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Co-creation of knowledge in the research work of the West Africa Community of Practice

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Authors	Bucini, Gabriela;Baker, Emily
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CO-CREATION OF KNOWLEDGE IN THE RESEARCH WORK OF THE WEST AFRICA COMMUNITY OF PRACTICE

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Background

The West Africa Community of Practice (CoP) of the [Global Collaboration for Resilient Food Systems](#) (CRFS; McKnight Foundation, 2023) program includes Niger, Burkina Faso, and Mali, and is a valuable space for co-creating knowledge and critically reflecting on participatory action research approaches. The program focuses on agroecology and places particular emphasis on scientific research that strengthens transdisciplinary collaborations and dialogues as a means of promoting sustainable and equitable transformation of food systems. The research work is mainly carried out in farmer-researcher networks (FRNs; Nelson et al., 2019; Richardson et al., 2022) and is sometimes in synergy among several projects within the program. Participants include actors from farmer organizations, scientific institutions, civil society, and non-governmental organizations. FRNs aim to stimulate the participation of producers in research work and serve as a structure for the co-creation of knowledge with rigorous scientific content relevant to the network's territory. Over time, the CoP's commitment to the principles of agroecology, as defined by the [FAO](#) (FAO, 2018), as well as [the principles of FRNs](#) (CRFS, 2021; Richardson et al., 2021), has inspired a deeper understanding of their meaning in both agricultural practices and participatory research methodologies.

For agroecology, which is built on a diversity of shared knowledge and synergies, the co-creation of knowledge is a guiding principle (Milgroom et al., 2016). In participatory action research (PAR), producers have an active and leading role, and activities include farmer-to-farmer exchanges or multi-stakeholder processes involving several parts of the food system. The co-creation of knowledge emerges from this desire to bring everyone together and build a holistic view with solutions that would not be visible to a single actor (Gliessman, 2018; Utter et al., 2021). Producers are recognized as co-researchers. Their knowledge, experiments, and observations enrich and guide scientific production. Scientists ensure the necessary rigor in experimentation and monitoring and evaluation. They also help establish the two-way link between general scientific knowledge and its local application. The skills contributed by each person must be accompanied by mutual and attentive listening to the needs and knowledge of the group so that co-creation can take place and the results lead to solutions that are relevant to the context.

However, this is not only a question of knowledge, but also of power (Bottazzi et al., 2020). Transformative agroecology is fundamentally based on a solidarity-based transfer of power to producers and communities. Agroecological transitions require not only the mobilization of knowledge, but also a renewal of research approaches that strengthen solidarity, collaboration, exchange, and communication between disciplines and experiences (Nehring et al., 2025). In the context of research, this highlights the active role of scientific research teams, farmer organizations, and social movements as a means of building and amplifying knowledge to construct sustainable and equitable food systems (López-García et al., 2021). A transformative co-creation process goes beyond the integration of knowledge and makes room for farmer leadership, supported by research (Latulippe & Klenk, 2020). Co-creation of knowledge in agroecology recognizes that farmers are knowledge actors in their own right, capable of observing, analyzing, and experimenting, just like scientists.



A model of co-creation of producer-researcher knowledge in Innovation Centers (Sahel): research questions and action plans are defined in a participatory manner within FRNs; producers, processors, researchers, and other actors come together to evaluate, study, discuss, and assess the results obtained in the fields; exploration and taste testing of ancestral food and recipes. Source: Moustapha Moussa and partners (2025)

Co-creation of knowledge within the CoP

The CRFS program supports participatory research with actors from all parts of the food system. Approaches are designed to develop their capacity to act in their role as co-researchers (The UVM IFA, 2024). To deepen understanding of co-creation processes, a session of the 2025 CoP annual meeting was dedicated to reflecting on the meaning of knowledge co-creation and its dynamics based on the experiences of more than 100 participants. The session included a report on the posters of six project teams, followed by a series of activities in which participants gradually co-created guiding principles for co-creating knowledge.

Lessons learned from the posters

The first step was to share observations drawn from posters presented by CoP project teams and related to the work of FRNs and co-creation of knowledge. Table 1 summarizes key points. In scientific co-creation between farmers and scientists, it is possible to see an effort to develop complementary and interdependent roles, breaking with the model of unidirectional knowledge transfer. Various authors attest to the importance of regular exchanges between scientists and producers to adapt working hypotheses and plan joint research. In practical terms, these methods include discussions, negotiations, and joint decision-making during all stages of research, with all actors involved taking responsibility.



Several academic teams have embraced transdisciplinary research approaches and gained experience in implementing co-creation processes. The posters show that integrating endogenous knowledge makes it easier to find options that are adapted to the local culture and context. To this end, some projects include training farmer facilitators and using funds to support farmer initiatives, backed by scientific research. Posters show that co-creation work within FRNs is strengthened by inclusion, diversity and by mutual learning that includes farmers as relevant actors. Actions proposed (and sometimes already implemented) to support these aspects include multi-stakeholder exchange workshops, inviting farmers to thesis presentations, monitoring the use of new ideas/technologies, setting up farmer-organized committees, and creating databases managed by farmer organizations and available to both producers and researchers.

