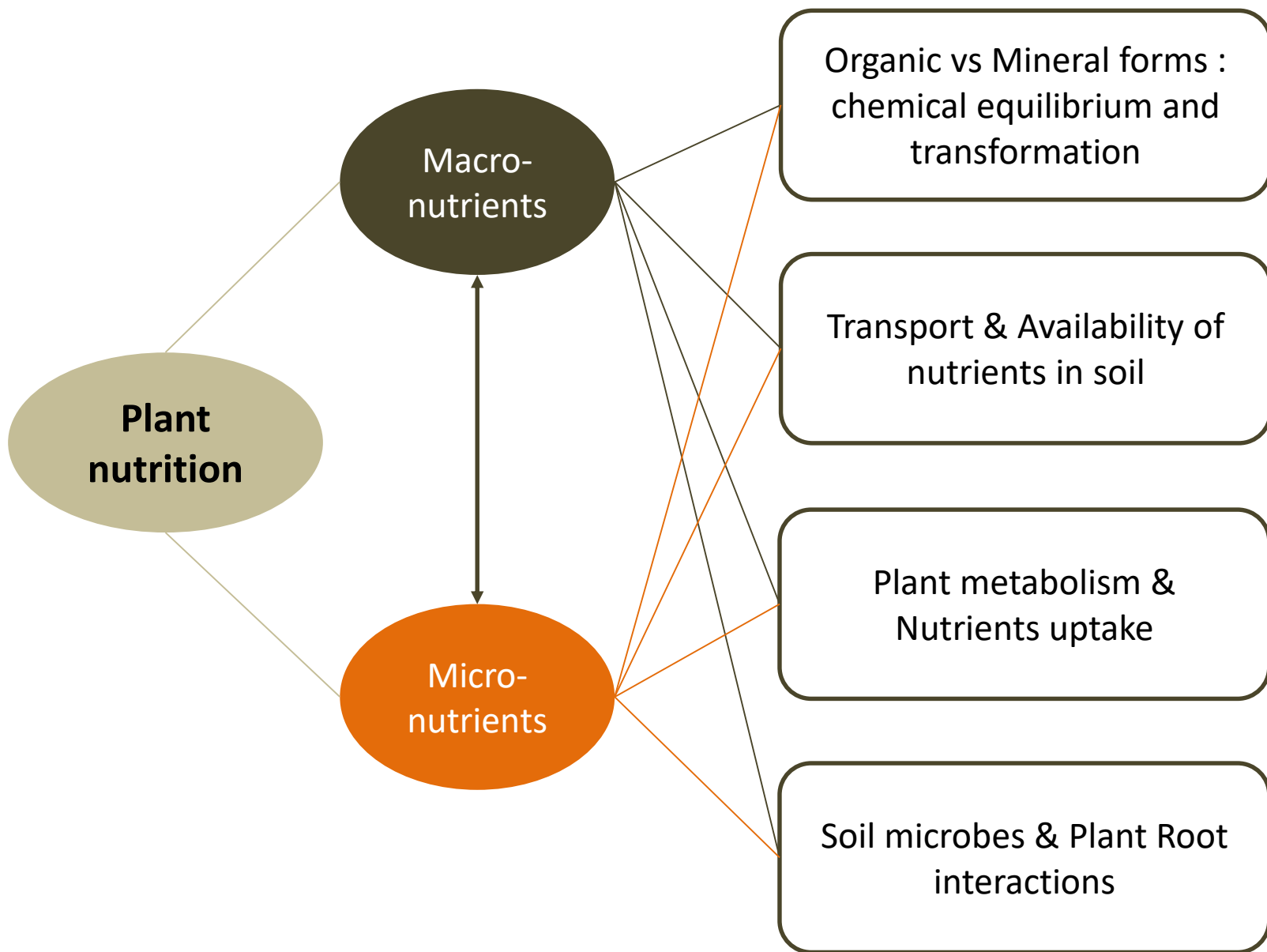
Ammonia emissions, EU-28, 2013

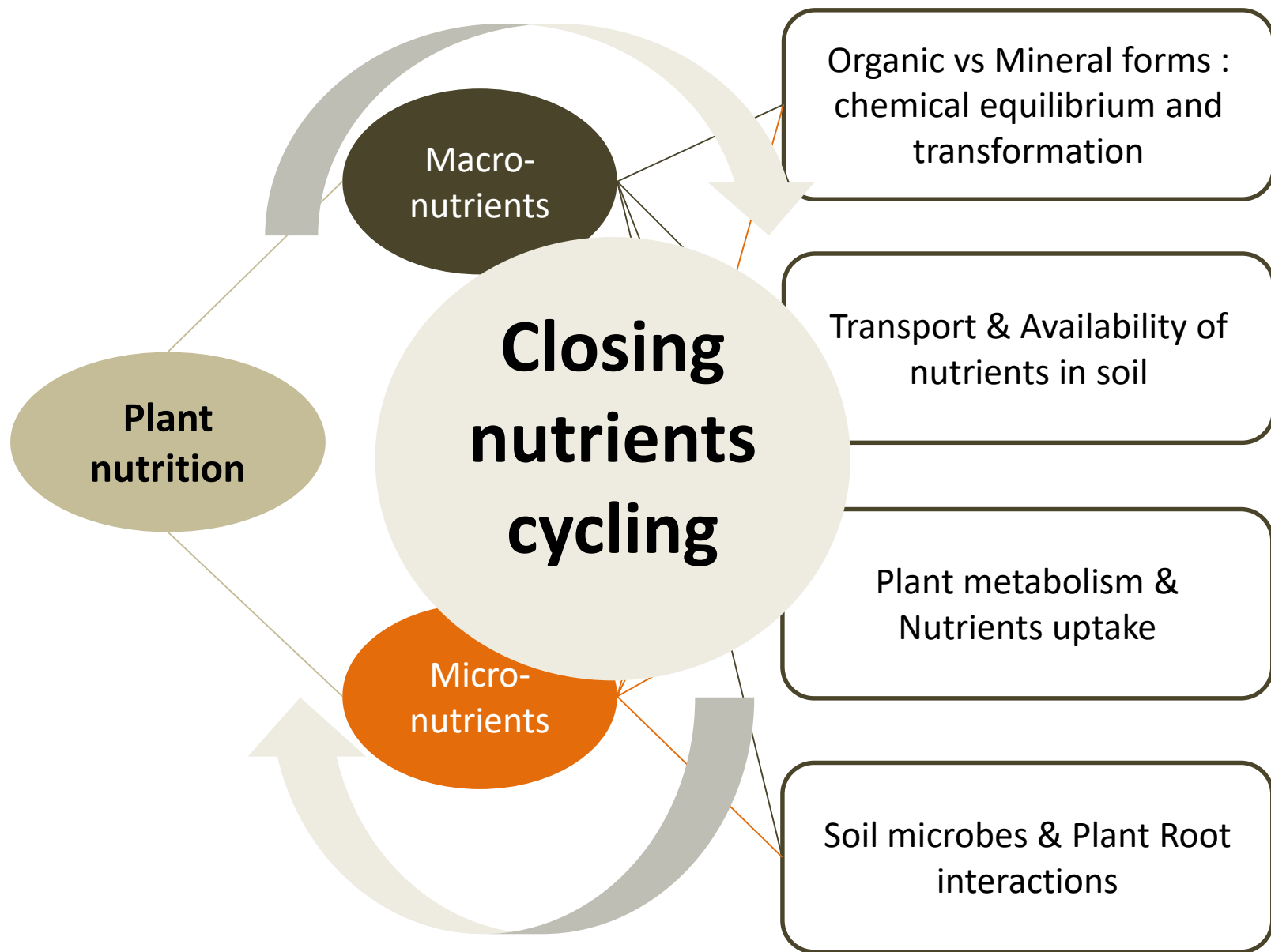
# Challenges

Producing food for all at an affordable price while reaching the environmental targets.

- Reach better yields
- Nutrient management by focusing on the needs of the plants







# Improve synchronisation and synlocalisation of plant-available nutrients supply and crops demand

- Soils intrinsic and dynamic properties vs nutrient availability
- Exogeneous Organic matter used in agriculture : management and behavior of nutrients after addition to soil
- Interactions between nutrients : effect of P, K, S availability and their interactions on N and P uptake
- Integrated management of soil biodiversity to promote processes linked to nutrient supply
- Decision-support tools for inorganic and organic crop fertilisation, and diagnosis tools for nutrients management



# Some projects

- SOLINAZO : Novative solutions for N management in crop systems – the case of wheat crop
- OFIVO : Optimisation of grapevine Fertilrrigation in the french region Occitanie



# Some projects

- NutrInnov : novative diagnostic tool to improve the nutrition of vegetable crops



- French joint technology network « Fertilisation & environment »



- PROTERR : Organic waste products in crop system





Thank you for your attention.

Have fruitful discussions !

