



**WORKSHOP HELD ALONGSIDE THE “SALON  
INTERNATIONAL DE L’AGRICULTURE ET DES  
RESSOURCES ANIMALES (SARA)”**

*"Investing in good practices and innovative technologies to reduce  
post-harvest losses and contribute to improving food security and  
nutrition"*

**23-24 November 2019, Radisson Blu Hotel**

**Final Report**



COMITÉ PERMANENT INTER-ÉTATS  
DE LUTTE CONTRE LA SÉCHERESSE DANS LE SAHEL  
Permanent Interstate Committee for Drought Control in the Sahel



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## 1. FINAL COMMUNIQUE

At the end of the two-day workshop and in the light of the undermentioned key highlights from the different statements and sessions, a final communiqué emphasizing the key messages and general recommendations was read.

### 1.1. Key messages

1. The scale of post-harvest losses and its economic and social costs constitute major challenges to the development of agriculture and rural areas. They also represent key obstacles to food security and nutrition in developing countries. Africa remains the most affected continent. In light of the current progress, Africa is apparently not on track to reach the SDG12.3 and the Malabo and Maputo Declarations targets. Despite a renewed commitment, the current situation requires a serious reflection on strategies, policies and means of implementation to meet the Malabo Declaration targets: halving post-harvest losses by 2025, and ending hunger and malnutrition in Africa by 2030.
2. Post-harvest losses management entails the transformation of food systems, as the inefficiency of food systems is one of the main causes of post-harvest losses. To do this, it is crucial to better understand and develop a common and broader definition of post-harvest loss management which should not be limited to some components of the process, but take value chain as a whole.
3. An effective post-harvest losses management encompasses the development of standards and regulatory frameworks that promote a favourable environment and strengthen institutional capacity at local, national and regional levels.
4. While significant progress has been made, production of reliable post-harvest loss data and its access remain a challenge due to its high costs, lack of a systematic approach and insufficient financial resources dedicated for high-quality assessments, documentation and dissemination of a global strategy for sharing good practices and lessons learned. Nonetheless, positive initiatives involving many universities, research institutes and networks across the African continent or in collaboration with African entities are underway and there are real opportunities that should be promoted.
5. Although post-harvest solutions exist, they are fragmented, and remain mostly isolated and poorly integrated into the entire food system. The needs and resources of various stakeholders, whether industrial or smallholders, are different. Flexible approaches and solutions should be adapted to contexts, learning and absorption capacities. Furthermore, appropriate support are required to ensure that smallholders are not left behind.
6. Managing post-harvest losses and their impact on food and nutrition security is a complex and dynamic process, starting from farm to fork. Improving post-harvest losses management will therefore require an inclusive and holistic approach which encourages the participation of all stakeholders along food value chains in a multidisciplinary and multi-sectorial manner. Rapid population growth, increased urbanization and climate effects call for an urgent reflexion on food systems and new models.
7. Africa is full of good practices and endogenous solutions which deserve to be better recognized and valued. The identification, dissemination, replicability and scaling up of good practices offer real opportunities by investing in research and expertise and in the development of knowledge management platforms and their easy access, networks of specialists and communities of practice that meet the needs of different stakeholders.
8. Industrialisation and modernisation of agriculture are indispensable and constitute real opportunities to generate techniques, technologies and practices, providing solutions not only for post-harvest losses management but also for the development of local and national economies. Steps must be taken to ensure that adequate measures are in place to benefit smallholders and

make agriculture appealing to young people by rebuilding it as a promising, innovative sector, which create jobs and wealth and are socially acknowledged through appropriate communication and marketing techniques.

9. Smart and innovative technologies should be made more available and accessible, taking into account local specificities and realities and ownership capacities of communities that benefit from support measures by taking into consideration their learning and absorption capacity. Harmonization of good practices and innovative technologies is necessary.
10. South-South cooperation and the opportunities offered by the centres of excellence such as CERFAM and the China's Centre of Excellence should be strengthened. Opportunities include providing support and facilitation mechanisms and tools to strengthen governments' capacities, and the sharing of resources and the promotion of innovative solutions tailored to their needs and contexts.
11. China's successful experience in reducing post-harvest losses and transforming its agriculture – through ambitious reform policies, promotion of technological innovations, massive investments in infrastructure and machinery and establishment of supervisory and support institutions at national, regional and local levels – is a convincing illustration of public-private partnerships and a holistic approach. The partnership between China and the African Union offers real opportunities for exchanges, sharing of experience and knowledge, technology transfer and deployment of experts supporting the efforts made by regional and national authorities and development partners. Institutions dedicated to South-South Cooperation and capacity building, such as CERFAM and the China's Centre of Excellence, play a leading role as catalyst and facilitator in their operationalization.

