



Soil: fertility, biological life and fighting against erosion



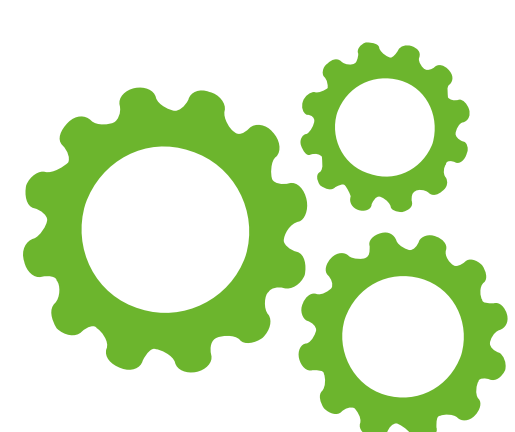
AGRI Innovation summit 2019



Operational Group

GIEE Carbone 'N' Caux: Storing carbon by farming, an opportunity for the future of our region

GIEE Carbone 'N' Caux : Le stockage de l'élément carbone par l'agriculture, une chance pour l'avenir de notre région



Practical problem

This project aims to resolve soil erosion due to a low organic matter level. Moreover, it focusses on the reduction of carbon dioxide emissions.



Partners

Cerfrance Seine Normandie (association management and accounting) and ARAD² – LEGTA d'Yvetot and UniLaSalle Rouen Beauvais (educational institutions).



Calendar

Start: 01/11/2017
End: 30/09/2020



Budget

Total amount:
€95,980.80

Objectives of the project

Storing carbon is a major challenge in a region strongly influenced by erosion and water runoff. In addition to soil protection actions, the farmers' group wants to achieve a positive carbon balance with the aim of considering agricultural practices as a solution to global warming. The farmers' group aims to implement practical techniques in favour of soil carbon storage through increasing carbon inputs and reducing carbon losses from the soil. Thus, the farmers' goals on their farms are: – increasing soil fertility – reaching self-sufficiency of farms through external inputs – improving the farm system profitability – pooling experience and sharing information.

Main activities

The farmers carry out field trials in order to test several techniques that promote carbon storage in the soil. They also take part in trainings and visits to the plots to share their experience and increase their knowledge on different topics. The work of Carbone 'N' Caux targets 4 areas: – Monitoring manure and fertilization: using livestock manure and reducing the use of synthetic fertilizers – Managing cover crop and mixed cropping: multi-species cover crops, permanent cover cropping system, rapeseed-legume mixtures... – Comparing external organic fertilizers: Ramial Chipped Wood, compost – Testing means to stimulate natural defenses of plants and biocontrol products: fermented plant extract.

Expected results

The group Carbone 'N' Caux seeks to improve its economic, social and environmental performances on its farms. Expected results are: improvement of soil fertility (increase of biodiversity and organic matter level (+1%)), reduction of the use of pesticides, increase of soil fertility (by 25%), reduction of erosion (improvement of soil structure), decrease of greenhouse gas emissions, food self-sufficiency of farms, improvement of the farm systems profitability (reduction of fixed costs, inputs), improvement of the quality of life for farmers: reduction of working hours due to less tillage, decrease of the use of pesticides (TFI reduced by 60%), collaborative work with different actors.

Results so far/first lessons

First the farmers ensured that they could test different techniques in favour of carbon storage with economic social and environmental benefits. In the light of the results obtained, the techniques tested didn't compromise the technico-economic performances. Thus, after these initial results and a co-design work, the farmers established field trials platforms in order to determine the effective techniques to sequester carbon in the soil.

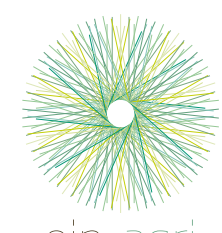
Who will benefit

The farmers of the group will improve their agricultural practices and become proficient in the means to favour carbon storage from the experiences capitalised by the group. The project's results will be available to all farmers to raise awareness on this topic. These results will provide support to farmers who are ready to change their practices in favour of the carbon storage in the soil. More generally, the local community could benefit from actions carried out by the farmers to reduce erosion and water runoff. Local actors will also be informed about this project promoting sustainable agriculture and the major role of agriculture in tackling global warming issues.

Supported by:



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