



**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 recent 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 agro-ecologic principles. With 15,000 organic farmers as partners in Mali, Burkina Faso and Benin. FiBL-led researchers developed a network to conduct on-farm research testing local innovations.

The 100 elected farmers, representing 2 – 3,000 organic farmers are conducting on-farm research and 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.

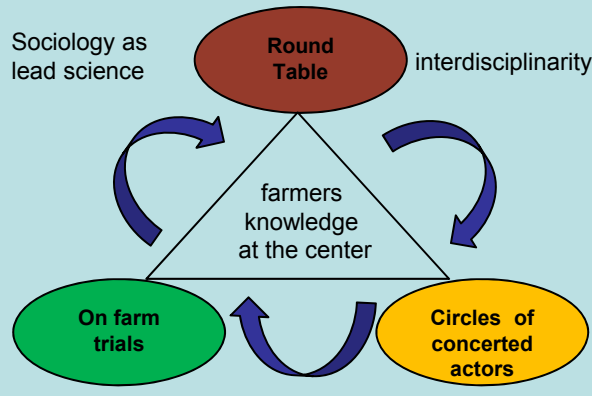
Core hypotheses

- 1) Relevant technologies for small-scale farmers that lead to food security and climate change adaptation for both organic/agroecologic 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.

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 3rd year of testing
- Mobile phones with videos for extension



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.

Table: List of the selected innovations for experiment

Country	Soil fertility	Seed	Plant health	Agronomics	Socio	tot
Mali	2	3	1	2	1	9
Burkina	2	2	2	1	2	9
Benin	4	-	2	2	1	9
Total	8	5	5	5	4	27



Collaborating institutions

- FiBL (research)
- Helvetas Swiss Intercooperation (iNGO)
- IER/CRRRA (research)
- MOBIOM (FO)
- INERA (research)
- UNPCB (FO, para-statal)
- INRAB (research)
- U-AVIGREF (environ. CBO)

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