## 1.2. General recommendations

At the end of the workshop, the following recommendations were presented and discussed with the participants:

1. Governments are encouraged to intervene, direct and invest significantly in order to effectively manage post-harvest losses, given their huge human, economic and social costs and their negative impact on the food security and nutrition of rural communities, which rely mainly on agriculture. This requires concerted actions, a renewed and significant support from partners to governments for the formulation of required policies and the implementation of adequate measures as well as for capacity strengthening at all levels.
2. Development partners are encouraged to support the ongoing efforts led by governments and regional organizations such as the African Union, ECOWAS, and CILSS in monitoring progress towards the achievement of the Malabo Declaration and the SDGs' targets.
3. It is urgent to shift from "business as usual" towards exploring catalytic and innovative solutions which go beyond reforms to achieve a real transformation of food systems all along the value chain, including production, processing and consumption processes.
4. Given the global awareness on the devastating effects of food loss and waste, poorly controlled demographic growth, rapid and massive urbanization and migration crises, the transformation of food systems in Africa must take into account political, economic, social and cultural challenges and dimensions and their long-term effects on climate change, ecosystems and people's wellbeing.
5. Africa is full of endogenous good practices and expertises related to post-harvest losses management and agriculture – adapted to local contexts and realities – which should be better recognized, scaled up and shared. Governments will benefit from joining force with development partners to mobilize required and adequate human, technical and financial resources to improve and sustain post-harvest losses management.

6. Governments and development partners are called upon to promote the scaling up of affordable post-harvest technologies and techniques in Africa, enabling smallholders, traders and agro-processors to benefit from them. Simple and accessible technical solutions should be identified and promoted, capitalizing on the promotion of communities of practice that facilitate access to knowledge at local level. Local conditions, learning and absorption capacities should be taken into consideration to develop engaging and inclusive participatory methods which facilitate ownership and sustainability of new technologies and techniques, especially by women, young people and the disabled.
7. National governments and development partners are encouraged to invest in improving information and knowledge management, capitalize on the potential of technology by leveraging the potential of digital solutions and recognize that promoting agro-digital solutions can be a means of attracting young people to agriculture.
8. There is an urgent need to step up efforts to improve post-harvest losses management at global, continental, regional and national levels through enhanced coordination and collaboration. Concerted and related efforts are encouraged to develop necessary partnerships that could accelerate post-harvest losses management in Africa. Governments are encouraged to take advantage of South-South and Triangular Cooperation.
9. Governments, regional institutions and partners would benefit from investing in initiatives aimed at filling the gap in data collection and developing reliable methodologies and tools to identify constraints and bottlenecks related to assessment of qualitative and quantitative losses, and their links with food security and nutrition. Resource mobilization is crucial for fully capturing all types of losses and generating solid evidence-based assessments on the impact of post-harvest losses on food security and nutrition.
10. There is an urgent need to generate evidence to support decision-making on policies, programmes, resource allocation and other investments by prioritizing crops and food value chains, where post-harvest losses of crops are high, and by facilitating and expanding research on other crops across the African continent.
11. There is a need to broaden countries' post-harvest policies and strategies by adopting market-based approaches. The market-based approaches explore added value while taking into consideration support measures to small producers who should not be left behind by non-inclusive industrialization and modernization.
12. It is necessary to attract investments from the private sector to contribute to developing and implementing sustainable and effective post-harvest solutions in Africa, which promote inclusive and sustainable economic growth, facilitate and expand trade and markets, and strengthen the productive workforce while making profits. To do this, it will be critical to mobilize not only resources from the private sector, but also from market forces to enhance and support socio-economic development and better articulate the opportunities that attract private sector actors.
13. There is an urgent need to invest in education and increase public awareness, including our future generations, on post-harvest losses, food waste and waste management in order to raise awareness of their harmful impacts on income, nutritional status and well-being and promote the adoption of behaviors that do not jeopardize ecosystems.

