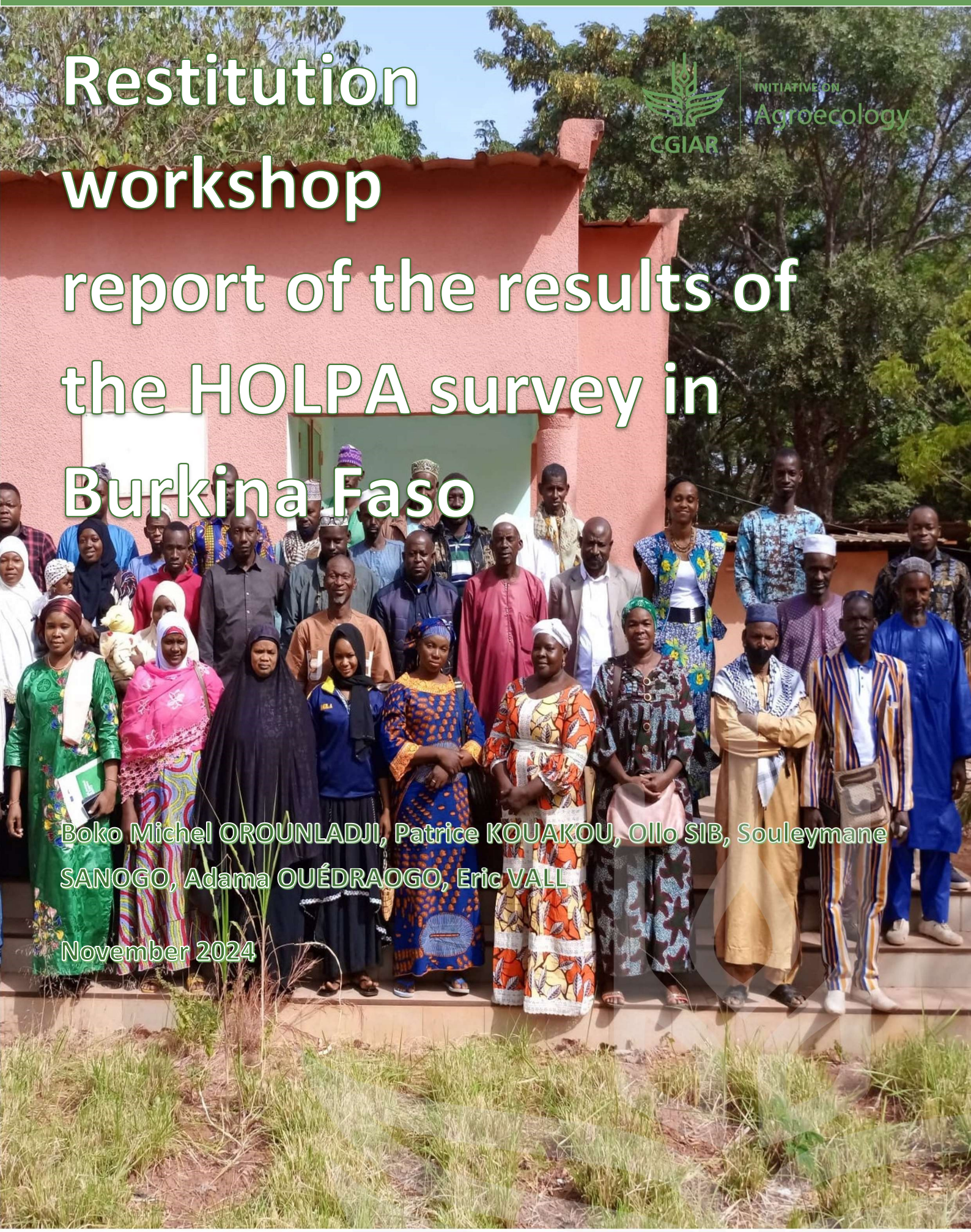
Restitution workshop report of the results of the HOLPA survey in Burkina Faso



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November 2024

Contents

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(1) CIRAD, (2) CIRDES, (3) INERA

1. Introduction

1.1. Context

Agroecology is an approach to achieving sustainable farming and food systems, rooted in a set of principles (recycling, input reduction, soil health, animal health, biodiversity, synergy, economic diversification, knowledge co-creation, social values and diets, equity, connectivity, governance of land and natural resources, and participation; Wezel et al., 2020) that emphasize the need to work with nature rather than against it. It aims to build sustainable agricultural and agri-food systems based on the co-creation of knowledge, the active participation of farmers and multiple stakeholders in decision-making, while strengthening the connection between farmers and consumers.

It is in this context that the Agroecology Initiative (AEI), through one of its specific objectives, aims to produce scientific evidence on the performance of the farming systems it supports in the agroecological transition, in order to document and provide evaluation elements to stakeholders in the field and decision-makers, with a view to encouraging the development of this transition on a large scale in the territories. This objective cannot be achieved without gathering data and evidence on the agroecological performance of the farming systems studied and supported in their agroecological transition.

In order to produce locally relevant and globally comparable data on the agroecological performance of farms, AEI Work Package 2 has developed the HOLPA (Holistic Localized Performance Assessment for Agroecology) assessment tool.

