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Agricultural Transformation by Innovation

Unraveling the role of Farmers' Organizations in the promotion of agroecological techniques in Burkina Faso

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Introduction: Why agroecology?

- Agro-ecology is considered (by its proponents) as the potential solution for the current challenges of agriculture production.
- Agro-ecology is defined as a science (application of ecology in agriculture), a movement (advocating for land right), and a practice (agricultural techniques that integrate ecological principles in farming practices).
- Examples of agroecological techniques (AET) include intercropping; biological control of pests; use of nitrogen-fixing crops; crop-livestock integration; composting; agroforestry; and anti-erosion measures.

Introduction: Agroecological techniques in Burkina Faso

- Most recently there is a growing promotion of AET (mostly by NGOs) in countries confronted with advanced land degradation such as Mali, Niger, and Burkina Faso.
- These AET were promoted through a joint partnership between international NGOs and local Farmers' Organizations (FOs). FOs are the key actors in the agriculture development of Burkina Faso as provide both technical and economic services to their members.
- This study aims to unravel the role of FOs in the promotion of AET in Burkina Faso.

Methods

Research design: A multiple case-study approach: n=8 cases; and 3 cases (for in-depth study).

Data sources: Data were collected by using document research, informal (spontaneous conversations), and formal (planned conversations) semi-structured interviews .

Data analysis:

- Content analysis was used to understand the goal of FOs in promoting AET.
- An actor-mechanism matrix (AMM) approach was used to identify what types of actors the FOs can collaborate with to provide various innovation support services to their farmers.

Results: Why do FOs promote AET in Burkina?

FO	Date of establishment and objectives	Types of agroecological techniques promoted (AET)			Goal of promoting AET
		Soil Fertility Management	Pests and Diseases Management	Soil and Water Conservation measures	
AIDMR: <i>Association Inter-zones pour le Développement en Milieu Rural</i>	Established in 1993 to strengthen the development of subsistence crops (sorghum, millet, cowpea) of village members located in the center and north provinces (in the north Sudanian and Sub-Saharan agroecological zones)	-Compost, mulching and manure -Mixed sorghum-cowpea -Rotation sorghum-cowpea	-Biopesticides -Improved seeds	-Zai -Stone-bunds and <i>Demi-lune</i> -Agroforestry	Improving the resilience of subsistence farmers
Beo-neere	Established in 2013 to promote the development of organic vegetables (cucumber, watermelon, and cucumber) and subsistence crops (sorghum, millet, cowpea) of their members located in the center and north provinces (in the north Sudanian and Sub-Saharan agroecological zones)	As above	As above	As above	Enhancing the productivity of commercial crops and improving the resilience of subsistence farmers
FEPAB: <i>Fédération Professionnelle des Agriculteurs du Burkina Faso</i>	Established in 2001 to structure the cereals (maize, sorghum, millet), fruits, and vegetable value chains operating in the sub-Saharan, north and sub-Saharan agroecological zones	-Compost, mulching and manure -Mixed sorghum-cowpea -Improved cowpea seeds	Improved sorghum seeds	As above	As above
FNGN: <i>Fédération Nationale des Groupements NAAM</i>	Established in 1967 (during the implementation of agriculture modernization projects) to support the development of subsistence (sorghum, millet, and cowpea) and commercial crops (cereals surplus, potatoes, tomatoes, and cowpea) of their members located in sub-Saharan, North and sub-Saharan agroecological zones	-Compost, mulching and manure -Mixed sorghum-cowpea -Rotation sorghum-cowpea -Improved cowpea seeds	As above	As above	As above

Results: Why do FOs promote AET in Burkina?

FO	Date of establishment and objectives	Types of agroecological techniques promoted (AET)			Goal of promoting AET
		Soil Fertility Management	Pests and Diseases Management	Soil and Water Conservation measures	
UGCPA: <i>Union des Groupements pour la commercialisation en commun des produits agricoles de la Boucle du Mouhoun</i>	Established in 1993 initially for the collective marketing of surpluses of cereals (maize, sorghum, millet) and cowpea of their members living in the Boucle du Mouhoun region (located in North and sub-Saharan agroecological zones)	-Compost, mulching and manure -Mixed sorghum-cowpea -Rotation sorghum-cowpea -Improved cowpea seeds	Improved sorghum seeds	-Zai -Stone-bunds and <i>Demi-lune</i> -Agroforestry	Enhancing the productivity of commercial crops and improving the resilience of subsistence farmers
Union Niébé	Established in 2003 to structure the cowpea value chain of farmers living in the central region, located in sub-Saharan and north Sudanian agroecological zones	-Compost, mulching and manure -Mixed sorghum-cowpea -Rotation sorghum-cowpea	Biopesticides	As above	As above
UNPCB <i>Union Nationale des Producteurs du Cotton du Burkina</i>	Established in 1998 to structure the cotton value chain from the transformation of former FOs (called <i>Groupements Villageois</i>) composed with both cotton and non-cotton growers to FOs composed of only cotton growers operating at local, departmental, provincial, and national levels	-Compost, mulching, and manure -Rotations and associations of crops with legumes	-Biopesticides -Trap crop	-	Enhancing the productivity of commercial crops
Union Signassigui	Established in 2007 to organize the processing and marketing of paddy rice in the Hauts-Bassins region located in the sub-Saharan zone	-Compost, mulching, and manure	Biopesticides	-	As above

Results: Pictures of some soil conservation measures

Stones-bunds



Zai pits



Results: How do FOs promote AET in Burkina?

	UNPCB	AIDMR	UGCPA
Technical services	Provided training on organic cotton technology	Organized group training of ecologically-based techniques	Provided training on organic <i>hibiscus</i> technology; Organized group meeting to discuss on the environmental issues related to the use of pesticides and the recommended ecologically-based agricultural techniques
	Organized farmers-advisors exchanges on issues encountered in the organic cotton farming	Facilitated farmers-advisors exchange sessions at the beginning of the rainy season	Conducted a participative selection of sorghum varieties
Economic services	Provided credits-inputs for organic cotton; Explored market opportunities of organic certified cotton rotation crops (sesame, soybean)	Provided inputs subsidies	Searched for market opportunities of organic <i>hibiscus</i> and provided credits-inputs to farmers concerned Provided inputs credits and subsidies (e.g. bio-gas materials and Faidherbia seedlings obtained from supportive partners)
	Managed the certification of organic products	Started the collective certification (under the participatory guarantee system) of fruits collected from the training center and the nearby village farms	Managed the certification of organic <i>hibiscus</i>

Conclusion

- This study has unraveled the WHY and HOW do FOs promote AET in Burkina Faso. These are shown from their goals towards AET and the types of services they provide for achieving these goals.
- This study has provided updated knowledge on the broader agroecology development in a developing country setting by showing the involvement of pivotal actors such as FOs in the agroecology transition process.
- Finally, the study, therefore, calls for the investigation of a detailed description of why do farmers adopt promoted AET?



THANK YOU!

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