For example, the poster for the “Transformation” project presented a co-creation process between peasant organizations and research institutes, aimed at improving both the diversity and quality of nutrition, as well as household income, within the challenging context of the Sahelian region. Over several years of transdisciplinary collaboration, producers, food processors, and researchers have jointly developed knowledge and created nutritious food products. This work is grounded in the value of community well-being and is carried out within FRNs. The co-creation process involves actors assessing, studying, and discussing each stage of the food production process—from farming to the final product—drawing on the group’s collective capacities and knowledge. The poster depicted actors coming together for the harvest of cereal and legume varieties, which are evaluated for their quality, physical characteristics, and suitability for processing. Recipes are developed by combining traditional knowledge with nutritional science, and are tested for color, taste, texture, and aroma by project participants and community members, including local authorities and health center staff, to ensure both desirability and cultural relevance. The poster highlighted a dynamic, iterative process of knowledge sharing and co-creation, built through participatory discussions, scientific inquiry, community-based experimentation, and collaborative testing.

Key messages to remember	Questions or aspects to explore further	Concrete proposals to strengthen co-creation
<ul style="list-style-type: none"> • Involvement of producers from the outset of the process and strengthening of links through FRNs • Establishing an effective communication system among community members helps strengthen ties • Sincere collaboration and assigning specific roles to producers in the process of co-creating knowledge in agroecology are key factors 	<ul style="list-style-type: none"> • Strengthen synergy and communication between FRN projects to share knowledge • Better clarify participatory diagnostic methods • Deepen gender mainstreaming • Sustain the achievements of FRN projects beyond McKnight Foundation funding 	<ul style="list-style-type: none"> • Capitalize on and disseminate participatory methods in a guide • Create research tools tailored to each type of stakeholder • Encourage producer participation in CoP meetings

Table 1: Key points identified in posters focusing on FRNs and co-creation of knowledge.



Lessons learned from group reflections and discussions

Following this report on the posters, the session engaged participants in jointly developing guiding principles for knowledge co-creation. The sequence of activities was designed as a co-creation process, starting with individual reflection on the words that best characterize knowledge co-creation and then inviting participants to group discussions. In pairs first, they discussed their chosen words, then in groups of four, they examined the conditions favorable and unfavorable to the co-creation of knowledge. Finally, in groups of eight, they worked on the principles, which were presented in the final plenary session offering the opportunity to follow up with an open discussion within the CoP.



Image 1: Word cloud composed of words characterizing co-creation of knowledge according to the participants in the CoP meeting. The most frequently cited keywords to define the co-creation of knowledge are displayed in large font.

The meeting notes provided the content from which we constructed:

1. a word cloud (Image 1) where the keywords most frequently cited by participants to define co-creation are shown in large font.
2. a charter with the principles of knowledge co-creation (Table 2). The charter was formulated by analyzing and synthesizing the principles presented by the participants. We grouped the principles according to three dimensions that emerged as underpinning co-creation: human attitudes and values, group organization and facilitation, and process approach. The charter presents three leading principles, one for each dimension. Both those principles and their sub-principles express the essence of the ideas proposed during the session.



Principles of co-creation of knowledge

Open-mindedness and solidarity

Actors participate in the co-creation of knowledge with an active, open attitude centered on values of mutual respect and support.

- The actors engage with active listening, open-mindedness, initiative, receptivity, and a willingness to find mutual agreement.
- The actors cultivate the values of empathy, availability, humility, honesty, and trust throughout the process of co-creating knowledge.

Diversity of knowledge and empowerment

The organization of actors for the co-creation process is based on a common interest, and facilitation focuses on diversity of knowledge, transdisciplinarity, and a balance of power.

- Complementary skills are combined with shared values to foster trust, sharing, and collective knowledge creation that benefits all actors.
- Farmers and marginalized groups are actively involved in the process, and their knowledge and needs are placed at the center.
- Roles are clearly defined, with each person acting autonomously in a spirit of respectful partnership, using social practices adapted to cultural contexts and fluid, transparent communication.
- Facilitation of the process ensures a balance of power that strengthens collaboration and creative engagement and recognizes all actors for their contributions and efforts.

Joint creation and contextualization

The approach used generates a process of joint and horizontal creation that starts from an awareness of a common need, brings together several forms of knowledge, and promotes the dissemination and use of new knowledge.

- The co-creation process includes several key phases, such as contextualized needs assessment, sharing of knowledge and skills to generate new knowledge, and time to properly evaluate and disseminate it.
- The actors engage in the interaction and integration of different forms of knowledge, such as peasant, indigenous, and academic knowledge.
- The actors maintain active communication and the language used is understandable to everyone.
- Co-created knowledge can take many forms (agroecological practices, tools, collective action, scientific evidence, etc.) and its scaling up must be contextualized locally.