But the application of this tool among farmers is relatively complex, which is why the following steps are essential: (i) development of a context document taking into account the current situation of the farmers' targeted farming systems described using technical, economic, environmental and social criteria as well as the 13 principles of agroecology (Kouakou et al., 2023), (ii) familiarization with the HOLPA tool (Orounladji and Kouakou, 2023a) and (iii) identification of local indicators specific to the dairy value chain in the Agroecological Living Landscape (ALL - Orounladji et al., 2023b).

As a reminder, in Burkina Faso, AEI's activities focus on the dairy value chain, and it relies on a multi-stakeholder platformcalled the Agroecological Living Landscape (ALL), which is itself based on the Dairy Innovation Platform Bobo-Dioulasso (DIP) established in 2020. In 2023, the DIP was consolidated into an ALL with the incorporation of new members and partners (Sib et al., 2023).

The implementation of a survey to evaluate the agroecological performance of dairy farms using the HOLPA tool required the involvement of researchers and the participation of several cooperatives of milk farmers, processors, representatives of the public sector (Direction Régionale de l'Agriculture, des Ressources Animales et Halieutiques, City Hall), technical and financial partners, NGOs and professional organizations. All these stakeholders were involved, each in their own right, in drawing up the context document, identifying local indicators, learning how to use the HOLPA tool and collecting quantitative and qualitative data.

In Burkina Faso, the HOLPA survey was carried out on 204 dairy farmers and 204 dairy farmers households. The survey was conducted over a reference period that more or less coincided with the first year of AEI in Burkina Faso. At that time, experimentation with agroecological technologies among dairy farmers had only just begun. Consequently, these new agroecological technologies had not had time to produce their effects and induce changes and impacts on the farms. Consequently, under these conditions, the HOLPA survey enabled us to draw up a sort of baseline on the levels of agroecological performance of dairy farms prior to the implementation of changes aimed at increasing their degree of agroecology. It is very important that the reader bear this in mind.

Data from the HOLPA survey in Burkina Faso were analysed and the results presented and discussed with the various stakeholders. Stakeholders had already attended the presentation of the preliminary results of the HOLPA 2023 survey (based on 52 dairy farms and 52 dairy-farm households; Ouattara et al., 2024). This final HOLPA survey results workshop was also an opportunity to reflect critically on the tool testing process, in order to draw lessons and identify ways forward in realizing the LIP vision.

1.2. Workshop objectives

The aim of this workshop was to share the synthesis of the information produced by the agroecological performance assessment survey of dairy farms in the Bobo-Dioulasso dairy milkshed, using the HOLPA tool, with stakeholders.

Specifically, this involved:

- Present and discuss the results of the study with the stakeholders who took part in it

- Verify the consistency of the results obtained with the stakeholders
- Establish with stakeholders a hierarchy of performance indicators by dimension (agronomic, environmental, social and economic)
- Draw lessons and identify ways forward to achieve the LIP vision in line with the principles of agroecology.

1.3. HOLPA workshop participants and agenda

The workshop was held on Wednesday November 27, 2024 in Bobo-Dioulasso, in the training room of the Centre International de Recherche-Développement sur l'Élevage en zone Subhumide (CIRDES).

It brought together some 60 participants from the Bobo-Dioulasso dairy milkshed, including dairy farmers, milk collectors, dairy processors, local elected representatives, members of the DIP, representatives of the Burkina Faso breeders' federation, heads of agricultural and livestock technical services, NGO representatives and experts from various fields (agronomy, zootechnics, economics, biodiversity/environment, sociology).

The workshop agenda is appended to this report.

2. Workshop methodology

The dynamics of the workshop were based on presentations, group work in the World café and plenary discussions, together with proposals for new ways of thinking about improving the agroecological performance of dairy farms in the Bobo-Dioulasso dairy basin.

The work was divided into four main phases:

- Sequence 1: Presentation of the HOLPA tool and general survey results
- Sequence 2: Presentation of performance results for three farm groups
- Sequence 3: Prioritization and improvement strategies for farm performance indicators
- Sequence 4: Lessons learned and the way forward

2.1. Sequence 1: Presentation of the HOLPA tool and general survey results

The Co-lead of WP2 in Burkina Faso explained to participants what is meant by HOLPA and why it was decided to set up a new tool for evaluating the performance of agroecology. The results of the "context" and "agroecology" modules were also presented (Figure 1). This sequence also enabled participants to discuss the various general results presented.

