

Compatibility of Agricultural Management Practices and Types of Farming in the EU to enhance Climate Change Mitigation and Soil Health (CATCH-C)



Resumen:

The Catch-C project assesses the farm-compatibility of 'Best Management Practices' (BMPs) that aim to promote productivity, climate change mitigation, and soil quality. Information collected on current management will be spatially organised with the help of a typology of the main farm types and agro-ecological zones across Europe. Biophysical impacts of management practices will be assessed from a large set of current field experiments by the partners. BMPs will be formulated, along with their trade-offs and synergies between productivity, climate change mitigation, and soil quality. The project will identify barriers against adoption and formulate ways to remove these. In interaction with policy makers, Catch-C will develop guidelines for policies that will support the adoption of BMPs and that are consistent with regional, agro-ecological and farming contexts.

Objetivos:

Catch-C will firstly (WP2) set up a typology of the main farm types and agro-ecological zones across Europe. This frame, coupled to a pan-European database of socio-economic and biophysical data, will be used for spatially organising the information collected on current management and on the impacts expected from changes in management.

Secondly, biophysical impacts of management practices will be assessed (WP3) primarily from a large set of current field experiments, executed by the participants. BMPs will be formulated, along with their trade-offs and synergies between productivity, climate change mitigation, and soil quality. Farmers, however, often do not adopt BMPs.

Thirdly, the project will identify the barriers against adoption, and will formulate ways to remove these (WP4). Catch-C will survey farmer views on BMPs in all participant countries, assess costs and benefits of implementation, identify technical and ecological bottlenecks preventing adoption, develop a decision support tool, and prioritize innovation requirements to address bottlenecks.

Policy measures can promote adoption of BMPs in various ways, such as voluntary measures, regulation, and economic incentives. In interaction with policy makers, Catch-C will develop (WP5) guidelines for policies that will support the adoption of BMPs; and that are consistent with regional agro-environmental and farming contexts.

Dissemination (WP6) includes dissemination to the farmers and policy communities, and scientific publication. The project results on BMPs, their adoption and feasibility in different farm types and environments will raise awareness about the pros and cons of respective management and policy options. Farmers and policy communities will be reached via workshops, brochures, farmers press and web-based tools.

Objetivos contribución:

General objective: To establish and further improve the farm-compatibility of the identified Best Management Practices with the FTZ Units over Europe. These analyses will show the applicability of a wide range of Best Management Practices (BMPs) at the farm level, their costs to the farmer, the effectiveness, and the likely uptake across a wide range of farm types.

Detailed objectives:

- Developing a Compatibility Frame as research tool
- Surveys and interviews with farmers about their ideas for implementing BMPs
- Assessing agro-technical, ecological and economic barriers against adoption of BMPs
- Listing and prioritizing innovations that will help to overcome these barriers
- Developing a decision grid for farmers to show the effectiveness, costs and benefits, and other consequences of adopting BMPs tailored to major FTZs over Europe.
- Deriving practical guidelines, rules of thumb, and other operational tools for farmers. These may include target levels for SOM%; annual organic input requirement to sustain target SOM%; farm level sustainability indicators; tools to help implement control strategies for soil borne pathogens; decision tools for optimizing farm nutrient management.

Entregables:

- D4.422) Farmers review of BMP: Farmer's review of Best Management Practices for selected farm types [month 30].
- D4.434) List major barriers against BMP: List by FTZs of major barriers (incl costs) and strategies to overcome barriers against implementing Best Management Practices at the major farm types [month 27].
- D4.443) Decision tool for farmers: A user-friendly tool to help farmers select most suitable BMP for a given set of farming and environmental conditions [month 30].
- D4.451) Overview of innovations: Overview of relevant technological innovations that may help resolve barriers against adoption of BMPs [month 30].

Impacto:

The CATCH-C project is addressing the following issues listed in the work programme, to help in:

- Better understanding the complex and dynamic nature of agricultural soil ecosystems, including soil and plant health related aspects.
- Improving farming practices and farm land uses for increasing crop productivity,
- Enhance carbon sequestration capacity, thus limiting the environmental impact of agriculture in terms of GHG emissions.

The overall objective of the CATCH-C project is to establish Best Management Practices for the major farm types (FT) and agriecological zones (Z) over Europe, to determine the main barriers for their implementation in the actual farming systems and under the current EC policies, and to determine the main possibilities to foster their implementation through economical, policy and other drivers.

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Equipo de investigación

Nombre: HIDROLOGÍA E HIDRÁULICA AGRÍCOLA

Email: fa1alua@uco.es

PAIDI: AGR-127

Web: <http://www.uco.es/grupos/agr-127/>

Investigador principal: JUAN VICENTE GIRALDEZ CERVERA (PARTNER)

Email: opi@uco.es

Presupuesto del equipo: 166,168.00€

Universidad: Universidad de Córdoba

Enlace: <http://www.catch-c.eu/>

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