

# Joint Technological Network Fertilisation & Environment

Teams, projects and tools mobilized around the management of biogeochemical cycles in agricultural systems (2007 - 2018)



**34 partners**  
22 founding members, 12 associated partners, ~ 100 persons  
8 facilitators



## A unifying and ambitious goal

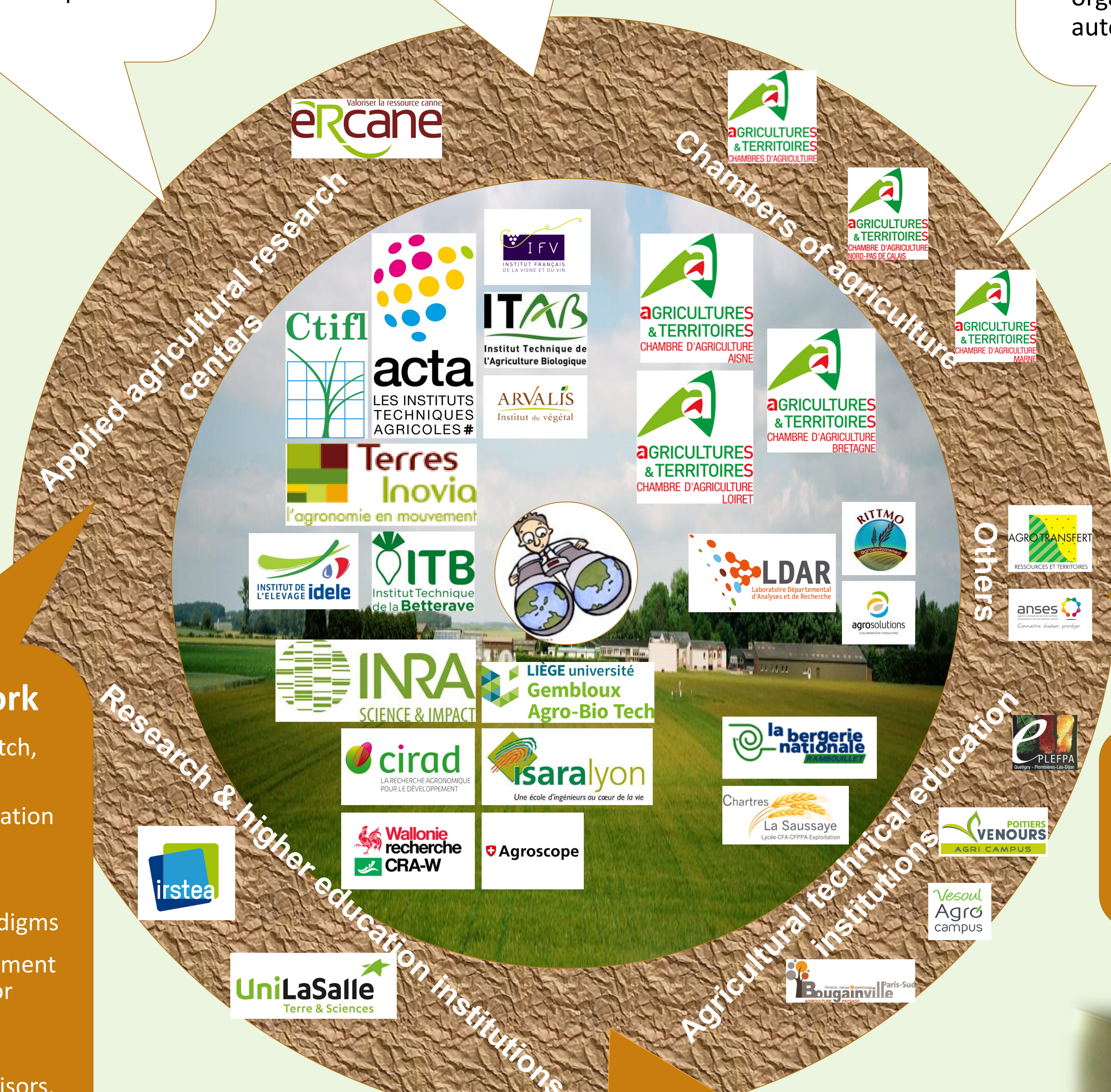
Provide stakeholders (farmers, agricultural advisors, teachers, resource and land managers, public authorities...) with references, methods and tools for a sustainable management of biogeochemical cycles and soil fertility in the main farming systems present in France (Metropolitan and Overseas).