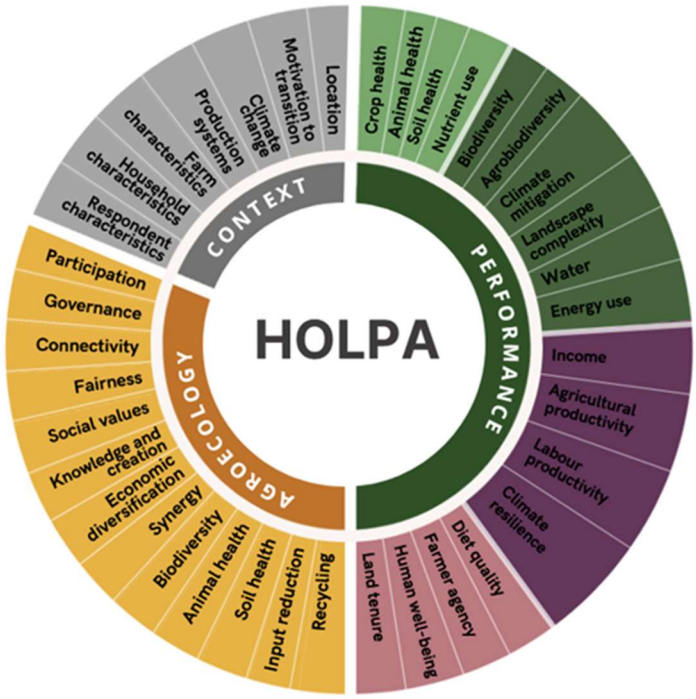

Figure 1. HOLPA tool modules and their various components

2.2. Sequence 2: Presentation of performance results for three groups of dairy farms

The second sequence was devoted to presenting the performance results for the three groups of farms (mini-dairy farms, agropastoralist dairy farms experimenting with the agroecological package, agropastoralists dairy farms who have not experimented with the agroecological package), as well as overall performance indicators and crop yields.

Respondents have been divided into three categories so that their results can be better appreciated, for two fundamental reasons: (i) firstly, since the formalization of ALL in Burkina Faso, for all activities (development of current and agroecological business models, cost-benefit analysis, identification of stakeholders space for initiative, etc.) carried out with the various links in the dairy value chain, particularly the production link, we have always had two professional groups: (i) the first group, which has been involved in the ALL project since its inception, has been the mini-dairy farmers, and (ii) the second group, which has been involved in the ALL project since its inception, has been the dairy farmers: mini-farms and agropastoralists; and (ii) secondly,

while we know that at this stage of data collection the agroecological package could not have produced any effect, we decided to separate the agropastoralist dairy farmers involved in the experimentation of the agroecological package in 2023 from the other agropastoralists (not involved in this experimentation on the farms). In this way, we were able to establish the three categories that enabled us to compare their performance (based on local indicators). The three categories are described as follows:

- Dairy mini-farms (08): with a relatively intensive dairy production unit based on zebu dairy cows crossed with exotic breeds, raised in stalls with limited access to natural pastures;
- Agropastoralists who have experimented with the agroecological package proposed by AEI (52): These farmers have set up a relatively extensive dairy production unit based on the rearing of female zebus, with daily grazing maintained on natural rangelands and supplemented with fodder and feed. These farmers experimented with forage demonstration plots and received support for optimized management of crop and livestock co-products using the *CoProdScope* tool. They also received support with the *Jabnde* tool for cow rationing, and installed covered manure pits to improve organic waste management.
- Other agropastoralists (144): their extensive dairy production unit relies on dairy cows of local breeds, better adapted to the region's climatic conditions.

Following the presentation, discussions took place on the relevance and consistency of the results.

2.3. Sequence 3: Prioritization and improvement strategies for farm performance indicators

The aim of this sequence was to establish a hierarchy of agroecological performance indicators for farms, and to identify strategies for improving these performances in order to make better progress towards the LIP vision.

The method used at this level is that of World café work, where participants are divided into two groups with an equitable representation of farmers in each group. After presenting the indicators for the four dimensions to the participants, the facilitators asked them to rank the performance indicators from most to least important. To make this classification, for each indicator, participants were asked to vote by a show of hands for each of the following four (04) items: 1= Not at all important; 2= Not very important; 3= Important; 4= Very important. The number of votes cast for each item of each indicator was recorded in each group. In the final plenary session, the number of votes for each item of each performance indicator was summed up. In order to prioritize the performance indicators, the scores for each indicator were calculated using the following formula:

$$\text{Score de l'indicateur} = \sum_{k=1}^{4} (\text{coefficient de l'item x nb de votants pour l' item}) / \text{nb total de votants} \quad (1)$$

The performance indicator receiving the most votes is ranked first, and so on.

2.4. Sequence 4: Lessons learned and the way forward

In this sequence, a plenary session was organized around the following questions:

1. What have you learned from the HOLPA application process?
2. What is your feedback on the HOLPA tool? Positive aspects, limitations, etc. Any suggestions for improvement?
3. How do the results make sense for your production activity?
4. What conclusions do you draw from this process?
5. What are the benefits of evaluation, and how might it change the way farming/livestock is practiced on your farm?
6. What do you propose to do on the basis of these results?

3. Summary of results presented

3.1. Background on the HOLPA tool, study methodology and results on context and agroecology

The co-leader of WP2 in Burkina Faso, Dr Michel Orounladji, reminded participants that the HOLPA tool aims to produce locally relevant and globally comparable data on the agroecological performance of agricultural systems. He also made it clear in his presentation that before arriving at the results that were presented during the workshop, several steps were carried out, including:

- Drawing up a background document on farming systems in Burkina Faso
- Getting to grips with the HOLPA tool
- Contextualizing performance indicators
- Data collection and analysis.

