



AGROSYM

BOOK OF ABSTRACTS



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"Agrosym 2025"
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NEGLECTED AND UNDERUTILIZED CROP SPECIES (NUS) AND AGROECOLOGY IN WEST AFRICA

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Abstract

There is a widespread agreement that West African food systems need to be transformed. Neglected and underutilised crop species (NUCS/NUS) and agroecology can play a vital role in making these systems more sustainable and resilient. Therefore, this systematic review analyses the multifaceted and multidimensional relationships between NUS and agroecology as well as the potential contribution of NUS to agroecological transition in West Africa. In particular, the article examines whether and which agroecology principles are associated with research on NUS in West Africa. The review draws upon 42 articles dealing with NUS in West Africa selected from 185 publications identified through a search conducted on the Web of Science in March 2025. Generally speaking, there is a lack of studies addressing jointly NUS and agroecology in West Africa. Apart from animal health, all the remaining 12 agroecology principles can be associated with NUS, but in a differentiated way. Biodiversity is by far the principle most associated with NUS, followed by Social values & diets and Co-creation of knowledge. Meanwhile, Recycling, Land and natural resource governance, and Fairness are the principles least associated with NUS. In general, while those dealing with agronomic and environmental aspects (e.g. Biodiversity) are fairly addressed, principles related to socio-economic (Economic diversification, Fairness) and, especially, political (e.g. Land and natural resource governance) aspects are generally overlooked. In terms of the application scale, there is more focus on principles applicable at the field and farm levels, while those more applicable at the agroecosystem level (e.g. Synergy) or the value chain/food system level (e.g. Fairness, Connectivity, Participation) are generally overlooked. There is a need to strengthen research on the nexus between NUS and agroecology in order to foster the operationalisation of the transition towards sustainable and resilient agri-food systems in West Africa.

Keywords: *agrobiodiversity, agroecology principles, agroecological transition, Sahel, SUSTLIVES.*