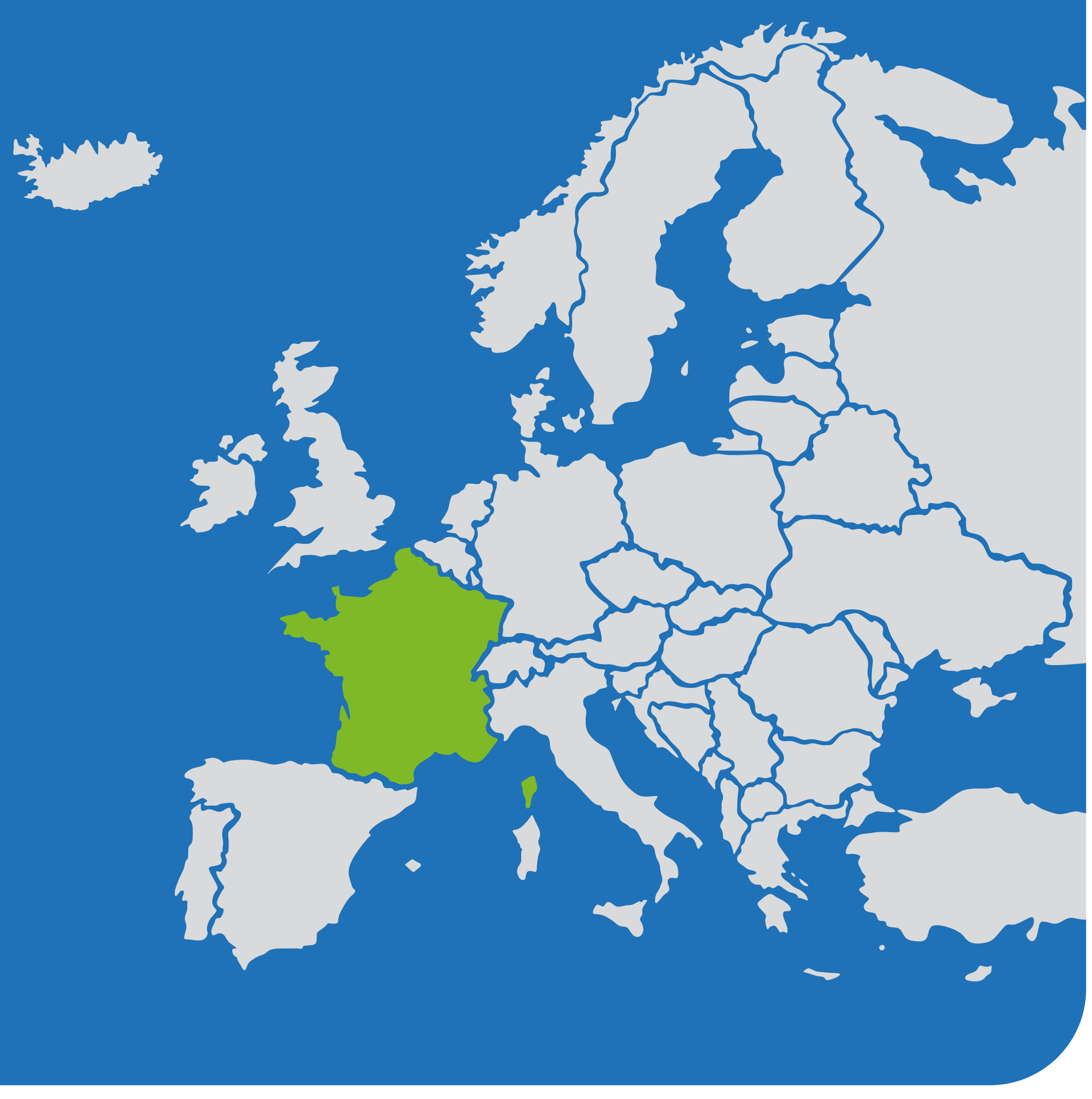
Integrating agroecology with the downstream: food value chains



AGRI Innovation summit 2019

Operational Group

Sweet potatoes (Ipomea batatas) in a strategy of agricultural diversification in the Languedoc-Roussillon region

Patate douce (Ipomea batatas) : culture de diversification en Languedoc-Roussillon

Practical problem

Diversify agricultural production and the range of organic products for the consumers through the growing of sweet potatoes

Partners

Sica Centrex – experimental center; Languedoc Roussillon Chamber of Agriculture; CIVAM bio 66 – produceur association; SUDEXPE – research stationSIMRA (associés)

Calendar

Start: 01/01/2015
End: 31/12/2017

Budget

Total amount:
€135,700

Objectives of the project

Testing different varieties for 2 different markets (fresh consumption and transformed in chips or beer) to respond:

- to demands of the consumer market (private restoration and catering which is more and more focused on local ecological and/or organic products);
- to regional companies in the organic sector interested by local suppliers; to industrial “converters” (beer brewery, chips);
- to local growers interested by diversifying their cultures to be less dependent of fluctuating prices of monocultures;
- to local growers who wish to market “non standard” sweet potatoes.

Main activities

Improve cutting production (multiplication) close to the production sites adapted to local conditions. Establish a technical sheet adapted to different geographical locations with different soil and climat conditions (cutting and plant production, fertilization, irrigation, weed control…). Test five varieties of potatoes and technical itineraries, in four experimental sites: the “Plaine de Roussillon”, organic culture CENTREX and CIVAMBI O66, the coastal zone of the “Hérault” district, organic by the CEHM, the “Cévennes” area on two plots of land in rotation with “sweet” onion nurseries on two types of soil (schists and sandy loam). Variables observed: mortality rate, yield, caliber, diseases and pests resistances.

Expected results

Observations: production yield, comparison of organoleptic quality, brewery quality, measuring of the quantity of irrigation water, quantity of fertilizers, phytosanitary conditions… Select best varieties and develop the most appropriated technical itinerary according to varieties, local conditions, and commercial use. Find a solution to losses due to wireworms (first problem of the crop with 45% of lost) working on plantation date and crop rotations. Control the caliber of products by working on duration of culture, plantation dates and density. Reduce mortality after plantation by local cuttings production, which give best results and taking account of the importance of drip irrigation system.

Results so far/first lessons

The project has already ended. 4 varieties selected, for two markets (fresh consumption and transformation in chips or beer). Technical conclusions: Culture of mother plants for local cuttings multiplication on fertile soil; Dates of plantation (1st May/15 June); Duration of culture (110-150 days); Plantation on mulched mound, Density (15000 to 50000 plants/ha) in function of local mechanized crop equipment; Drip irrigation system under Biodegradable mulching; Mechanical or manual weeding; Irrigation stopped one month before crop; Top cut 3-5 days before harvest; Harvest period (September/October); Mean weight (300-400g); Conditions of conservation (8-10 month at 18-20°C).

Who will benefit

Local growers, regional companies in the organic sector, private restoration, catering, consumers interested in organic and local products.

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