



Plant nutrition



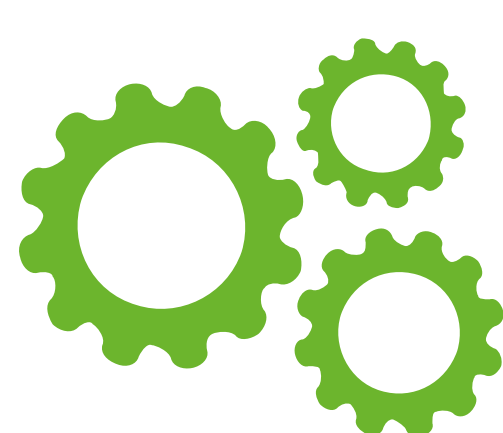
AGRI
Innovation summit 2019



Other Thematic Network

Fertilization & Environment joint technological network

Réseau Mixte Technologique Fertilisation & Environnement



Practical problem

Endow farmers, extension services and territory managers with references and tools for a sustainable management of nutrients in cropping systems.



Partners

The network coordinated by ACTA comprises 31 French, 2 Belgian and 1 Swiss organizations involved in research, training and extension activities.



Calendar

Start: 01/01/2007
End: 01/01/2019



Budget

Total amount:
€710,000

Objectives of the project

The aim of this network is to contribute to the elaboration of methods and tools for sustainable fertilization practices in agriculture by considering together primary productivity, products quality and environment protection efficiency. This network seeks to generate synergies between research, agricultural extension services and education. This requires pooling of knowledge, tools and references, consensus building of science and techniques and the establishment of a common understanding of nutrients biogeochemical cycles' management issues in agriculture. The results are mobilized for transfer and education as well as a scientific support for public decision-making process.

Main activities

The RMT F&E work programme is structured around three thematic priorities which, by combining plant production and environmental conservation, are in line with agro-ecological principles (parsimonious use and equitable distribution of resources, reduction in the use of inputs, recycling of organic products, ecological intensification, preservation of agro- and ecosystems, enhancement and preservation of ecosystem services provided by agriculture and soils) at different spatial and temporal scales: crop fertilization, recycling of waste products (mainly organic), control of biogeochemical cycles at different scales and organizational levels.

Expected results

To carry out its programme of activities and produce the expected results, the RMT F&E facilitation team organizes the work along four axes, defined by the type of production they generate: – Foresight and scientific watch, European strategy – Coordination and sharing around the acquisition of scientific and technical references and the appropriation of new paradigms – Development and improvement of decision-making tools for stakeholders – Transfer and training to education and development; support to public policies.

Results so far/first lessons

– Development of databases and implementation of decision-making tools, Characterization of organic wastes, naming and typology according to use, Improvement of N and P management at plot, farm to regional scales; measurements of losses (air, water); impact of agricultural practices (crop rotations, legumes, reduction of mineral fertilizer) – Development of diagnosis and/or decision making tools in the area of fertilization and management of biogeochemical cycles: e.g., AzoFert®, software for advice on N fertilization at the annual field scale; Syst'N® webservice tool for estimating N emissions (NO₃-, NH₃, N₂O), at the scale of crops rotations. – Conception of an educational tool (N'EDU).

