

**Animal Research Programme –  
Sustainable Production Systems and System Analysis  
RMIS No: 6191**

**Title**

Towards land management of tomorrow - Innovative forms of mixed farming for optimized use of energy and nutrients

**Abstract**

This is an FP7 funded project with partners from 11 research institutions in EU and Switzerland and 10 SME's. The objective is to develop systems of recycling nutrients in manures either within or between farms that are environmentally and energy efficient delivering benefits at catchment scale. CANTOGETHER will develop and implement a methodological approach combining models, assessment methods and experimental approaches. CANTOGETHER will bring together data from a network of 25 case studies based on our existing field research platforms across a wide variety of agricultural regions of Europe and different systems (organic, low external input, integrated, etc.) in which some innovative mixed-farming practices and systems will be implemented and monitored at farm and or district levels. Drawing on these data, CANTOGETHER will design new mixed farming systems and measure the environmental and socio-economic consequences of the most promising innovations, and will test them with socioeconomic and biophysical models, following a multi-scale approach from the field to the landscape level.

These systems will involve high resource-use efficiency (notably of nutrients), reduction in dependence on external inputs (fertilisers, pesticides, concentrated feeds), and acceptable environmental and economic performances.

CANTOGETHER will test the efficacy, practicability and relevance of these innovative systems under the agro-ecosystems and farming systems of the main broad European regions. CANTOGETHER will therefore increase sustainability and competitiveness of European mixed farming systems, contributing to increase food security and environmental quality. It will also support public policy and related commercial objectives: reducing fossil energy inputs into agriculture, nitrogen emissions to the environment, and the global environmental impact of European agriculture.

**Project Leader:** James Humphreys  
**Start Date:** 1 September 2011  
**Expected Finish date:** 1 September 2015