

International research Centre 1: Sustainable Agroecosystems

Objective: optimize the integration of the agricultural systems into their environment and territories

Agroecosystems are facing numerous challenges: climate change, decline in biodiversity, need for input reduction, need for sustainable quality food supply, new dietary behaviors as well as new perception of agriculture at a global level, etc.

Our production modes need to adapt in order to face the threefold challenge: economic, social and environmental sustainability. International Research Centre 1 of CAP 20-25 focuses on two agricultural systems that are emblematic of the Auvergne region: **cereals** (predominant in the plain of Limagne) and **herbivores** (predominant livestock in moderately mountainous areas), as well as on key socioeconomic partners such as **Limagrain**. Ultimately, the project ambition is to **optimize the integration of agricultural systems into their environment and territories**. This implies raising these systems resilience and sustainability levels taking into account their production and environmental performances, while addressing social demands (end-product quality, animal welfare, etc.).

Four lines of research are identified:

- Analytical studies on adaptive capacities of plants and animals
- Systemic approach to redesign agrosystems
- Environmental studies on interactions between agrosystems and their environments
- Integration of agrosystems in territories.

Structure

International Research Centre 1 structured its work around 4 axes, each with a roadmap defining an action plan for the coming years:

1. Analytical research on adaptive capacities of plants and animals
2. Systemic approach to redesign agrosystems

3. Environmental studies on interactions between agrosystems and their environment
4. Integration of agrosystems in territories

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Irène Till-Botraud (DR-CNRS, GEOLAB)

CONTACT

Thierry Langin

Joint Research Unit GDEC

UCA, INRAE

F-63000 Clermont-Ferrand

Email: thierry.langin@inrae.fr(mailto:thierry%2Elangin%40inrae%2Efr) Phone: [+33 \(0\)4 73 76 15 37](tel:+33(0)473761537)

Mob: [+33 \(0\)6 32 01 93 81](tel:+33(0)632019381)

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