## 2. WORKSHOP OPENING AND KEYNOTE HIGHLIGHTS

### 2.1. Introduction

On 23-24 November 2019, the Government of Côte d'Ivoire, the Regional Centre of Excellence against Hunger and Malnutrition (CERFAM) and the Centre of Excellence against Hunger in China – in partnership with the Economic Community of West African States (ECOWAS), the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and the Agricultural Research Centre for International Development (CIRAD) – co-organized a two-day workshop under the theme “*Investing in good practices and innovative technologies to reduce post-harvest losses and contribute to improving food security and nutrition.*”

The event, held , on the side the “*Salon international de l’Agriculture et des Ressources Animales (SARA)*”, in Abidjan, Côte d'Ivoire brought together 70 representatives from governments, international organizations, regional economic communities, financial institutions, development partners, non-Governmental Organizations, networks including youth and women associations, farmer organizations, universities, research institutes, media, and the private sector.

The workshop aimed to foster discussions and sharing of experience among various stakeholders involved in the search of innovative technologies and good practices to strengthen post-harvest loss management as well as their impact on smallholder farmers’ productivity and food security and nutrition at large.

Specific objectives of the workshop are as follows :

1. Present and exchange on different models of good practices on post-harvest loss management and their impact on nutrition, food security and farmers’ productivity.
2. Share lessons learned and opportunities to improve value chain and thus increase the production and productivity of smallholder farmers.
3. Promote and disseminate techniques and technologies aiming to optimize post-harvest loss management.

### 2.2. Welcoming remarks

In their welcoming remarks, **Mr. Issa SANOGO, Director of CERFAM** and **Mr. Sixi QU, WFP Representative and Director of the Centre of Excellence against Hunger in China** welcomed the participants and set the tone for the workshop. Mr. SANOGO and Mr. QU emphasized the very high expectations of the workshop and the importance of undertaking concrete actions to reduce post-harvest losses which should lead to opportunities for collaboration.

Mr. SANOGO reminded the audience that at a time of global awareness and mobilization to fight against food loss and waste, it is urgent to make food systems more efficient and sustainable. There is a need to leverage high-quality policies and interventions to ensure that the investments made are transformed into tangible results for the most vulnerable groups, especially smallholder farmers. Africa is full of innovative experiences that are not systematically exploited. Therefore, a better access to information and expertise are very important cornerstones for the continent. The fight is imminent and South-South Cooperation can play a crucial role in promoting opportunities for strategic partnerships and alliances. CERFAM aims to be a catalyst for good practices, promoting innovative solutions and seeking concrete partnerships.

Mr. QU highlighted China's successful experience in fighting food insecurity and malnutrition and stressed the determination to share China's experience and know-how with African countries and build a strategic partnership with CERFAM.

### 2.3. Opening remarks by the Vice-President of Côte d'Ivoire

In his opening remarks, **H.E. Mr. Daniel Kablan Duncan, Vice-President of Côte d'Ivoire**, underlined that Côte d'Ivoire takes great pride in hosting this event and in co-founding CERFAM. He highlighted some contextual elements by insisting on the seriousness of food insecurity and malnutrition in Africa, which remains the most affected continent. He then presented the achievements made by Côte d'Ivoire with key data : reduction in the prevalence of moderate food insecurity to 10.8% in 2018, the eradication of severe food insecurity, reduction of the prevalence of stunting in children under 5 from 29.8% in 2012 to 21.6% in 2016. He also emphasized that coordinated multisectoral action, policies, frameworks and mechanisms have been critical in advancing these achievements at national level.