Table 2: Principles of knowledge co-creation developed by the authors based on participant feedback. The principles focus on three dimensions that mutually support/strengthen the process of knowledge co-creation.



The elements of the principles co-created by the participants (Table 2) reflect the depth of their conversations in all three dimensions. Through the elements of human attitude and values, the participants affirm that relationships of trust are fundamental to unlocking a common goal and joint creative dialogue. Facilitation and working approaches must therefore support these values throughout the process and with patience. Each actor must be empowered and invited to participate with openness, listening, and gratitude. The time needed to nurture these values and relationships should not be restricted, even while recognizing that project cycles often limit this relational aspect.

Participants also shared challenges and factors limiting co-creation in their work. It emerged that: (1) vulnerability and the mobilization of actors due to insecurity in the Sahel make it difficult to maintain the level of participation and continuous exchange, (2) there is a low availability of co-creation tools adapted to knowledge exchange with producers. Co-creation approaches in research often focus on scientific priorities without addressing the difficulties of understanding scientific terms, which could lead to confusion for stakeholder groups. The co-creation of appropriate innovations and technologies requires consideration of the socio-cultural and economic context, such as indigenous languages, scientific preparation, existing knowledge, and the specific needs of communities, which are often linked to their history and territory.

Co-creation of knowledge is "the pooling of knowledge and skills in a spirit of transparency and mutual respect to generate new knowledge and achieve a common goal."

Source: working group notes

Reflections and discussion

The reflection and co-creation work carried out during the session made it possible to reconstruct salient elements of the knowledge co-creation process that are mobilized or desired by the project teams. We highlight two elements of the nature of knowledge co-creation based on this work.

Firstly, agroecology research based on co-creation of knowledge develops links between science and society (Hervé et al., 2021). For agroecology, research must be a pluralistic process and a public service, with co-created knowledge disseminated in an accessible manner and in a form that is understandable to the various stakeholders. The legitimacy, relevance, and validity of co-created knowledge are ensured through rigorous scientific methods as well as approaches that include diverse epistemologies. The process creates new knowledge and forges evidence for agroecology that can convince the research actors themselves as well as a potentially wider network of actors who could benefit from this knowledge (Jacobi et al., 2022). This includes new collaborators, decision-makers, the scientific community, development actors, and funders.

Secondly, it is not only the diversity of actors in the co-creation process that must be taken into account, but also the diversity of the territories in which these processes are located. This means that agroecological research takes on a form that is adapted to each territory. The histories and knowledge of the actors leave their mark on the decisions made in the work. Similarly, the physical, agronomic, socio-cultural, political, and economic characteristics of the territory shape the collective process. They chisel the unique challenges and solutions that are worked on within the group. The group then becomes the vehicle for direct dialogue within



the territory and its community by taking on the responsibility of applying their various forms of knowledge and collectively creating beneficial changes.

The agroecological transformation of food systems requires a transformation in the conventional way of constructing knowledge (Loconto, 2023). It requires mechanisms for research and co-creation of knowledge that enable learning through diverse perspectives and experiences and that support active and supportive participation among actors (Anderson et al., 2019; Lavandero et al., 2025). Agroecological research involves a constantly renewed transdisciplinary tension between the theoretical, contextual, and social domains. Based on the assumption that theoretical and practical knowledge in agroecology are intertwined, research develops them through interaction and dialogue with stakeholders.

We found expressions of these dynamics in the farmer-researcher networks (FRNs) that were built within several CRFS program projects and in the three highly interdependent dimensions of action on which the West Africa CoP focuses to strengthen knowledge co-creation (Table 2). In summary, the principles are directed towards cultivating an open-minded attitude based on solidarity, enabling a group organization that both empowers actors and promotes diverse forms of knowledge, and advancing joint creation through shared power and the contextualization of co-created knowledge to meet the needs of communities in a given territory. These attitudes will also help maintain the momentum and longevity of research networks. The capacity for action of FRNs and CRFS research teams is based on the plurality of subjects and knowledge. In social ties and scientific evidence, co-creation acquires the potential for the contextual scaling out of agroecological knowledge and the transformation of food systems.



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Colophon

Written by: Gabriela Bucini and Emily Baker

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The UVM Institute for Agroecology (IFA) is mobilizing knowledge to advance the transition towards more equitable and sustainable food systems. The IFA uses a holistic approach to understand complex systems and tackle the root causes of today’s problems, engaging agroecology and food sovereignty to challenge the status quo and open new pathways to better futures. Our work spans from local to global through the integration of research, learning, and action. This reach across geographies gives the Institute a unique and interconnected perspective, allowing us to cross-pollinate ideas and innovations and to leverage change.

