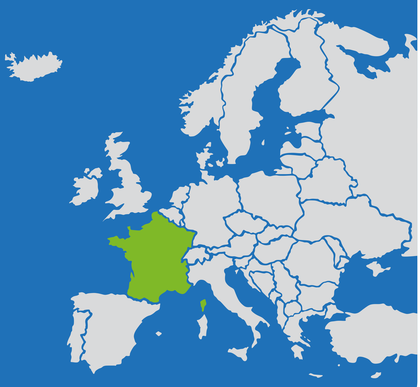
Soil: fertility, biological life and fighting against erosion



AGRI Innovation summit 2019

Operational Group

Guyafer 2 project: Organic soil fertility management in French Guiana

Guyafer 2: Gestion de la fertilité organique des sols en Guyane française

Practical problem

To maintain or even improve the tropical soil fertility of French Guiana, agro-ecological processes focusing organic matter are developed.

Partners

Scientific partners: Solicaz (leader), UMR EcoFoG, CIRAD, INRA. Technical partners: Chambre d'agriculture, CFPPA, MFR and other Guianese partners.

Calendar

Start: 01/01/2016
End: 01/01/2019

Budget

Total amount:
€279,888

Objectives of the project

The main objective of the Guyafer project is to promote organic sustainable agriculture, integrated into the ecological transition approach, responding to local and global issues of sustainable development. More particularly: – Meeting the needs of farmers, – Design and evaluation of innovative cropping systems, – Improving soil fertility through adapted practices focusing on the valorization of local organic matters, – Transfer of agro-ecological practices to agricultural professionals. This project is integrated into network program "RITA" (Réseau d'Innovation et de Transfert Agricole dans les DOMs"/Agricultural innovation & transfer network in French oversea territories).

Main activities

To lead this project, various actions have been carried out: – Survey of farmers to assess their awareness of organic fertilization, – Inventory and agronomic analyses of different types of organic matters (OM) recoverable in agriculture in French Guiana, – Establishment of open-field experiments in co-design with farmers, – study of the improvement of the chemical, physical and biological properties of soils, – Field kits tests for rapid diagnosis of soil fertility, – Conducting participatory workshops and training sessions on organic fertilization, – Production of a booklet "Guidebook to Organic Fertility in French Guiana".

Expected results

– The use of organic matter improves soil fertility, – The different organic matters available in French Guiana have different compositions and different actions on soil fertility, – Raise farmers' awareness of organic fertilization by transferring the results acquired during in situ experiments and produce tools that will benefit them.

Results so far/first lessons

– Farmers' awareness of the use of OM, but lack of practice, – Different agronomic properties depending on the type of OM (fertilizer/amendment, richness in nutrients, etc…) -> Coming soon, creation of a decision support tool for the realization of a fertilization plan, – Combining different types of OM makes it possible to overcome some disadvantages (association to stop nitrogen hunger with the use of Rameal Chipped Wood – RCW, improve the action time of the different OM by associating them with charcoal, etc…), – Adaptation of rapid diagnosis field kits to tropical pedoclimatic conditions.

Who will benefit

The results of this project will directly benefit farmers, as well as agricultural group technicians in French Guiana. These results can also be extrapolated to neighboring countries sharing the same pedoclimatic conditions (Guiana shield's countries and Brazil).

Supported by:

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