**H.E. Mr. Daniel Kablan Duncan** reaffirmed the commitment of the Government of Côte d'Ivoire in fighting hunger and malnutrition in collaboration with the countries in the sub-region in order to accelerate progress towards the achievement of the SDG 12.3 by 2030 of the Malabo Declaration of the African Union and the United Nations 2030 Agenda on the Sustainable Development Goals (SDGs). He recalled that Côte d'Ivoire is also facing post-harvest losses which vary between 20 and 40%, depending on the food categories. Before announcing the opening of the workshop, H.E. Mr. Daniel Kablan Duncan pointed out that the current challenges require more concerted efforts and collaboration. In his conclusion, he highlighted that CERFAM could be an important player in strengthening regional capacities by compiling and disseminating good practices and lessons learned, facilitating synergies and interactions between partners for innovative regional solutions regarding post-harvest loss management.

### 2.4. Statement by the African Union Commissioner for Rural Economy and Agriculture

**H.E. Ambassador Joséphine Mayumba Kala, Representative of the African Union (AU) in Côte d'Ivoire** made a statement on behalf of **H.E. Ambassador Josefa Sacko, African Union Commissioner for Rural Economy and Agriculture**. H.E. Ambassador Mayumba Kala provided an overview of the AU's context and strategy on post-harvest loss management and an update on ongoing activities and actions across the continent. She highlighted enormous economic and social costs deriving from food loss and waste. She urged AU member states to put an end to "business as usual" by leveraging catalytic alternatives that allow tangible gains in all areas. She called upon all partners to help the AU Commission (AUC) to transform the strategies adopted by its member states into reality and build a consensus on the partnerships critical to advancing the implementation of the post-harvest losses reduction strategy across the continent. In addition, the AUC looks forwards to the outcomes, the recommendations and the means of implementation from the workshop. In conclusion, the African Union Commissioner for Rural Economy and Agriculture, proposed to the participants the below five solutions:

- Develop high-yielding varieties of crops through increased investments in research to develop plant varieties adapted to the African ecosystems;
- Invest in irrigation development to increase farm-level productivity;
- Promote access to fertilizers to address soil erosion and fertility degradation;
- Improve access to markets through policies, regulations and good governance that promote the development of infrastructures including roads, storage systems and strategic food reserves that reduce losses and post-harvest costs;
- Capitalize on the benefits offered by enhanced information management and digital technology to facilitate the selection of improved crops, fertilizers and pesticides, and foster access to data and financial inclusion

### 2.5. Statement by the Director of the Department of International Cooperation and Organizations, Ministry of Agriculture and Rural Affairs of the People's Republic of China

**Mr. Wu LIFENG, Director of the Department of International Cooperation and Organizations at Ministry of Agriculture and Rural Affairs of the People's Republic of China**, dedicated his speech to "food security

in China and rural transformation.” He presented China’s experience in food security and the different stages undergone in the process of rural transformation over the last forty years, marked by a constant long-term vision with a strong support from the central Government through policies, institutions and measures supporting agriculture at all levels (national, regional and local). In his speech, Mr. LIFENG also drew attention on the success factors that have enabled to achieve food security and contribute to rural development in China. Concrete measures have been taken to increase production capacity and productivity through policy reforms and adequate supportive measures including selection of new crop varieties, dissemination of technology and mechanisation, introduction of subsidies to farmers and easier access to credit. A better management of post-harvest losses has been made possible through a reform of food distribution systems: supply chain, transportation, storage and processing. After reducing its dependence on imports, China became a food aid donor in 2002. The aforementioned factors could stimulate innovative solutions for African countries to develop regional and national policies and programmes in partnership with CERFAM and other regional institutions to significantly reduce post-harvest losses and thereby achieve food security and nutrition.

### 3. SESSIONS AND PANELS : KEY HIGHLIGHTS

The opening remarks and statements were followed by a series of presentations and a deep dive questions and answers session on the different thematic areas.

#### 3.1. *Session 1: Post-harvest losses: scale, causes, challenges and opportunities.*

After the review of the scale, the causes and the challenges as well as the opportunities related to post-harvest losses, different presentations showed that very little progress has been made in Africa towards the achievement of the 2030 agenda post-harvest loss reduction target (SDG12.3). More need to be done also to ensure the concrete implementation of the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods. To date less than 20% of African countries have allocated at least 10% of their national budget in agriculture.

