

Building local sorghum biomass production and valorization chains: Which model ? Which strategies ? Which tools ? The case of "Valosorgho" in the french region Occitania

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Global warming and Fossil fuel depletion crisis



The region Occitania will particularly suffer from the global warming and the scarcity of water (2070 : +2 degrees C in the French South West (Occitania) Region)

➔ Agriculture challenge : to develop production and transformation systems ensuring environmental sustainability and economic profitability

➔ New market opportunities : Biomass is a renewable source of energy, materials and chemicals

Sorghum offers solutions

as a rustic (low consumer of water, fertilizers and pesticides), multi-purpose crop (huge phenotypic diversity) and high biomass production capacity (C4 plant)

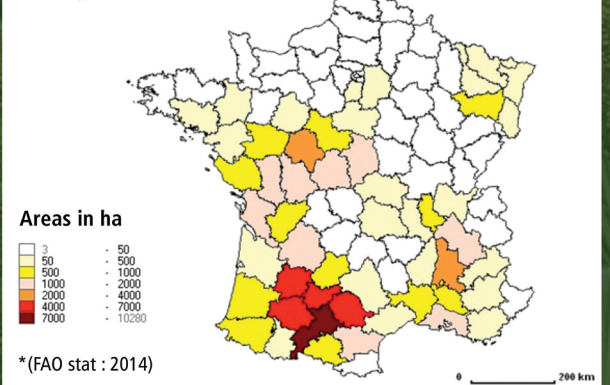
Occitania: a producing region since the 70's



1st producer region \approx 30 Kha

France : 62 863 ha*

Mainly for feed



- A pragmatic participatory approach
- An interactive innovation model
- Territorial and innovation engineering

- Animation tools :**
- EU Rural Programs (RDPS) through the new EU concept "European Innovation Partnership" (EIP AGRI)
 - Operational groups
 - Territorialized value chains
 - Focus groups
 - H2020: Thematic networks

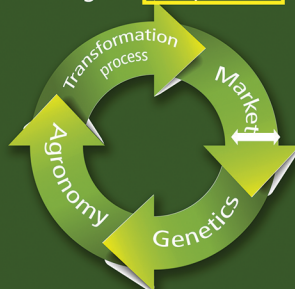
Valosorgho : a territorial approach with three main components

Political / institutional anchorage



Embedded into the Regional Innovation Strategy - theme : biotechnology and valorization of renewable C

Sorghum R&I process*



Embedded into the local innovation ecosystem

Innovation Broker

Multi stakeholders group



A combination of local public & private, academic & economic stakeholders across the value chain : federation of coops, seed producers, farmers, labs and technical institutes, end-users industries (biocomposites, textile)

Exploration (new valorization ways : markets & technologies), proof of concepts, development of innovative cropping systems (which include sorghum), transformation process, new products

Mobilization of human, physical and financial resources

Operationalizing of the R&I process

Project management, animation, mediation, translation, building of links

*R&I = Research & Innovation

Developing sorghum biomass Value chains Three conditions

- availability of relevant varieties for production and transformation
- availability of adequate cropping systems
- availability and cost-efficient extraction/ transformation technologies
- convergence of interests between the different actors

Feedstock

Industrial uses



A bunch of research projects opening new ways !