In Burkina Faso, data were collected from 204 dairy farms households and 204 dairy farms belonging to the Bobo-Dioulasso ALL, which covers all nine (09) milk collection centers affiliated to DIP.

Several agroecological practices are implemented on dairy farms. Among all these agroecological practices, eight (08) are implemented by at least 50% of farmers: (i) moderate use of herbicides, (ii) depositing organic manure in the field by stabling livestock, (iii) use of fodder to supplement livestock feed, (iv) moderate use of mineral fertilizers, (v) storage and conservation of fodder, (vi) use of agroecological equipment (fodder sheds, silos, cart, tombereau, etc.), (vii) maintenance of mulch on crop plots, (viii) monoculture with livestock feed, (ix) use of organic fertilizers, (x) use of organic fertilizers.), (vii) maintenance of mulch on crop plots, (viii) monoculture with annual crops.

A scoring system was used to assign a rating from 1 to 5 on the level of implementation of the 13 principles of agroecology on dairy farms. The result of this work is as follows:

Highly rated agroecological principles

- Recycling
- Animal health
- Social values
- Equity
- Participation

Agroecological principles with an average rating

- Reducing inputs
- Biodiversity
- Synergies
- Knowledge co-creation
- Connectivity
- Governance of land and natural resources

Agroecological principles with a low rating

- Soil health
- Economic diversification

In general, dairy farms in the Bobo-Dioulasso dairy milkshed have an average agroecological score (2.62 ± 1.06).

The heterogeneity of agroecological levels observed on dairy farms reflects the diversity of farmers' practices and priorities. This variability can be explained by differences in the technical support provided by decentralized government departments in charge of agriculture and livestock, and by other DIP partners who have supported farmers in various agricultural initiatives. Also, in an effort to reduce production costs or to meet immediate economic needs, etc., farmers frequently choose their own practices. Dairy farmers, who are the upstream actors of the value chain, adapt their practices in line with these constraints and opportunities, creating an uneven implementation of agroecological principles.

The highest-rated principles, such as recycling and animal health, stand out for their direct link to productivity and economic resilience, while those lagging behind, such as soil health and economic diversification, require long-term resources and support. This disparity highlights the importance of prioritizing farmers' immediate needs, while preparing strategic actions to integrate less developed agroecological principles.

3.2. Performance of the three categories of farmers

To enable farmers to assess their performance more accurately, results were presented in the three categories described in section 2.2.

Local performance indicators for these types of farmers were presented according to agronomic, environmental, economic and social dimensions.

The mini-farmers group accounts for 4% of farmers. They have the highest number of manure pits per farm (on average one manure pit), the largest quantities of fodder produced (1,457 kgDM/TLU of quality fodder and 1,210 kgDM/TLU of coarse fodder), the highest quantity of organic manure produced (5 tons/farm), and the highest number of fodder storage facilities (2 facilities on average/farm). All mini-farmers produce fodder, and have the largest areas secured by title deeds. They seem to spend more on veterinary inputs (at least 3,000 FCFA/cow/year). The majority of mini-farmers (62%) have received training in innovative farming practices and farm management.

Experimental agropastoralists account for 25% of dairy farmers. Like mini-farmers, they also have the highest number of manure pits per farm (on average one manure pit). All farmers in this group produce forage. The quantities of fodder produced are average (412 kgDM/TLU of quality fodder and 728 kgDM/TLU of coarse fodder). They spend an average of 2,500 FCFA/cow per year on health monitoring. The majority (67%) have benefited from training in innovative farming practices and farm management.

Other agropastoralists make up the majority group (71% of respondents). They are characterized by the lowest quantities of quality forage (89 kgDM) and roughage (382 kgDM) distributed per TLU. They obtain the highest quantities of milk per cow in the rainy season (3.7 L/d/cow vs. 2.44 L/d/cow held by mini-farmers). This result is surprising, as these agropastoralists mainly raise zebus, unlike the mini-farmers who mainly raise crossbred cows (zebus x exotic dairy breeds). They produce the smallest quantities of organic manure, but lead the field in terms of soil fertility. This can be explained by the fact that the animals rotate around their plots during the dry season. This group of farmers spends less on annual health checks for a cow (1,500 FCFA/cow) than mini-farmers and experimental agropastoralists.

Overall performance indicators and crop yields were also presented during the workshop.

On the agronomic front, crop and soil health indicators show high values. As for animal health, despite a high degree of variability, this indicator shows an average value overall.

In environmental terms, indicators relating to energy use, tree diversity and seed variety diversity show high values. On the other hand, indicators for climate mitigation and animal diversity show relatively average performance. However, performance is weak when it comes to landscape complexity and water stress reduction.

From an economic point of view, household income indicators and their stability show low and moderately stable values, highlighting a notable economic fragility of dairy farms.

In social terms, the indicators show high values, revealing a very good level of well-being among household members. However, dietary diversity is rated as average, and access to land is characterized by great variability.