The “Inaugural Biennial review Report on the Implementation of the Malabo Declaration” revealed that among the 47 countries which provided information, only 20% are reported to be on-track for achieving the commitments by 2025. Among the top 10 best countries, Rwanda ranked first with a score of 6.1, followed by Mali (5.6), Morocco (5.5), Ethiopia (5.3), Togo (4.9), Malawi (4.9), Kenya (4.8), Mauritania (4.8), Burundi (4.7) and Uganda (4.5). The report sets the 2017 benchmark at 3.94 out of 10 as the minimum overall score for a country to be considered on the path to meeting the Malabo commitments by 2025. At the regional level, East Africa had the highest score of 4.2, followed by Southern Africa with a score of 4.02.

There is, indeed, an urgent need to transform African food systems, which is inefficient and dysfunctional, to reduce high-level post-harvest losses. Reliable data and harmonized methodological approaches are also required to allow comparisons and inform decision-making.

The following key messages emerged from this session to address the aforementioned challenges and reduce hunger and malnutrition in Africa:

- Need to modernize and industrialise agriculture;
- Need to improve storage and drying infrastructures;
- Strengthen ownership and replicate good practices at the community level;
- Address post-harvest management challenges and assess the economic costs of post-harvest losses and;
- Need to strengthen Government’s capacities.

In addition to the aforementioned points, the following key findings stemmed from this session:

- Replicate the study conducted by CILSS and the Sahel Institute across the Sahel and West Africa in order to have specific and reliable data to inform decision-making on food security;
- Promote and disseminate more efficient technologies and strategies for managing post-harvest losses with stakeholders in value chain by leveraging experiences and extension programmes;
- Overall, the implemented post-harvest losses reduction strategies must constitute a technical package covering the different segments of the value chains.

### 3.2. *Session 2: Research and development for an effective post-harvest losses management*

During this session, the following thematic areas were discussed : (a) Impact of post-harvest losses management on food security : empirical evidence ; (b) Research on post-harvest losses : links to food and nutrition security; (c) The cost of inaction in post-harvest losses management ; and (d) Integration of nutrition into post-harvest losses management.

The panelists and participants' discussions highlighted the following key points:

- Food losses occur across all stages of production, but most of them take place during the storage phase. There is a need to assess overall post-harvest losses with reliable data. In fact, the implementation of post-harvest loss estimation systems will enable to assess objectively the scale since it is difficult to manage what is not measured. The cost of inaction remains very high. In Malawi, maize losses recorded in 2015 (542,442 MT) could have fed 2.6 million people for a year and had an estimated cost of US \$ 151 million. The majority of post-harvest loss measures focus on losses occurring during the storage stage. There is very little data available on losses in other stages of the value chains. It is important to measure exhaustively the quantity losses (weight, nutrients, value, greenhouse gas emissions, etc.) after harvesting more rigorously than to rely on perceptions and estimates which tend to be systematically underestimated.
- A better post-harvest losses management can contribute to reducing the extent of food insecurity during the lean season. A study carried out in Tanzania by the University of Zurich has shown that improved farm storage significantly reduces the proportion of smallholder farmers experiencing seasonal food insecurity. For the lean season, results show that the intervention reduced the proportion of households suffering from severe food insecurity by 40% in the first harvest cycle, and by 27% in the second harvest cycle, on average. Such a positive impact on food security has rarely been documented in other agricultural activities. The results also show that improved storage conditions at the farm level can also reduce seasonal fluctuation in food prices.
- In West Africa, the impact of post-harvest losses on food insecurity has yet to be evaluated through evidence. Research to date has been insufficient and of poor quality, and focused on a limited number of countries, while the variety of adopted methodologies make comparisons difficult. There is a need to monitor progress over time, to understand the variability in percentages of food loss in different contexts, to develop strategies and to better understand the impact of post-harvest losses on food security and nutrition.

The following conclusions can be drawn from this section:

- There is an urgent need to improve data collection, develop reliable methodologies and tools to assess quantitative and qualitative losses and their relationship vis-à-vis of population's well being.
- It is crucial to undertake studies to measure the impact of post-harvest losses on food security and nutrition.
- It is important to adopt a market-based approach to demonstrate the added value of a better post-harvest loss management.
- It is recommended to adopt simple, affordable and accessible technological solutions.
- There is a need for a paradigm and approach change regarding nutrition. It was recommended that nutrition-sensitive programmes be scaled up by adopting a life cycle and a human capital development approaches. A theory of change approach to post-harvest losses would help identify effective ways to capitalize on the positive effects. There are many benefits to be gained from

adopting a systematic analysis of the nutritional situation and factors of malnutrition through tools such as the "Fill The Nutrient Gap (FNG)".