## Stakes at the heart of agro-ecological issues

- Reduce agrichemicals' use
- Limit nutrient losses in the environment (water and atmosphere)
- Contribute to climate change mitigation

## 3 priority themes

- Crop fertilisation
- Management of biogeochemical cycles at different scales and organizational levels
- Recycling of waste products (mainly organic) in relationship to farms autonomy for N and P



## 4 main areas of work

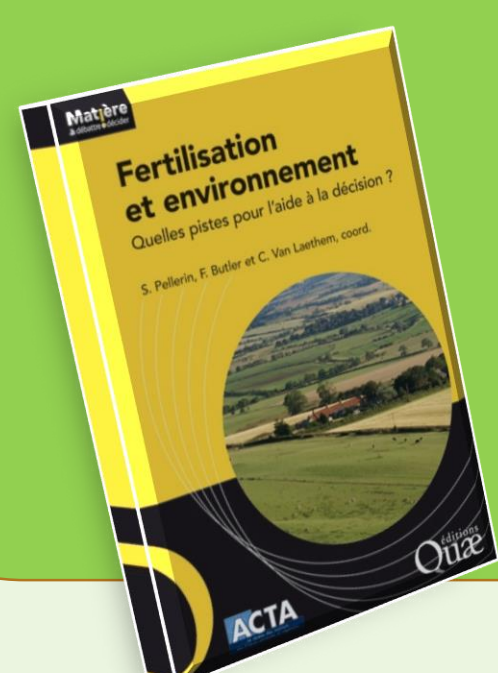
- Foresight and scientific watch, European strategy
- Coordination and mutualisation around the acquisition of scientific and technical references and the appropriation of new paradigms
- Development and improvement of decision-making tools for stakeholders
- Transfer of knowledge to teachers and technical advisors, Support to public policies

A network which helps to build and share a common vision



## Diversified collaborative productions

**A collective prospective work** on the future needs in references, tools and methods for biogeochemical cycle management and fertilisation reasoning  
« Fertilisation et Environnement : Quelles pistes pour l'aide à la décision ? »



Co-publishing Acta-Quæ  
Feb. 2014, 288 pages

## Decision-support and environmental diagnostic tools

- **Syst'N®**, diagnostic tool for N management, at cropping system level
- **N-Pérennes**, a decision-support system for N fertilisation management on fruit trees and vineyard, and **N'EDU**, an educational software to promote the learning of N dynamics in agrosystems and the N balance-sheet method; both are derived from **AzoFert®**, a decision-support system for the prescription of N fertilisation of crops, at plot and annual scales
- **Inter-comparison protocols and a labelling procedure** for decision-support tools (in partnership with the COMIFER)

## And...

- **Several Research & Development collaborative projects**, for instance on organic waste products characterisation, N performances of crop systems, or N losses, particularly volatilisation induced by organic and mineral N fertilizers spreading...
- **Shared databases and common scientific references** (PERTAZOTE, SI PRO...)
- **A scientific and technical advice to public authorities** by providing support to local groups of experts on nitrate losses (*Groupes Régionaux d'Expertise Nitrates - GREN*), in partnership with the COMIFER
- **Educational tools, scientific and technical publications**, scientific workshops, technical meetings organised to share and transfer information and knowledge

## An international workshop on nutrient management and decision-support systems

Collaboration with INRA and COMIFER, side-event of the 20th N Workshop in Rennes, on June 27, 2018

For further information:

<http://www.rmt-fertilisationetenvironnement.org/>

Contacts:

mathilde.heurtaux@acta.asso.fr, sylvie.recous@inra.fr, f.laurent@arvalis.fr, Jean-Marie.Paillat@cirad.fr, c.legall@terresinovia.fr, fobriot@aisne.fr, pascal.dubrule@inra.fr, bernard.verbeque@loiret.chambagri.fr