As far as crop yields are concerned, the average yield of cereals is 1,500 kg/ha. Sorghum and millet yielded 414 kg/ha and 349 kg/ha respectively. Rice has an average yield of 1,440 kg/ha. As for legumes, soya has an average yield of 600 kg/ha and groundnuts 365 kg/ha. Cowpea yields average 269 kg/ha. Sesame yields 83 kg/ha and cashew 400 kg/ha. Reported grain yields are low compared with local averages (maize between 2 and 2.5 t/ha, millet and sorghum between 0.8 and 1 t/ha, rice between 1.5 and 2 t/ha, groundnuts and cowpeas between 0.5 and 1 t/ha).

4. Discussions and suggestions

4.1. Discussions on the results presented

After presenting the results of the HOLPA survey,

> “ Overall, participants appreciated the results presented, which reflect their context, the status of agroecology on dairy farms and the performance indicators for these farms.

Nevertheless, opinions are divided regarding the results on the quantity of milk produced by dairy cows on mini-farms. For some, the low quantities observed seem consistent and can be explained by several factors: poor adaptation of the cows to local climatic conditions, feeding difficulties, or inadequate management of the animals. On the other hand, others believe that these results could be biased due to errors in reporting the quantity of milk produced per cow, or to data entry problems.

With regard to crop yields, participants recognized their weakness and decided to take steps to improve soil fertility, notably through the use of organic fertilizers.

4.2. Prioritizing performance indicators

The prioritization of key farm performance indicators revealed that local indicators are, on the whole, considered more important by participants, whatever the dimension analyzed, in comparison with global indicators. In all four dimensions, local indicators are always in first place (Table 1).

For the agronomic dimension, the indicators in the top 8 places are local indicators. Global indicators rank between 10th and 14th. On this agronomic dimension, the 3 priority indicators identified by the participants are:

- Forage production
- The quantity of milk produced during the hot dry season
- Soil fertility

For the environmental dimension, the indicator in first place is a local indicator. Then, from 2th to 9th, we find global indicators. In this dimension, the three main key indicators are:

- Securing acreage through title deeds
- The diversity of seed varieties
- Reducing water stress.

For the economic dimension, the two indicators in first place are local indicators, followed by global indicators from 3th to 4th. In this dimension, the priority indicators are:

- Forage production costs per farm
- The annual cost of monitoring a cow's health
- Household income.

Finally, for the social dimension, the two indicators in first place are local indicators, followed by global indicators in 3rd to 5th place. The most important performance indicators are:

- Raising awareness of the rules of living together
- Training in innovative farming practices and farm management
- The well-being of household members

Table 1. Hierarchy of key performance indicators for dairy farms

Indicators	Indicator types	Score	Rank
Agronomic dimension			
Forage production	Local	4.0	1 er
Quantity of milk produced per cow in the hot dry season	Local	4.0	1er ex
Soil fertility (organic matter, soil carbon)	Local	3.9	3 ème
Proportion of forage farmers	Local	3.9	3ème ex
Quantity of manure spread per ha	Local	3.8	5ème
Quantity of manure produced	Local	3.8	5ème ex
Quantity of milk produced per cow in the cold dry season	Local	3.7	7 ème
Storage equipment (hayloft, silos, forage sheds)	Local	3.6	8 ème
Animal health	Global	3.6	8ème ex
Quantity of milk produced per cow in the rainy season	Local	3.5	10 ème
Crop health	Global	3.5	10ème ex
Soil health	Global	3.4	12 ème
Number of manure pits	Local	2.7	13 ème
Use of inputs	Global	2.5	14 ème
Environmental dimension			
Areas secured through title documents	Local	3.8	1 er
Seed variety diversity	Global	3.5	2 ème
Elimination of water stress	Global	3.4	3 ème
Tree diversity	Global	3.2	4 ème
Climate mitigation	Global	2.9	5 ème
Animal diversity	Global	2.7	6 ème
Percentage of users of biodegradable packaging	Local	2.5	7 ème
Energy use	Global	2.5	7ème ex
Landscape complexity	Global	2.5	7ème ex
Economic dimension			
Forage production costs per farm	Local	3.7	1 er
Annual cost of cow health monitoring	Local	3.6	2 ème
Household income	Global	3.5	3 ème
Stable revenues	Global	3.0	4 ème
Social dimension			
Raising awareness of the rules of living together	Local	3.8	1 er
Training in innovative farming practices and farm management	Local	3.5	2 ème
Well-being of household members	Global	3.5	2ème ex
Food ration diversity	Global	2.8	4 ème
Professional organization	Global	2.7	5 ème

Source: HOLPA workshop, Bobo-Dioulasso, November 2024

4.3. Strategies for improving performance indicators

The strategies proposed by workshop participants to improve dairy farm performance are presented below. We have grouped them into three categories according to the actors most concerned by their implementation:

Farmers

- Develop a network of seed farmers to increase seed availability.
- Fencing off production sites.
- Composting in a pile.
- Strengthen solidarity between farmers to facilitate access to seeds.
- Promote the best farmers to encourage emulation.
- Ensuring that animals are kept on plots to improve soil fertility.
- Better water management for forage production.

Ministry of Agriculture, Animal Resources and Fisheries

- Improve seed distribution to farmers.
- Promoting the dairy sector through the agropastoral offensive.
- Supporting DIP in forage production.
- Support farmers to improve forage production.
- Encourage widespread adoption of forage production technologies.
- Reward the best farmers to motivate all players.