- CERFAM must continue to work with researchers to identify practical methods and solutions to post-harvest loss.

### 3.3. *Session 3: Technological innovations and investments in post-harvest loss management.*

The panelists presented innovative approaches, concrete examples and tangible solutions to post-harvest losses. The technologies presented on post-harvest losses covered all segments of the value chain, for example dryers, hermetic storage bags, silos, moisture measuring systems. etc.

A concrete case of youth and women involvement and engagement in the cassava value chain in the Democratic Republic of Congo (DRC) – in particular in the production of cassava and its processing into many derived products – with the support of governments and development actors was presented.

As an well-recognised model, China has been able to transform its agricultural system through industrialization of the sector by setting up modern infrastructures which have significantly contributed to reducing crop losses and improving food and nutritional security.

It is well-known that dysfunctions exist throughout the value chains, leading to significant losses. It is imperative to better connect agricultural products to markets. The African Development Bank (AfDB) supports countries in identifying and scaling up good practices in post-harvest management by urging governments to undertake reforms and create an enabling environment that capitalizes on reinforced partnerships and complementary with development actors such as WFP, FAO, IFAD and the World Bank.

To address the challenges related to post-harvest losses, this session helped consolidate the following highlights:

- Introduce innovative technologies in agriculture;
- Promote technical development and support (training), synergies and technical and financial partnerships;
- Encourage group and online marketing;
- Strengthen cereal market institutions and;
- Promote access to improved approaches and technologies, including leveraging digital technology and digital data in post-harvest losses management.

### 3.4. *Session 4: Sharing experiences in the management and reduction of post-harvest losses at national level: lessons learned and good practices*

This session focused on two main topics, namely: (i) Actions by the public sector and development partners in reducing post-harvest losses, and (ii) Results, challenges and opportunities.

The panelists showcased the experiences of Côte d'Ivoire, Ghana and Burkina Faso supported by WFP, FAO and IFAD.

The discussions also highlighted the following key points:

- Post-harvest losses lead to significant loss of income for small-scale producers and affect community's wellbeing. There are significant challenges to overcome, such as poor engagement integration of the youth, very low target literacy rates, lack of adequate infrastructure, limited learning capacity of farmers and limited availability of technology to name a few.
- Technologies and good practices exist and can be replicated to help increase incomes through adoption of better storage solutions, crop diversification, women empowerment and concrete actions against climate change. Success factors have also been identified: strong commitment and better ownership of good practices by communities; strengthened partnerships with the private sector, easier access to credit, increased support to the agricultural sector as a whole to promote better techniques and skills at community level.

- To effectively support populations, particularly small-scale producers, including women and the youth, the following conditions are necessary: adoption of know-how and innovative technologies; enhanced partnerships; support to producers and implementation of monitoring systems; make technologies accessible and at lower cost; capacity building; promotion of governments ownership of the knowledge transmitted and acquired by communities with the support of partners to ensure sustainability; and involvement of the respective parliaments to adopt laws on the harmful effects of post-harvest losses.

At the end of this session, the Vice Administrator of the National Food and Strategic Reserves Administration of China (NAFRA) delivered a speech to share the country's experience and major challenges related to its agricultural and rural development, which had negative impacts on population's food security and nutrition. China then embarked on the path of transformation by promoting political reform, concerted actions, investing significantly in infrastructure, promoting technologies and agricultural research and development. Given the scale of post-harvest losses in Africa and their consequences, the NAFRA is determined to strengthen its partnership with the African Union for a collaboration with its member states based on exchange of experiences and pragmatic solutions.

### *3.5. Session 5: Private sector and multilateral institutions initiatives in post-harvest loss management*

Stakeholders from the private sector, civil society, and universities presented their initiatives and experiences in terms of technologies, studies and research on post-harvest losses management, which contribute to the improvement of production and productivity of small-scale producers.

