

## Agroecology Applied

### The Case of the Syprobio Project

Driving farmer-led innovations to address food security, poverty alleviation and resilience to climate change in West African cotton communities

#### Background:

Syprobio is a EuropeAid financed research and development project in West Africa aiming to promote farmer innovations – both technical and social – compatible with organic standards and based on agroecological principles. The project addresses 15,000 organic farmers in Mali, Burkina Faso and Benin. FiBL-led researchers developed a network to conduct on-farm research testing local innovations.

100 elected farmers, who represent 2–3,000 organic farmers of selected districts, are conducting on-farm research cooperating with 40–50 researchers and technicians in testing 30 innovative practices. Soil fertility, seed improvement, pest management, agronomy and socio-economics are the main themes. The innovations to be tested shall improve food security and climate change adaptation. Comparative research is done in order to better understand the economic and agronomic differences of organic, conventional and GMO systems in the sub-region.

#### Core hypotheses:

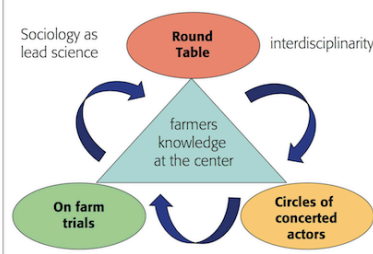
- 1) Relevant technologies for small-scale farmers that lead to food security and climate change adaptation for both organic/agroecological and conventional farmers can be invented and implemented by farmer associations designed specifically for that purpose.
- 2) Organic matter in the soil (SOM) is required for resilient yields and sustainable farming. Ecological and organic farmers have advantages in reaching sufficient SOM levels.
- 3) Innovations invented and tested jointly by farmers and researchers are more likely to be adopted than those invented and tested only by farmers or only by researchers.
- 4) Adoption of jointly developed technological innovations will result in more robust agricultural and food systems that will improve food security and can contribute to economic integration and nation building.

#### Objective:

The objective of the applied research is to produce practical and scientifically tested technological innovations and strategies to improve farmers' incomes and food security and prove that agroecology works.



#### Approach: Making transdisciplinarity work



#### Results after 3 years:

- > All 10 circles of concerted actors are productive.
- > 16 innovations go for the 3<sup>rd</sup> year of testing.
- > Extension using videos on mobile phones.



#### Expected outcomes

- 1) Locally relevant technologies and strategies to increase smallholder farmers' incomes and enhance food security and resilience to climate change in West Africa are identified and co-constructed;
- 2) The capacity of the national research organizations in collaborative research is strengthened;
- 3) Policy makers are informed with appropriate recommendations for food security, poverty alleviation and adaptation to climate change based on agroecology.

#### Farmer priorities: 27 innovations to be tested

Country	Soil fertility	Seed	Plant health	Agro-nomic	Socio-eco	Total
Mali	2	3	1	2	1	9
Burkina	2	2	2	1	2	9
Benin	4	—	2	2	1	9
<b>Total</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>27</b>



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FiBL office in Mali at CRRA, Sikasso

#### Collaborating institutions:

- > FiBL (research)
- > Helvetas Swiss Intercooperation (INGO)
- > IER/CRRA (research)
- > MOBIOM (farmer organisation)
- > INERA (research)
- > UNPCB (farmer organisation, parastatal)
- > INRAB (research)
- > U-AVIGREF (environmental CBO)

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