Other DIP partners

- Subsidize the purchase of equipment, particularly shredders.
- Train farmers in innovative farming practices, farm management and equipment use.
- Install boreholes to secure fodder production in the dry season.
- Train trainers to accompany farmers on manure pits and heap composting.
- Work with farmers to improve fertilization practices.
- Build the capacity of uninvolved farmers to increase forage production.
- Strengthen farmers' capacity to use the heap composting technique, which is considered more accessible and better suited to their needs.

4.4. Lessons learned and the way forward

Participants recognized the effectiveness of the HOLPA tool for assessing agroecological performance. Although the survey was time-consuming according to survey respondents, it yielded relevant results, notably on the state of soil fertility, the level of forage production (proportion of farmers, quantity produced, types of forage species, etc.), and the agroecological status of dairy farms in the Hauts-Bassins region.

The restitution of results was seen as a highly beneficial initiative. It enabled participants to gain a better understanding of the agroecological status and performance of their farms, as well as the impact of certain practices, such as the use of pesticides and herbicides, which were considered to be non-agroecological. This awareness changed their initial perception, as some had previously considered the survey a mere constraint.

Participants also realized the importance of keeping a close eye on the size of their herds, knowing their numbers by age category and type of animal, as well as their productivity. This has enabled them to better assess available resources and adapt their practices.

Several directions have been identified for the future. Firstly, a change of behavior in farming and breeding practices is needed to promote more agroecological production. This includes the gradual abandonment of pesticides and herbicides in favor of environmentally-friendly methods.

Participants also stressed the importance of maintaining and intensifying forage and manure production, essential for improving the fertility of depleted soils. Awareness of manure use motivated farmers to adopt more sustainable practices to preserve and restore their farmland.

Diversification of income sources is also a priority. Beyond milk sales, participants identified economic opportunities in the production and marketing of forage seeds and organic manure. This diversification could strengthen the economic resilience of farms while meeting local needs.

Last but not least, it is essential to continue raising awareness and building farmers' capacities to maintain these positive dynamics and further improve farm performance.

4.5. Suggestions for developing a culture of agroecological performance measurement

During the workshop, a number of suggestions were put forward to improve agroecological performance assessment practices and consolidate achievements:

- Make soil analysis results available to surveyed farmers via the DIP. This would enable them to know precisely the state of fertility of their soils and adjust their practices accordingly.
- In a few years' time, carry out a new evaluation using the HOLPA tool with the same farmers. This will enable us to measure the impact of the agroecological packages introduced on certain farms, and assess the progress made.

5. Conclusion

The workshop enabled participants to gain a better understanding of the objectives, modules and results targeted by the use of the HOLPA tool. The presentation of the results obtained in the course of the study gave rise to enriching discussions, fostering a critical appreciation of their relevance and coherence. These exchanges provided an opportunity to identify key lessons, improvement strategies and concrete suggestions for strengthening the agroecological performance of dairy farms.

Among the highlights, the importance of feedback to farmers, monitoring the impact of agroecological packages and capacity building on specific practices, such as heap composting, were particularly emphasized. These actions represent promising avenues for continuing the efforts already underway.

The workshop also highlighted the importance of local indicators for ALL members. Indeed, the prioritization of key farm performance indicators revealed that local indicators are, on the whole, considered more important by participants, whatever the dimension analyzed, in comparison with global indicators.

The workshop served to consolidate what had been learned, motivate participants to adopt more sustainable practices, and lay the foundations for future follow-up. All participants left satisfied with the results obtained, underlining the effectiveness of the HOLPA tool test and its potential for guiding the improvement of farm performance. This satisfaction testifies to the success of the workshop and the relevance of the steps taken.

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7. Appendices

7.1. Workshop agenda

Date	Time (UTC)	Activities	Details	Responsibilities
Wednesday 27/11/24	08:30 - 09:00	Home	Participant registration	Organizing committee
	09:00 - 09:30	Introduction to the workshop	Opening, participants' tour de table, presentation of the workshop's objectives and schedule, amendment and adoption of the program	Salimata Pousga/Sondé, Hati Konaté, Michel Orounladji
	09:30 - 10:30	Reporting results	Background on the HOLPA tool, study methodology and results on context and agroecology Discussion to amend and validate the results presented	Michel Orounladji
	10:30 - 10:45		Family photo	Organizing committee
	10:45 - 11:00		Health break	Organizing committee
	11:00 - 12:00	Reporting results	Presentation of the performance of the three farmer groups Discussion to amend and validate the results presented	Michel Orounladji
	12:00 - 12:30	World café group work	Prioritization and improvement strategies for agronomic and environmental performance indicators	Raoul Zoundi & Michel Orounladji
			Prioritization and improvement strategies for social and economic performance indicators	Issouf Traoré & Désiré Ouattara
	12:30 - 13:30		Lunch	Organizing committee
	13:30 - 14:00	World café group work (continued)	Prioritization and improvement strategies for agronomic and environmental performance indicators	Raoul Zoundi & Michel Orounladji
			Prioritization and improvement strategies for social and economic performance indicators	Issouf Traoré & Désiré Ouattara
	14:00 - 14:30	Plenary sessions	Restitution of group work	Group leaders
	14:30 - 15:30		Lessons learned and the way forward	Hati Konaté & Michel Orounladji
	15:30 - 16:00		Closing the workshop	Organizing committee