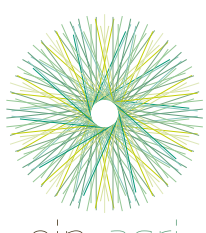
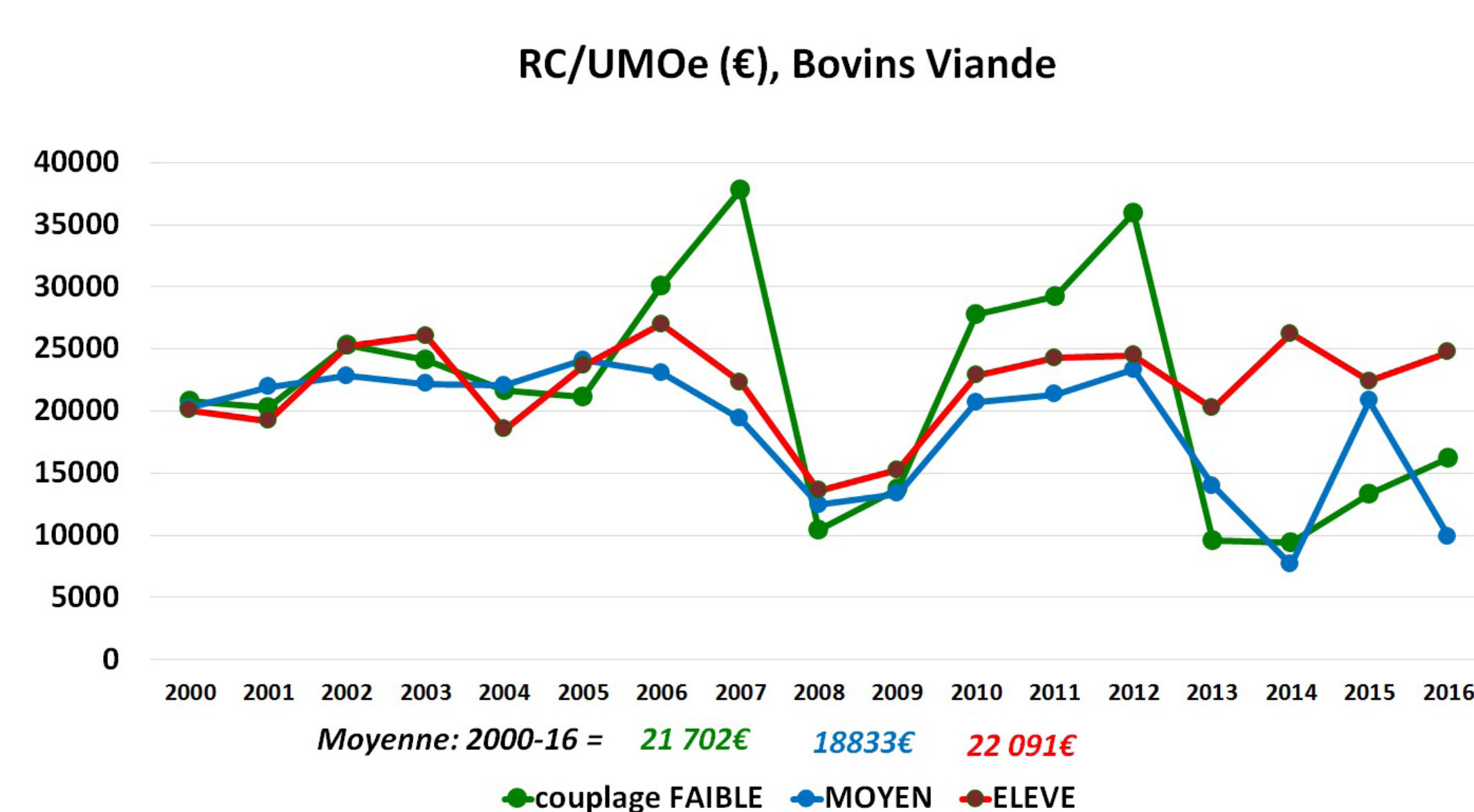
Who will benefit

The RMT F&E promotes (i) the sharing of knowledge, tools and references, avoiding dispersion and duplication, (ii) the development of scientific and technical consensus among its members and beyond, (iii) the acquisition of a common vision of the major issues related to the management of biogeochemical cycles in agriculture and (iv) produces: – Teaching tools for teaching and development and training for extension advisors and students; – Scientific seminars and technical days, technical supports (user guides, database,...) that promote the sharing of results – Scientific and technical support to public policies particularly on the implementation of the Nitrates Directive (GREN).

Supported by:



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