The shared experiences reminded that managing post-harvest losses and improving food and nutritional security issues can only be addressed by:

- Identifying constraints and bottlenecks in the sector;
- Implementing concrete measures and actions to address the problems linked to post-harvest losses management and to food and nutritional security;
- Managing, adopting and disseminating good practices;
- Strengthening partnerships and supporting small-scale producers;
- Including women and young people in production activities and post-harvest losses management;
- Establishing strong institutional partnerships across countries within the framework of South-South and triangular cooperation as well as public-private partnerships in order to share good practices with all stakeholders and;
- Implementing arrangements to increase literacy rate so that illiterate populations can easily acquire new technologies and good practices.

### *3.6. Session 6: South-South cooperation for the implementation of good practices in post-harvest losses management in order to improve food and nutrition security*

This session was opened by a brief presentation by **Mr. Jorge CHEDIEK, Director of the United Nations Office for South-South Cooperation**. In his speech, this senior official, provided participants with an overall overview of the importance of South-South cooperation and the benefits of promoting South-South dialogue and exchanges. He also emphasized that the strategic importance of the partnership between WFP and the Government of Côte d'Ivoire, which has led to the creation of CERFAM, constitutes a relevant initiative in the fight against food insecurity and malnutrition, including through South-South cooperation.

The representative of the Ministry of Agriculture and Rural Development of Côte d'Ivoire presented the technical assistance mission conducted in the Republic of Congo, which was supported and facilitated by CERFAM and served as a concrete example of South-South cooperation. This presentation provided an overview of the cooperation recently launched between Côte d'Ivoire, Benin and the Republic of Congo on cassava processing into *Gari* and *Attieké*.

The key highlights from these presentations can be summarized as follows:

- South-South cooperation through promoting sharing of experiences, good practices and know-how will enable African countries, in particular Sub-Saharan African countries, to overcome food security and nutrition challenges.
- The United Nations Office for South-South Cooperation is ready to support CERFAM for the implementation of current and future initiatives in order to achieve the 2030 Agenda objectives.
- There is a need to encourage and strengthen South-South cooperation, which will bring added value through transfer of know-how, sharing of experiences and good practices as demonstrated by the technical assistance mission in the Republic of Congo facilitated by CERFAM.
- South-South cooperation is a mechanism by which developing countries help each other by exchanging knowledge, expertise and solutions. It is a complementary arrangement for achieving the SDGs.
- CERFAM's support to South-South cooperation contributes to capacity-building initiatives, sharing of resources and promotion of innovation.
- South-South Cooperation, demonstrated by the example of the mission of experts from Côte d'Ivoire and Benin to the Republic of Congo, can serve as a good practice for managing post-harvest losses which can contribute to improving food and nutrition security.

#### 4. SUMMARY OF THE SURVEY FROM THE WORKSHOP PARTICIPANTS

After the workshop, participants were asked to answer a questionnaire on the content and organization of the workshop, in order to enrich the recommendations of the report. The response rate to the questionnaire is 18% of the participants.

In order to improve workshops in the future, participants recommended targeting technologies / innovations along agricultural sectors and value chains, instead of around grain storage. Technologies from harvest to marketing would be useful in reducing post-harvest losses, for example those for refrigeration cold, drying and processing. It was also recommended to diversify the types of crops as subjects of the presentations. For example, rice which is one of the major crops in the sub-region could have been addressed in discussions.

The sharing of experience in different countries, in particular those of Burkina Faso and through South-South cooperation between Côte d'Ivoire, Benin and Congo Brazzaville, has generated a lot of interest, especially for follow-ups. While it was interesting to listen to the country experiences, it is imperative to promote, replicate and scale up good practices and technologies. Many other technologies exist and could have been highlighted. In addition, an effort remains to be made to demonstrate the impact of technologies on post-harvest losses and rural development. During the workshop, the sharing of experience on the application of technology in the field allowed to identify the success factors of innovations, which could constitute a major decision-making tool for decision-makers, without overlooking specificities of each country and adaptation to the needs of stakeholders.

Overall, the questionnaire respondents appreciated most of the sessions. However, specific points of interest were suggested, namely methodological questions, impact studies, evaluation of post-harvest losses from a nutritional perspective, cost of inaction for better management of post-harvest losses.

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