7.2. Some photos of the workshop

Photo 1. Family photo of workshop participants

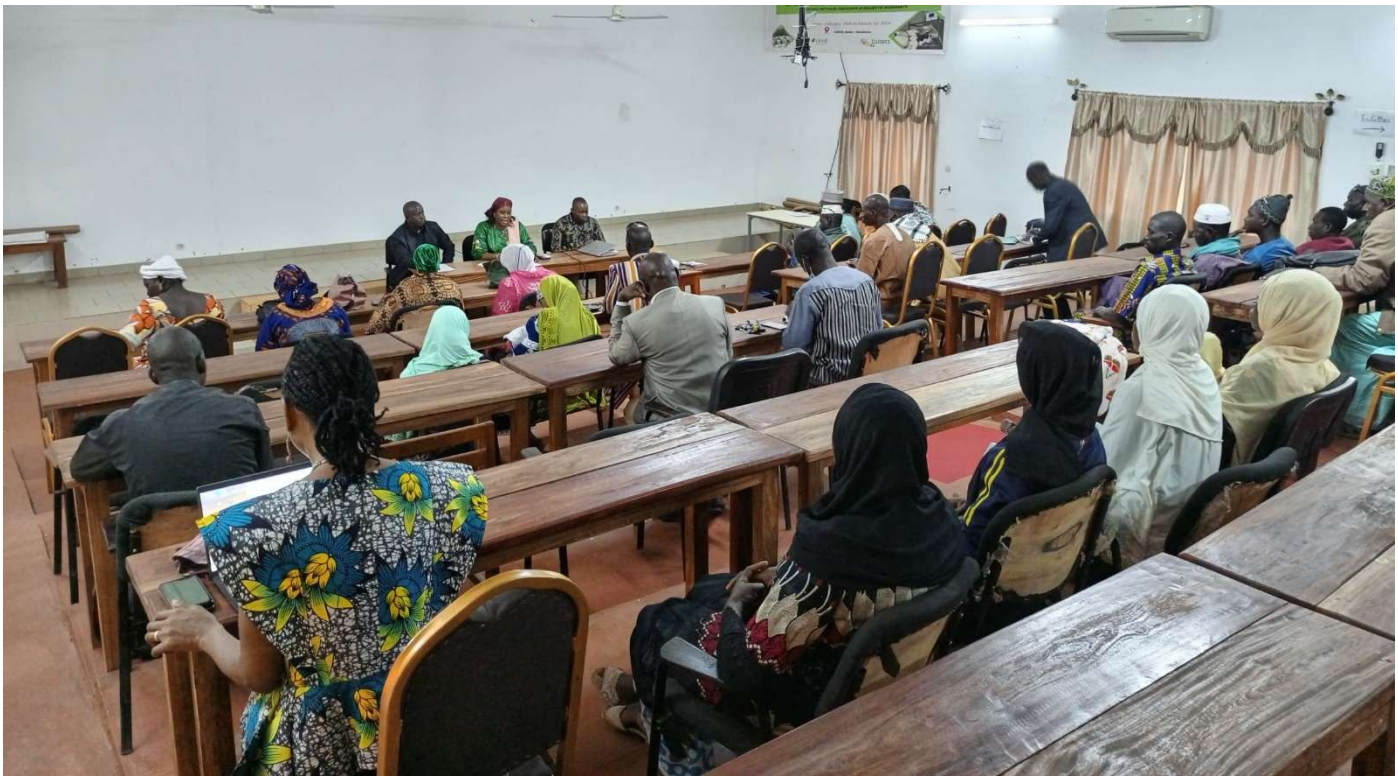

Photo 2. Participants in the room at the opening of the workshop (back view)

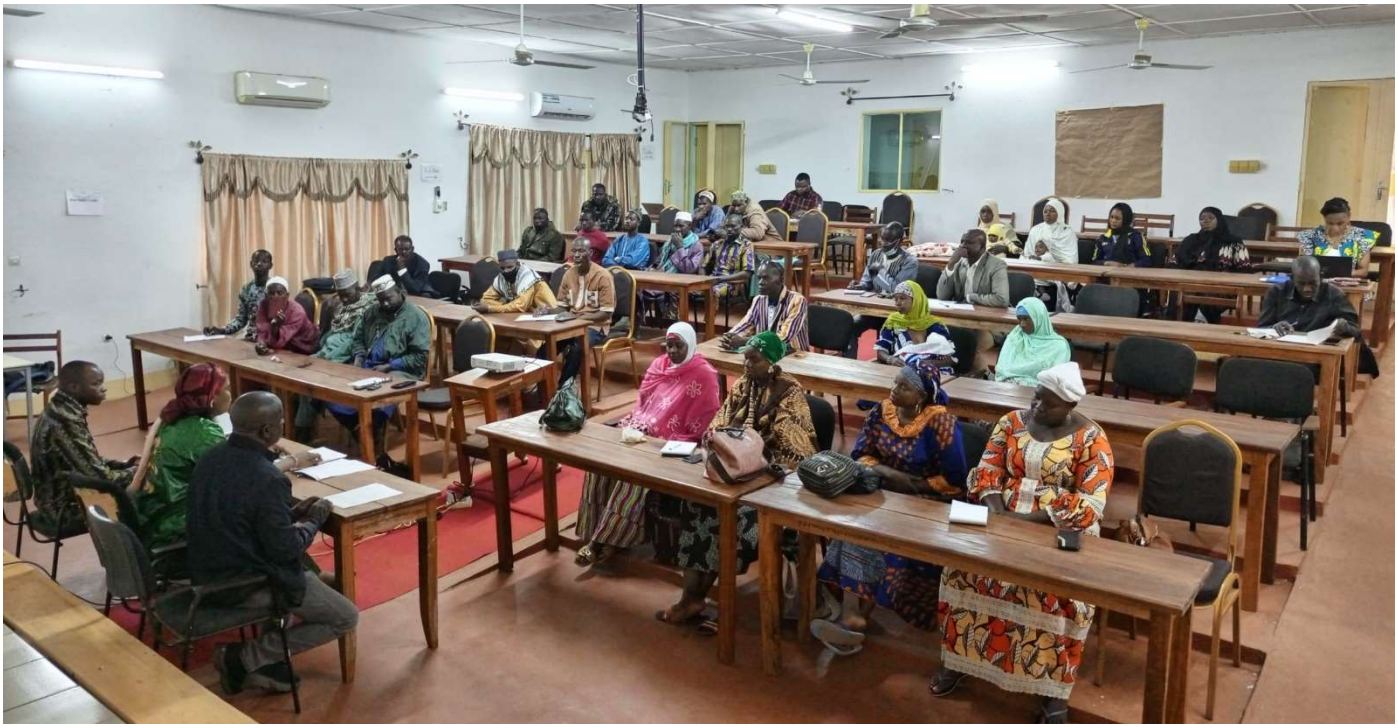

Photo 3. Participants in the room at the opening of the workshop (front view)

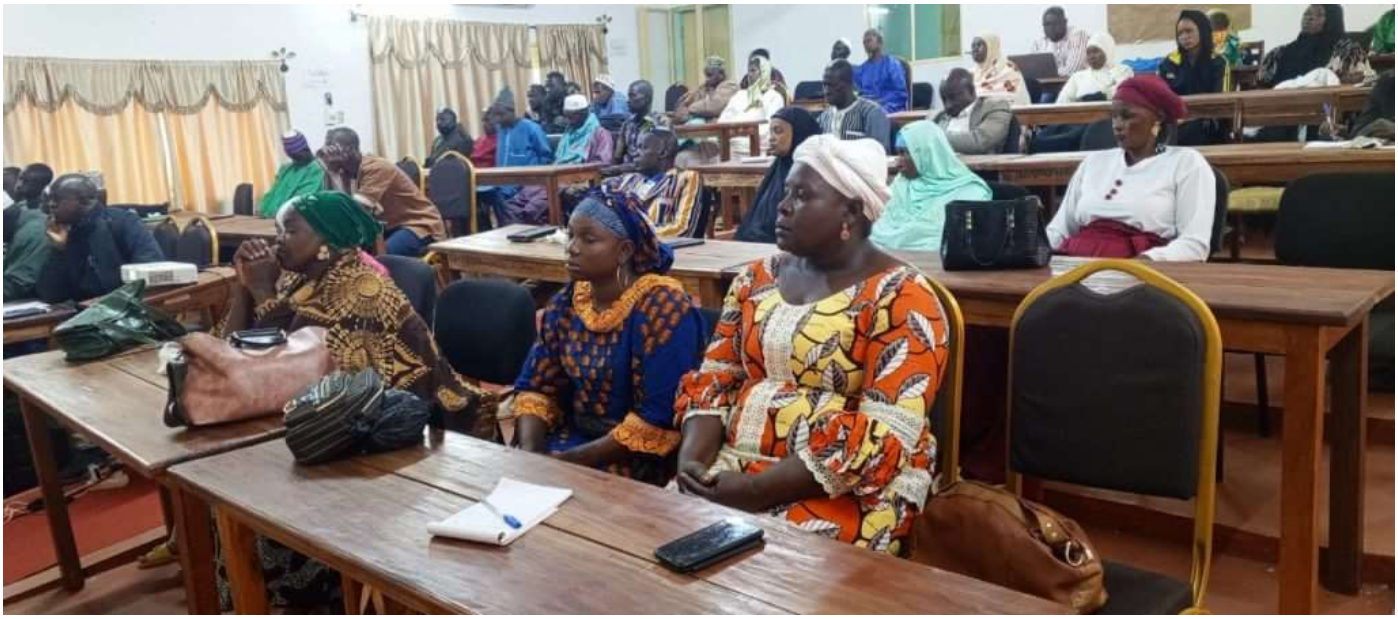

Photo 4. Participants in the room during the presentation of the results

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